SAFEWAY SHOPPING CENTER – COLLEGE AND CLAREMONT AVENUES

Draft Environmental Impact Report
File No. ER09-0006
State Clearinghouse # 2009112008
2009102100

July 1, 2011

City of Oakland, California
350 Frank H. Ogawa Plaza
Suite 300
Oakland, CA 94612

CITY OF OAKLAND

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COMBINED NOTICE OF RELEASE AND AVAILABILITY OF THE DRAFT ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC HEARINGS ON THE COLLEGE AVENUE SAFEWAY

PROJECT TITLE: College Avenue Safeway

CASE NO. ER09-0006, CMDV09-107, TPM-09889, State Clearinghouse # 2009112008

PROJECT SPONSOR: Safeway Stores Inc.

PROJECT LOCATION: 6310 College Avenue at Claremont Avenue. Assessor's Parcel Numbers 048A-7070-007-01; & -001-01

REVIEW PERIOD: **July 1, 2011 through August 15, 2011**

EXISTING CONDITIONS: The 2.1 acre project site at the northeast corner of College and Claremont Avenues is presently occupied by an existing Safeway Store, with approximately 25,000 square-feet of floor area, a 96-space surface parking lot, and a Union 76 gasoline station. The Safeway Store at 6310 College Avenue existed in its present configuration for over 40 years. The site is not listed on the Cortese List and does not include any existing historical buildings.

DESCRIPTION OF PROJECT: The project would involve demolition of the existing approximately 25,000 square-foot store, parking lot and service station and construction of a two-story, approximately 62,000 square foot building that would contain Safeway supermarket of approximately 51,500 square feet, approximately 10,500 square feet of ground floor retail spaces (for approximately eight retail shops including one restaurant), and a partially below-grade and upper level parking garage with about 171 parking spaces.

The project site is located within the Neighborhood Center Mixed Use land use classification of the Oakland General Plan Land Use and Transportation Element. At the time of the release of the Notice of Preparation (NOP) the project site was located within the C-31 Zone, Special Retail Zone. Since the release of the NOP the subject site's zoning designation has been changed as part of the citywide zoning update and the subject property is now located within a CN-1 Zone.

ENVIRONMENTAL REVIEW: Based on an Initial Study, it was determined that the project may have significant environmental impacts. A Draft Environmental Impact Report (DEIR) was then prepared for the project, under the requirements of the California Environmental Quality Act (CEQA), pursuant to Public Resources Code Section 21000 *et. seq.* The DEIR analyzes potentially significant environmental impacts in the following environmental categories: aesthetics, land use, noise, air quality, and transportation and traffic. The DEIR identifies eleven significant unavoidable environmental impacts related to transportation and traffic. Copies of the DEIR are available for review or distribution to interested parties at no charge at the Community and Economic Development Agency, Planning Division, 250 Frank H. Ogawa Plaza, Suite

3315, Oakland, CA 94612, Monday through Friday, 8:30 a.m. to 5:00 p.m. The Draft EIR may also be reviewed at the following website:

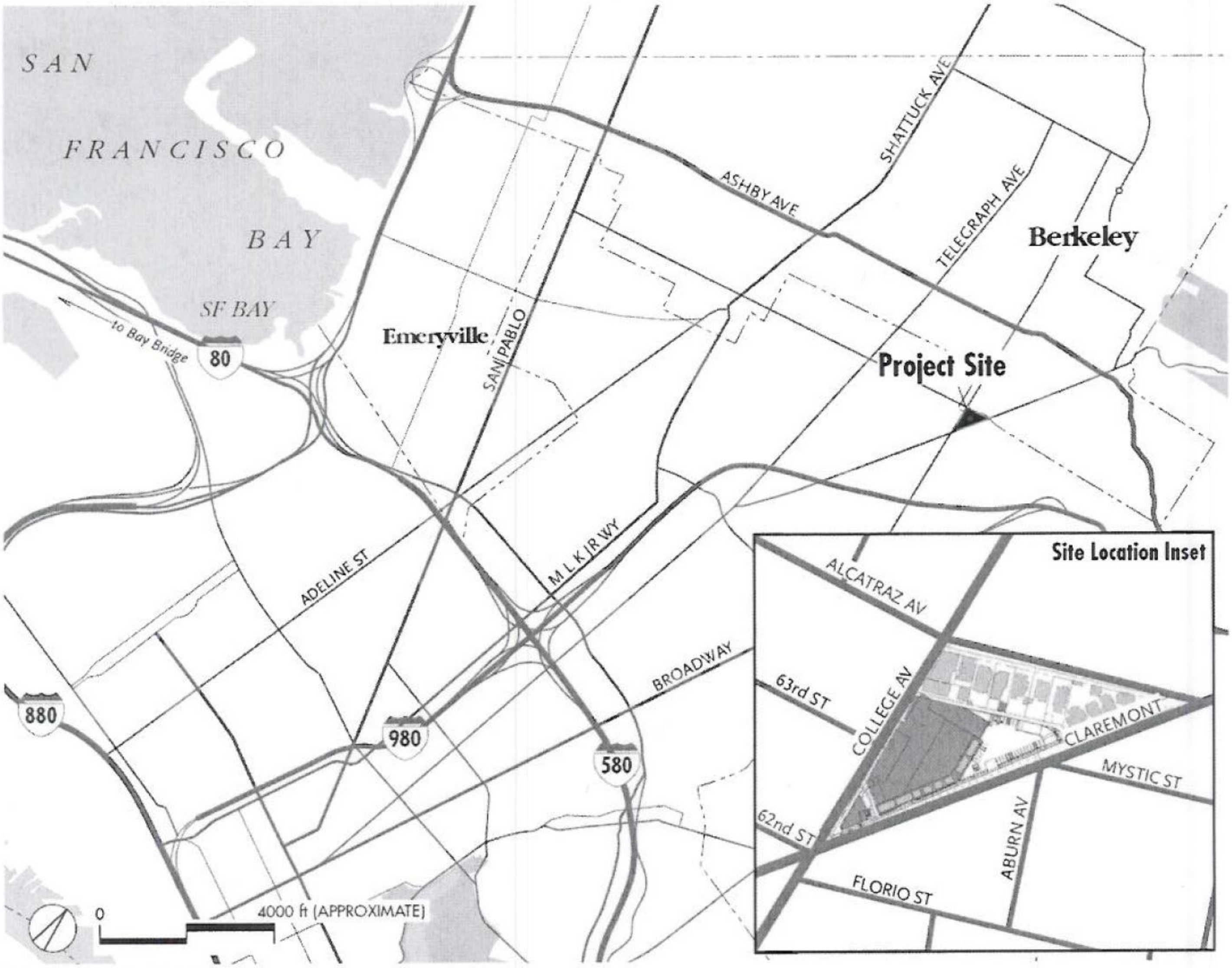
http://www2.oaklandnet.com/Government/o/CEDA/o/PlanningZoning/s/Application/DOWD009157

PUBLIC HEARINGS: The City Planning Commission will conduct a public hearing on the Draft EIR and the project on July 20, 2011, at 6:30 p.m. in Hearing Room 1, City Hall, 1 Frank H. Ogawa Plaza.

The City of Oakland is hereby releasing this Draft EIR, finding it to be accurate and complete and ready for public review. Members of the public are invited to comment on the EIR and the project. There is no fee for commenting, and all comments received during the public comment period will be considered by the City prior to finalizing the EIR and making a decision on the project. Comments on the Draft EIR should focus on the sufficiency of the EIR in discussing possible impacts on the physical environment, ways in which potential adverse effects might be minimized, and alternatives to the project in light of the EIR's purpose to provide useful and accurate information about such factors. Comments may be made at the public hearing described above or in writing. Please address all written comments to Peterson Z. Vollmann, Planner III, City of Oakland, Community and Economic Development Agency, Planning Division, 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, CA 94612; 510-238-6538 (fax); or e-mailed to pvollman@oaklandnet.com. Comments should be received no later than 4:00 p.m. on Monday August 15, 2011. Please reference case number ER09-0006 in all correspondence. If you challenge the environmental document or project in court, you may be limited to raising only those issues raised at the Planning Commission public hearing described above, or in written correspondence received by the Community and Economic Development Agency on or prior to 4:00 p.m. on Monday August 15, 2011. After the close of the public comment period, a Final EIR will be prepared and the Planning Commission will consider certification of the Final EIR and render a decision/make a recommendation on the project at a later meeting date to be scheduled. For further information, please contact Peterson Z. Vollmann, Planner III at (510) 238-6167 or at pvollman@oaklandnet.com.

July 1, 2011
File Number ER09-0006

Eric Angstadt
Deputy Director
Community and Economic Development Agency
Environmental Review Officer



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Proposed Project Location Figure 1

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CHAPTER 1
Introduction

Safeway, Inc. has submitted an environmental review application to the City of Oakland for the Safeway Shopping Center – College and Claremont Avenues ("proposed project"), located in Oakland, Alameda County, California. The proposed project would develop Assessor's Parcel Number's 048A-7070-001-01 and 007-01 ("project site") with expanded grocery operations and new retail and restaurant uses.

The 2.1-acre project site is owned by Safeway, Inc. and occupies the triangular parcel at the north corner of the intersection of College and Claremont Avenues. The parcel has approximately 670 feet of frontage on Claremont Avenue and 430 feet of feet frontage on College Avenue. The parcel's 400-foot-long northern boundary is on the Oakland city limit line, and abuts eight residential parcels located in the City of Berkeley.

The project site is within the Neighborhood Center Mixed-Use designation identified in the Oakland General Plan. The project site is also located within the City of Oakland's C-31 – Special Retail zoning district.

Overall, the proposed project would involve demolition of the existing store, parking lot, and service station, and construction of a two-story building with ground-floor retail and restaurant and second floor grocery uses, and partially below-grade covered parking. Construction would occur over a period of approximately 13 months beginning in early 2012.

1.1 Environmental Review

Initiating the Environmental Review Process

Subsequent to receiving the application for environmental review, the City of Oakland, as the Lead Agency for the proposed project (pursuant to state and local guidelines for implement the California Environmental Quality Act [CEQA]), determined that an EIR would be prepared for the project. In October 2009, an Initial Study found project-specific effects and/or cumulative impacts that relate to traffic and circulation, air quality, greenhouse gases (GHGs), and noise, and they are analyzed in this EIR. The City has prepared this project-level EIR to analyze the potential environmental effects of the project under CEQA.

EIR Scoping

On October 30, 2009, the City issued a Notice of Preparation (NOP) to governmental agencies and organizations and persons interested in the project. The NOP review period ended on December 2, 2009. The NOP was distributed in particular to governmental agencies, organizations, and persons interested in the proposed project. The City sent the NOP to agencies with statutory responsibilities in connection with the proposed project with the request for their input on the scope and content of the environmental information that should be addressed in the EIR. This Draft EIR addresses all comments received in response to the NOP that are relevant to environmental issues under CEQA.

Public Review

This Draft EIR is available for public review and comment for the period identified on the notice accompanying this document. During the review and comment period, written comments on the Draft EIR may be submitted to the City at the address indicated on the notice. Oral comments will be received at the public hearing on the Draft EIR, which is scheduled to be held as indicated on the above-referenced notice.

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all substantive written and oral comments on the Draft EIR's environmental analyses received within the specified review period. The comments, responses and any other revisions to the Draft EIR will be compiled into a Response to Comments document. The Draft EIR and its Appendices, together with the Response to Comments document will constitute a Final EIR for the proposed project.

Use of this EIR

Pursuant to CEQA, this EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the proposed project, to evaluate and recommend mitigation measures that would substantially lessen or eliminate adverse impacts, and to examine a range of feasible alternatives to the proposed project. The information contained in this Draft EIR is subject to review and consideration by the City of Oakland (see *Project Review and Approval,* below), prior to the City's decision to approve, reject or modify the proposed project. The EIR will be used by the City and any other responsible agencies in connection with all discretionary approvals necessary for the project.

Project Review and Approval

The City must ultimately certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of CEQA. The City must make this determination before any decision can be made about the proposed project. This EIR identifies significant effects that would result from the proposed project. Therefore, pursuant to CEQA *Guidelines* Section 15091, no public agency shall approve or carry out a project for which an EIR has been certified which identifies one of more significant effects of the project, unless the public agency makes one or more of the following findings:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such agency.
3. Specified economic, legal, social, technological, or other considerations, including provisions of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

1.2 Organization of the Draft EIR

Following this Chapter 1, *Introduction*, this Draft EIR is organized as follows:

Chapter 2, *Summary*, contains a summary of the proposed project and allows the reader to easily reference the analysis presented in the Draft EIR. Table 2-1, Summary of Impacts, Standard Conditions of Approval and Mitigation Measures is provided at the end of Chapter 2 as a reader-friendly reference to each of the environmental effects, proposed mitigation measures and residual environmental impacts after mitigation is implemented, presented by environmental topic. Chapter 2 also summarizes the analysis of alternatives to the proposed project, areas of controversy, and issues to be resolved.

Chapter 3, *Project Description*, describes in detail the project site and surroundings, the background and regulatory context of the proposed project; proposed project characteristics (including anticipated development phasing and entitlements and approvals requested or required), and project objectives. Chapter 3 also identifies other agencies that must consider or approve aspects of the proposed project.

Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*, discusses the environmental setting (existing physical conditions and regulatory framework), the environmental impacts of the project and cumulative conditions that could result from the proposed project, and the mitigation measures that, after implementation, would reduce or eliminate significant impacts.

Chapter 5, *Alternatives*, evaluates a reasonable range of alternatives to the proposed project and identifies an environmentally superior alternative.

Chapter 6, *Impact Overview and Growth-Inducing Impacts*, summarizes the potentially significant and unavoidable impacts and the cumulative impacts that could result with the proposed project, as they are identified throughout Chapter 4. Chapter 6 also describes the proposed project's potential for inducing growth.

Chapter 7, *Report Preparation*, identifies the authors of the EIR, including City staff and the EIR Consultant team. The project applicant and key consultants that provided technical resources for the EIR are also identified in this chapter.

Appendices to the Draft EIR are provided at the end of the document and include the NOP, Responses to the NOP, as well as certain supporting background documents and technical reports used for the impact analyses for specific topics. All reference documents and persons contacted to prepare the EIR analyses are listed at the end of each analysis section in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, and are available for review by the public at the City of Oakland CEDA, Planning Department, under reference Case Number ER090001, located at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612.

CHAPTER 2
Summary

2.1 Project Overview

Safeway, Inc. (project applicant) proposes to replace an existing Safeway Store and closed gasoline service station with a two-story building housing a larger Safeway Store, seven separate ground-floor retail shops and a restaurant, at 6320 College Avenue, at the intersection with Claremont Avenue in the Rockridge District of Oakland, California. The project applicant submitted a Basic Application for Development Review to the City of Oakland describing the proposed actions. Based on an Initial Study in October 2009, prepared by the City of Oakland, it was determined that a project-level EIR evaluating air quality, noise, and transportation and traffic would be the appropriate document to analyze the potential environmental effects of the proposed project under CEQA. This EIR addresses all environmental topics identified in the City of Oakland's CEQA Thresholds/Criteria of Significance document for Land Use, Plans and Policies; Visual Quality; Transportation and Circulation; Air Quality; Greenhouse Gases; and Noise. Land Use, Plans and Policies and Visual Quality are addressed in this EIR for informational purposes. The environmental issues not included in this EIR (Agriculture Resources, Biological Resources, Cultural Resources, Geology/Soils, Hazards & Hazardous Materials, Hydrology/Water Quality, Mineral Resources, Population/Housing, Public Services, Recreation, and Utilities/Service Systems) were found to be potentially less-than-significant and are addressed in the Initial Study.

2.1.1 Site Location

The 2.1-acre project site is a triangular parcel in the northeast corner of College and Claremont Avenues.

The General Plan land use classification of the existing Safeway Store and now closed gasoline service station is *Neighborhood Center Mixed Use*. Surrounding areas to the east, west, and south of the project site also are within the *Neighborhood Center Mixed Use* land use classification. To the north, properties are within the City of Berkeley, and are classified as *Neighborhood Commercial* and *Low Medium Density Residential* by the City of Berkeley. The current zoning designation of the project site is C-31, *Special Retail*. The project is consistent with the Oakland General Plan land use designation that applies to the project site.

2.1.2 Key Components of the Project

The proposed project would involve removal of all the existing landscaping plants, including all 21 of the existing trees planted along the Claremont and College Avenue sidewalks adjacent to the site, and demolition of all of the existing buildings on the site: the approximately 24,260-square-foot single-story Safeway store with 106-space parking lot, and a closed former Union 76 gasoline station with 1,120-square-foot shop, covered service area, and canopied gasoline pump area.

The project would construct a new two story structure with a total of approximately 62,167 square feet of retail floor area, consisting of a 51,510–square-foot Safeway store on the upper level, seven small retail spaces and a restaurant located at ground level, fronting on College Avenue and on the proposed pedestrian "walk street" to be located near the College/Claremont corner, and connecting those two streets. The commercial spaces would range from 435 square feet to 2,729 square feet, and would total 10,657 square feet.

The project would provide a total of 171 parking spaces in a two-level parking structure that would be integrated into the retail building, with 144 for customers on the ground floor and 27 for Safeway employees and suppliers on the upper floor. The project would also provide 68 short-term and 15 long-term bike parking spaces

In comparison to conditions prior to closing of the Union 76 gas station, the proposed project would reduce the number of driveways on College Avenue from four to one and on Claremont Avenue from five to three.

Pedestrians would directly access the commercial tenants from the sidewalk on College Avenue. Since the Safeway Supermarket is located on the upper level of the building, access is provided via elevators and stairs from two lobbies with direct access to College Avenue and the underground garage.

Although exclusive bicycle facilities are not provided on College or Claremont Avenues or 63rd Street, most bicyclists would approach the project site from these three streets. Project customers would use the short-term bicycle parking (i.e., bicycle racks) along project frontage and project employees would use the long-term bicycle parking provided in the underground parking garage.

The proposed project would also make the following modifications to the transportation system surrounding the project site:

- Signalize the Claremont Avenue/Mystic Street/Safeway Driveway intersection.
- Provide left-turn lanes on northbound and southbound College Avenue into 63rd Street and the Safeway driveway. The new left-turn lanes are accommodated by widening College Avenue on the east side.
- Provide pedestrian bulb-outs on the east side of the 63rd Street/Safeway Driveway/College Avenue intersection on both the north and south crosswalks across College Avenue.
- Provide a pedestrian bulb-out on the project corner of the College Avenue/Claremont Avenue intersection.
- Provide a bus bulb-out on northbound College Avenue just north of Claremont Avenue and move the existing bus stop from south of Claremont Avenue to north of Claremont Avenue.
- Provide a short pedestrian only street between College Avenue and Claremont Avenue near the south end of the project site with fronting retail uses.

The roof of the Safeway store would be approximately 33 feet above the low point of the site (at the College/Claremont corner), 30 feet above College Avenue at the northwestern corner of the site and 16.5 feet above Claremont Avenue at the high point of the site, in the northeast corner. The signature tower at the southwest corner of the Safeway store would be forty feet high above College Avenue.

The project's landscaping would be concentrated around the perimeter of the site, with emphasis on the creation of a landscaped buffer between the project and the residential lots to the north, and on creating attractive pedestrian spaces and successful transitions to the adjoining streetscapes.

2.1.3 Public Agency Approvals

This EIR is intended to cover all approvals necessary to implement the project. These include but are not limited to the following approvals for the proposed project for which the project applicant has applied or anticipates applying. Each is described in detail in Chapter 3, Project Description, consistent with CEQA Guidelines.

City of Oakland

- **Conditional Use Permits** (Planning Code Chapters 17.48.040, 17.48.070, and 17.48.080)
- **Variance** (Planning Code Chapter 17.116)
- **Design Review (**Planning Code Chapter 17.136.120)
- **Tree Removal Permit** (Oakland Municipal Code Chapter 12.36)
- **Demolition Permits** (Oakland Municipal Code Chapter 15.36)
- **Encroachment and Construction Permits** (Oakland Municipal Code Chapter 12.08)
- **Excavation Permits** (Oakland Municipal Code Chapter 12.12)
- **Public Right-of-Way (P) – Job Permit**
- **Compliance with Oakland's Standard Conditions of Approval**
- **Tentative Parcel Map**

Other Agencies

Portions of the project would require review and approval by a number of other public and quasi-public agencies and jurisdictions that have purview over specific aspects of the project. These other agencies may also consider this EIR in their review and decision-making processes. A list of these other agencies and their jurisdictional permits and approvals include the following:

- **San Francisco Bay Regional Water Quality Control Board (RWQCB)** – acceptance of a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit), and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations and conditions for all previous contamination at the site have been met;

- **Bay Area Air Quality Management District (BAAQMD)** – compliance with BAAQMD Regulation 2, Rule 1 (General Requirements) for all portable construction equipment subject to that rule;
- **East Bay Municipal Utility District (EBMUD)** – approval of new service requests and new water meter installations;
- **Alameda County Flood Control and Water Conservation District (ACFCWD)** – enforcement of the Stormwater Quality Management Plan and Best Management Practices (BMP) included in Alameda Countywide Clean Water Program's Stormwater Pollution Prevention Permit (SWPPP). This is done in conjunction with the City of Oakland, one of 18 co-permitees; and
- **California Department of Toxic Substances Control (DTSC)** – ensuring compliance with state regulations for the generation, transportation, treatment, storage, and disposal of hazardous waste.

A description and discussion of each action and agency/jurisdiction is included within the relevant topical analysis sections in Chapter 4, Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures, or in the Initial Study.

2.2 Environmental Impacts and Mitigation Measures

All impacts and mitigation measures identified in this EIR are summarized in Table 2-1, Summary of Impacts, Standard Conditions of Approval, Mitigation Measures, and Residual Impacts, at the end of this chapter. Table 2-1 includes all impact statements, standard conditions of approval, recommended mitigation measures, and the level of significance of the impact after recommended mitigation measures are implemented.

The proposed project would result in significant and unavoidable impacts associated with the following topics:

SU Transportation, Circulation, and Parking Impacts

For purposes of this EIR, the following traffic impacts are considered significant and unavoidable because it is not certain that the measure could be implemented because the City of Oakland, as lead agency, could not implement feasible mitigation measures without the approval of the City of Berkeley and Caltrans. However, in the event that the identified mitigation measures were implemented, the impact would be less than significant.

- **Impact TRANS-1:** The proposed project would contribute to LOS E operations and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the *Ashby Avenue/College Avenue (#1) intersection* under Existing Conditions.
- **Impact TRANS-2:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under Existing Conditions.

- **Impact TRANS-3:** The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection*, which would meet the peak hour signal warrant under Existing Conditions.
- **Impact TRANS-5:** The proposed project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the *Ashby Avenue/College Avenue (#1) intersection* under 2015 Conditions
- **Impact TRANS-6:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds during the Saturday PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under 2015 Conditions.
- **Impact TRANS-7:** The proposed project would contribute to LOS F operation at the side street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection* which would meet the peak hour signal warrant under 2015 Conditions.
- **Impact TRANS-9:** The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours at the *Ashby Avenue/College Avenue (#1) intersection* under 2035 Conditions.
- **Impact TRANS-10:** The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the weekday PM peak hour at the *Ashby Avenue/Claremont Avenue (#2) intersection* under 2035 Conditions.
- **Impact TRANS-11:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds during the Saturday PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under 2035 Conditions.
- **Impact TRANS-12:** The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection* which would meet the peak hour signal warrant under 2035 Conditions
- **Impact TRANS-13:** The proposed project would add more than 10 trips to the *63rd Street/College Avenue* (#7) intersection which would meet the peak hour signal warrant under 2035 Conditions.

2.3 Improvement Measures

Although not required by CEQA, certain "Improvement Measures" are included in the environmental analysis with respect to certain measures that are not necessary to address or mitigate any environmental impacts of the project but nevertheless are recommended by City staff. These recommendations will be considered by decision-makers during the course of project review and may be imposed as project-specific Conditions of Approval.

2.4 Alternatives

Chapter 5 presents a detailed analysis of a range of reasonable alternatives to the proposed project. The alternatives that are analyzed in detail in this Draft EIR are listed below, and Alternative 2 (Reduced Size Alternative) is identified as the CEQA-required environmentally superior alternative. No additional alternatives were considered.

Mixed-Use Alternatives

- Alternative 1a: Mixed-Use Alternative with Regular Apartments
- Alternative 1b: Mixed-Use Alternative with Senior Housing

Reduced Size Alternatives

- Alternative 2: 40,000-Square-Foot Reduced Size Project
- Alternative 2a: 35,750-Square-Foot Reduced Size Project
- Alternative 2b: 25,250-Square-Foot Reduced Size Project

Full Project Alternative With No Curb Cut on College Avenue

- Alternative 3: Full Project with No Curb Cut on College Avenue

Full Project Alternative With Inbound Only Driveway on College Avenue

- Alternative 4: Full Project With Inbound Only Driveway on College Avenue.

No Project Alternative

- Alternative 5: No Project Alternative

2.5 Areas of Concern

The following topics were raised in written comments received in response to the Notice of Preparation (NOP) of this EIR. This summary list is compiled based on written comments received. Each of these topics is addressed in this Draft EIR or the Initial Study.

Major areas of concern (including some non-CEQA issues) include, but are not limited to, the following:

- **Land Use**
  - Zoning
  - Density
  - Type of use
- **Transportation, Circulation, and Parking**

  - Parking
  - Bicycle safety
  - Congestion
  - Concern about traffic study
- **Air Quality**
  - Global warming
  - GHG emissions
  - Hazardous waste
  - Human health
- **Geology**
  - Soils
  - Seismicity
- **Visual**
  - Scale/size of the building design
  - Aesthetics
  - Design
- **Public Services**
  - Demand on public services
- **Cumulative Impacts**
- **Alternatives**
  - Smaller project
  - Public Park

Additional comments were raised related to issues beyond the scope of the analysis in this EIR prepared pursuant to CEQA, but that address general support and general opposition to the proposed project.

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
4.1 Land Use, Plans and Policies		
Impact LU-1: The project would replace the existing Safeway store and add more storefronts and parking, but would not result in the physical division of the established neighborhood retail area. (No Impact)	None Required	
Impact LU-2: The project would not result in a fundamental conflict between adjacent and nearby land uses. (Less than Significant).	None Required	
Impact LU-3: The project would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)	None Required	
Impact LU-4: The project would not conflict with habitat conservation plans or natural community conservation plans. (No Impact)	None Required	
Impact LU-5: The proposed project, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, does not reveal any significant adverse cumulative impacts in the area. (Cumulative Impact: Less than Significant)	None Required	
4.2 Visual Quality		
Impact AES-1: The proposed project would not adversely affect a scenic vista or substantially damage scenic resources within a State or locally designated scenic highway. (Less than Significant)	None Required	
Impact AES-2: The proposed project would alter the existing visual conditions on the project site, but would not substantially degrade the existing visual character or quality of the site and its surroundings. In addition, it would be consistent with the City of Oakland Design Review criteria for non-Residential projects. (Less than Significant)	None Required	
Impact AES-3: Project construction activity and operations, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, would result in cumulative impacts related to visual character, views, aesthetics, shadow, or light and glare. (Less than Significant)	None Required Standard Condition of Approval AES-1, *Shielding of Lighting*	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
4.3 Transportation, Circulation and Parking		
Impact TRANS-1: The proposed project would contribute to LOS E operations and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under Existing Conditions. (Significant)	**Mitigation Measure TRANS-1:** The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following: • Convert signal control equipment from pre-timed to actuated-uncoordinated operations. The signal control equipment shall be designed to applicable standards in effect at the time of construction. • Optimize signal timing parameters (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Berkeley and Caltrans requirements. • Signal timing plans for the signals in the coordination group. The project sponsor shall fund the cost of preparing and implementing these plans. After implementation of this measure, the intersection would continue to operate at LOS E during the weekday PM peak hour and improve from LOS F to LOS E during the Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under Existing Conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary	Significant and Unavoidable This project impact would be significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-1 were implemented, the impact would be less than significant.

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.	
Impact TRANS-2: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under Existing Conditions. (Significant)	**Mitigation Measure TRANS-2:** The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by implementing the following: • Provide left-turn lanes on northbound and southbound College Avenue by converting the existing angled parking spaces along College Avenue to parallel spaces. • Convert signal control equipment from pre-timed to actuated-uncoordinated operations and provide protected left-turn phasing for the north/south approaches. The signal control equipment shall be designed to applicable standards in effect at the time of construction. • Optimize signal timing parameters (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Consider moving the AC Transit bus stops on both northbound and southbound College Avenue from near-side to far-side of the intersection (i.e., from before the signal to after the signal). To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes	Significant and Unavoidable This project impact would be significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	supporting vehicle travel and alternative modes travel consistent with City of Berkeley and Caltrans requirements. • Signal timing plans for the signals in the coordination group. The project sponsor shall fund the cost of preparing and implementing these plans. After implementation of this measure, the intersection would improve from LOS F to LOS D during the weekday PM peak hour. Converting the existing angled parking spaces on College Avenue to parallel spaces would result in elimination of six metered on-street parking spaces. Parking demand on this segment of College Avenue is currently at or above capacity. Thus, the loss of these parking spaces would contribute to the expected parking shortage in the area (see page 4.3-12). The mitigation measure would also improve pedestrian safety by providing protected left-turn phasing on College Avenue and reducing potential conflicts between left-turning automobiles and pedestrians crossing along College Avenue. No other secondary significant impacts would result from implementation of this measure.	
Impact TRANS-3: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection, which would meet the peak hour signal warrant under Existing Conditions. (Significant)	**Mitigation Measure TRANS-3:** Implement the following measures at the Alcatraz Avenue/Claremont Avenue intersection: • Signalize the intersection, providing actuated operation, with permitted left turns and communication conduit/cabling connecting the traffic signal to the proposed traffic signal on Claremont Avenue at Safeway Driveway/Mystic Street/Auburn Avenue. To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel	Significant and Unavoidable This project impact would be significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	consistent with City of Berkeley and Caltrans requirements. • Signal timing plans for the signals in the coordination group. The project sponsor shall fund the cost of preparing and implementing these plans. Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets the California Manual on Uniform Traffic Control Devices (MUTCD) signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS B during the weekday PM peak hour and LOS A during the Saturday PM peak hour. Pedestrians crossing at this intersection would experience more delay because they would need to wait for the appropriate signal phase; however this mitigation measure would improve their safety by providing a protected pedestrian crossing. No other secondary significant impacts would result from implementation of this measure.	that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.
Impact TRANS-4: The proposed project would contribute to LOS E operations, increase the average intersection vehicle delay by more than four seconds, and increase delay for the critical movements of northbound College Avenue and northeastbound Claremont Avenue by more than six seconds, during the weekday PM peak hour; and degrade intersection operations from LOS E to LOS F during the Saturday PM peak hour at the College Avenue/ Claremont Avenue (#9) intersection under Existing Conditions. (Significant)	**Mitigation Measure TRANS-4:** Implement the following measures at the College Avenue/Claremont Avenue intersection: • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach) • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below: o 2070L Type Controller o GPS communication (clock) o Accessible pedestrian crosswalks according to Federal and State Access Board guidelines o City Standard ADA wheelchair ramps o Full actuation (video detection, pedestrian push buttons, bicycle detection) o Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines o Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan o Signal timing plans for the signals in the coordination group. The project sponsor shall fund, prepare, and install the approved plans and improvements. After implementation of this measure, the intersection would continue to operate at LOS E during the weekday PM peak hour and improve from LOS F to LOS E during the Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay during both peak hours would be less than under Existing Conditions and the increase in delay for all critical movements would be less than four seconds higher than under 2015 No Project conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These improvements are not currently	

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.	
Impact TRANS-5: The proposed project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under 2015 Conditions. (Significant)	**Mitigation Measure TRANS-5:** The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following: • Implement Mitigation Measure TRANS-1 After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour and continue to operate at LOS F during the Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2015 No Project Conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.	Significant and Unavoidable This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-1 were implemented, the impact would be less than significant.
Impact TRANS-6: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade	**Mitigation Measure TRANS-6:** The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by	Significant and Unavoidable

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2015 Conditions. (Significant)	implementing the following: • Implement Mitigation Measure TRANS-2 After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay would be less than under 2015 No Project Conditions. The intersection would improve from LOS E to LOS C during the Saturday peak hour. No secondary significant impacts would result from implementation of this measure.	This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.
Impact TRANS-7: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2015 Conditions. (Significant)	**Mitigation Measure TRANS-7:** Implement the following measures at the Alcatraz Avenue/Claremont Avenue intersection: • Implement Mitigation Measure TRANS-3. Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS B during the weekday PM peak hour and LOS A during the Saturday PM peak hour. No secondary significant impacts would result from implementation of this measure.	Significant and Unavoidable This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.
Impact TRANS-8: The proposed project would contribute to LOS F operations, increase the average intersection vehicle delay by more than two seconds, and	**Mitigation Measure TRANS-8:** Implement the following measures at the College Avenue/Claremont Avenue intersection:	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
increase delay for a critical movement by more than four seconds, during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2015 Conditions. (Significant)	• Implement Mitigation Measure TRANS-4. After implementation of this measure, the intersection would continue to operate at LOS F during both weekday PM and Saturday PM peak hours. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay during both peak hours would be less than under 2015 No Project Conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.	
Impact TRANS-9: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours at the Ashby Avenue/College Avenue (#1) intersection under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-9:** The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following: • Implement Mitigation Measure TRANS-1 • Provide a left-turn lane on southbound College Avenue After implementation of this measure, the intersection would continue to operate at LOS F during both weekday and Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2035 No Project Conditions. Providing a left-turn lane on southbound College Avenue may result in secondary impacts. This segment of College Avenue currently provides adequate width to accommodate a southbound left-turn lane in addition to the existing southbound and	Significant and Unavoidable This project is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-9 were implemented, the impact would be less than significant.

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	northbound through lanes. However, provision of a southbound left-turn lane would narrow the northbound through lane. As a result, trucks may have difficulty turning right from westbound Ashby Avenue to northbound College Avenue. In addition, buses stopped at the existing bus stop on northbound College Avenue just north of Ashby Avenue may block northbound through traffic on the narrower travel lane. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.	
Impact TRANS-10: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the weekday PM peak hour at the Ashby Avenue/Claremont Avenue (#2) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)	**Mitigation Measure TRANS-10:** The impact at the Ashby Avenue/Claremont Avenue intersection can be mitigated by implementing the following: • Reconfigure the westbound approach on Ashby Avenue to provide a dedicated left-turn lane and a shared through/right-turn lane • Convert signal control equipment from pre-timed to actuated-uncoordinated operations • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach) To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and	Significant and Unavoidable This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Berkeley and Caltrans requirements. • Signal timing plans for the signals in the coordination group. The project sponsor shall fund the cost of preparing and implementing these plans. After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2035 No Project Conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase and do not have approvals. The improvements may include converting one of the through lanes on eastbound and/or westbound Ashby Avenue to a dedicated left-turn lane. The proposed mitigation measure is one of the improvements under study by City of Berkeley. The proposed mitigation measures would not conflict with other improvements under study at this intersection. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.	unavoidable. However, in the event that Mitigation Measure TRANS-10 were implemented, the impact would be less than significant.
Impact TRANS-11: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS E to LOS F and increase intersection average delay	**Mitigation Measure TRANS-11:** The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by implementing the following:	Significant and Unavoidable This project impact is significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
by more than three seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)	• Implement Mitigation Measure TRANS-2 After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay would be less than under 2035 No Project Conditions. The intersection would improve from LOS F to LOS D during the Saturday peak hour. No secondary significant impacts would result from implementation of this measure.	and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.
Impact TRANS-12: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-12**: Implement the following measures at the Alcatraz Avenue/Claremont Avenue intersection: • Implement Mitigation Measure TRANS-3. Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS C during the weekday PM peak hour and LOS A during the Saturday PM peak hour. No secondary significant impacts would result from implementation of this measure.	Significant and Unavoidable This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.
Impact TRANS-13: The proposed project would add more than 10 trips to the 63rd Street/College Avenue (#7) intersection which would meet the peak hour signal warrant under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-13:** Implement the following measures at the 63rd Street/College Avenue intersection: • Signalize the intersection, providing actuated operation, with	Significant and Unavoidable While mitigation measures have

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	permitted left turns, a pedestrian scramble phase (i.e., an all-pedestrian signal phases), and communication conduit/cabling connecting the traffic signal to the existing traffic signals on College Avenue at Alcatraz Avenue and Claremont Avenue. • Coordinate the signal timings at this intersection with the adjacent intersections that would be in the same signal coordination group. To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal installation. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below: o GPS communication (clock) o Accessible pedestrian crosswalks according to Federal and State Access Board guidelines o City Standard ADA wheelchair ramps o Full actuation (video detection, pedestrian push buttons, bicycle detection) o Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan o Signal timing plans for the signals in the coordination group The project sponsor shall fund, prepare, and install the approved plans and improvements.	been identified that, if implemented, would mitigate any significant impacts at this intersection, this impact is being conservatively assumed to be significant and unavoidable. Because the mitigation would create a signalized intersection on a residential side street and would provide direct access to the College Avenue entrance for the site, it could create negative increases in traffic in the residential neighborhood along 63rd Street. This could result in undesirable quality of life and other negative effects that, while not significant impacts under CEQA, may result in a determination that the mitigation is infeasible.

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City. After implementation of this measure, the intersection would operate at LOS A during both weekday PM and Saturday peak hours. Pedestrians crossing at this intersection would experience more delay because they would need to wait for the appropriate signal phase; however this mitigation measure would improve their safety by providing a protected pedestrian crossing. In addition, considering the proximity of this intersection to existing signals along College Avenue at Alcatraz and Claremont Avenues, a signal at this intersection may result in queues from upstream intersections backing and blocking this intersection. Queues on northbound College Avenue at Alcatraz Avenue and on southbound College Avenue at Claremont Avenue are expected to spill back past 63rd Street under 2035 Plus Project conditions after implementation of mitigation measures. Signal coordination along College Avenue would reduce the likelihood of queue spillbacks. Without a signal at this intersection, vehicles exiting the Safeway Driveway would form long queues inside the project garage as they wait for adequate gaps in the flow of vehicles and pedestrians to exit the garage. The proposed mitigation measure would reduce the delay and queues experienced by vehicles exiting the project driveway. As part of this mitigation measure, the westbound Safeway driveway shall be designed similar to a typical intersection approach with raised curb returns, the driveway surface lower than the sidewalk, and ADA compliant ramps. If the driveway approach is designed as a typical driveway at the same level as the sidewalk and the driveway is signalized, pedestrians along College Avenue may fail to note that the driveway is signalized. No other secondary significant impacts would result from implementation of this measure.	

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	Potential secondary significant impacts would result from implementation of this measure. However, they can be mitigated by implementing Mitigation Measures TRANS-17A and -17B as identified in the pedestrian and bicycle safety discussion of this section.	
Impact TRANS-14: The proposed project would contribute to LOS F operations and increase the intersection v/c ratio by more than 0.03 during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-14:** Implement the following measures at the College Avenue/Claremont Avenue intersection: • Implement Mitigation Measure TRANS-4. After implementation of this measure, the intersection would continue to operate at LOS F during both weekday PM and Saturday PM peak hours. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay and v/c ratio during both peak hours would be less than under 2035 No Project Conditions. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These improvements are not currently expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.	Less than Significant.
Impact TRANS-15: The proposed project would contribute to LOS F operations, increase the average intersection delay by more than two seconds, and increase delay for a critical movement by more than four seconds, during the weekday PM peak hours at the Forest Street/Claremont Avenue (#10) intersection under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-15:** Implement the following measures at the Forest Street/Claremont Avenue intersection: • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify intersection to accommodate the signal installation. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below: o 2070L Type Controller o GPS communication (clock) o Accessible pedestrian crosswalks according to Federal and State Access Board guidelines o City Standard ADA wheelchair ramps o Full actuation (video detection, pedestrian push buttons, bicycle detection) o Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan o Signal timing plans for the signals in the coordination group. The project sponsor shall fund, prepare, and install the approved plans and improvements. After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay would be less than under 2035 No Project Conditions. No	

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	secondary significant impacts would result from implementation of this measure.	
Impact TRANS-16: The proposed project would contribute to LOS E operations, increase the average intersection delay by more than four seconds during the weekday PM peak hours at the Hudson Street/Manila Avenue/College Avenue (#15) intersection under 2035 Conditions. (Significant)	**Mitigation Measure TRANS-16:** Implement the following measures at the Hudson Street/Manila Avenue/College Avenue intersection: • Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval: • Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below: o 2070L Type Controller. o GPS communication (clock) o Accessible pedestrian crosswalks according to Federal and State Access Board guidelines o City Standard ADA wheelchair ramps o Full actuation (video detection, pedestrian push buttons, bicycle detection) o Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan o Signal timing plans for the signals in the coordination group.	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	The project sponsor shall fund, prepare, and install the approved plans and improvements. After implementation of this measure, the intersection would improve from LOS E to LOS D during the weekday PM peak hour. No secondary significant impacts would result from implementation of this measure. As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of extending bulbouts at the west side of the intersection, installing new traffic signal control equipment to allow countdown pedestrian signal heads, and providing a new north-south crosswalk along the west side of College Avenue. These improvements are not currently expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.	
Impact TRANS-17A: Pedestrian crossings on College Avenue at 63rd Street and Safeway Driveway. (Significant)	**Mitigation Measure TRANS-17A:** Implement the following at the 63rd Street/College Avenue intersection: • Provide bulbouts on the west side of College Avenue at the 63rd Street/College Avenue intersection to shorten the pedestrian crossing distance across College Avenue. Since both sides of 63rd Street just west of College Avenue are designated for loading and are used for truck deliveries for businesses along College Avenue, the bulbouts should continue to accommodate truck movements between College Avenue and 63rd Street. Each bulbouts may result in loss of one parking space.	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
Impact TRANS-17B: Pedestrian crossings on the Safeway Driveway along College Avenue. (Significant)	**Mitigation Measure TRANS-17B:** Implement the following at the 63rd Street/College Avenue intersection: • If and when the 63rd Street/College Avenue intersection is signalized per Mitigation Measure TRANS-13, minimize the potential for conflicts between the high volume of pedestrians on the sidewalk adjacent to Safeway and automobiles entering and exiting the project driveway by considering the following items in the final design for the driveway that shall be reviewed and approved by City of Oakland's Transportation Services Division: ○ Design the driveway approach similar to a typical intersection approach with raised curb returns, the driveway surface lower than the sidewalk, and ADA compliant ramps. If the driveway approach is designed as a typical driveway at the same level as the sidewalk and the driveway is signalized, pedestrians along College Avenue may fail to note that the driveway is signalized. ○ Provide different paving material for the segment of sidewalk crossing the driveway. ○ Ensure adequate sight distance between automobiles entering and exiting the driveway and pedestrians on the sidewalk. ○ Provide directional curb ramps at each crosswalk crossing College Avenue, 63rd Street, and the project driveway.	
4.4 Air Quality		
Impact AIR-1: Activities associated with demolition, site preparation, and construction would generate short-term emissions of criteria pollutants. (Less than Significant)	None Required Standard Condition of Approval AIR-3, *Asbestos Removal in Structures*	Less than Significant
Impact AIR-2: Activities associated with demolition, site preparation, and construction would generate short-term emissions of fugitive dust. (Significant)	None Required Standard Condition of Approval AIR-1: *Dust Control*	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
Impact AIR-3: Construction activities would expose nearby sensitive receptors to substantial levels of PM2.5 and toxic air contaminants (TACs), which may lead to adverse health effects. (Significant)	**Mitigation Measure AIR-1:** The project applicant shall develop a Diesel Emission Reduction Plan including, but not limited to alternatively fueled equipment, engine retrofit technology, after-treatment products and add-on devices such as particulate filters, and/or other options as they become available, capable of achieving a project wide fleet-average of 70 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. This Plan shall be submitted for review and approval by the City, and the Project applicant shall implement the approved Plan.	Less than Significant Implementation of Mitigation Measure AIR-1 above would reduce TAC, including DPM, exhaust emissions by implementing feasible controls and requiring up-to-date equipment. With mitigation, the calculated maximum excess cancer risk from construction activities would be reduced from 30.9 in one million to 9.3 in one million. This would be considered less-than significant after mitigation.
Impact AIR-4: Operation of the proposed project would result in increased long-term emissions of criteria pollutants. (Less than Significant)	None Required	
Impact AIR-5: The proposed project would not frequently create substantial objectionable odors affecting a substantial number of people. (Less than Significant)	None Required	
Impact AIR-6: The proposed project would not contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour. (Less than Significant)	None Required	
Impact AIR-7: The project would continue to attract diesel powered delivery trucks, which are sources of diesel particulate, a Toxic Air Contaminant. (Less than Significant)	None Required	
Impact AIR-8: The proposed project could result in a cumulatively considerable contribution to a cumulative air quality impact from criteria pollutant emissions. (Less than Significant)	None Required	
4.5 Greenhouse Gases		
Impact GHG-1: Construction and operation of the proposed project would not result in significant GHG emissions under the City's thresholds. (Less than Significant)	None Required	Less than Significant

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
Impact GHG-2: The project would comply with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. (Less than Significant)	None Required.	Less than Significant
4.6 Noise		
Impact NOI-1: Construction activities associated with the proposed project would temporarily generate noise levels that could conflict with standards established in the City noise ordinance. (Less than Significant)	None Required Standard Conditions NOI-1, Days/Hours of Construction Operation, NOI-2, Noise Control, NOI-3, Noise Complaint Procedures, and NOI-5, Extreme Noise Generators	
Impact NOI-2: Noise levels from project generated traffic would increase roadside ambient noise levels. (Less than Significant)	None Required	
Impact NOI-3: Operational noise sources generated by HVAC equipment, emergency generators, proposed parking structures, and truck loading/unloading may impact nearby noise-sensitive receptors. (Less than Significant)	**Improvement Measure 1:** To eliminate the potential for noise impact from the ventilation openings, acoustical louvers could be installed in these vent openings to reduce the transmission of garage sounds. **Improvement Measure 2:** To further reduce the noise levels within the garage and further reduce noise emanating from the garage, the underside of the garage ceiling could be fully lined with spray-on thermal/acoustic insulation. This additional noise control measure would typically be provided on the garage ceiling directly below the store. **Improvement Measure 3:** As an added noise control measure, sound-absorptive material could be applied to the ramp walls to further reduce noise from vehicle movements on the ramp. Potential tire noise could be reduced by avoiding a polished (squeaky) concrete slab surface. **Improvement Measure 4:** Methods to reduce noise from shopping cart power washing would include conducting the washing activities within the enclosed loading dock area, or at the far end of the service deck, away from residential neighbors. **Improvement Measure 5:** Methods to reduce noise or	

TABLE 2-1
SUMMARY OF IMPACTS, STANDARD CONDITIONS OF APPROVAL, MITIGATION MEASURES, AND RESIDUAL IMPACTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after Application of Standard Conditions of Approval and Mitigation
	annoyance from garbage truck pickup activity would be to limit hours to 9 AM to 6 PM.	
Impact NOI-4: Project traffic, in combination with cumulative traffic, could substantially increase traffic noise levels in the project area. (Less than Significant)	None Required	

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CHAPTER 3
Project Description

3.1 Project Location and Site Characteristics

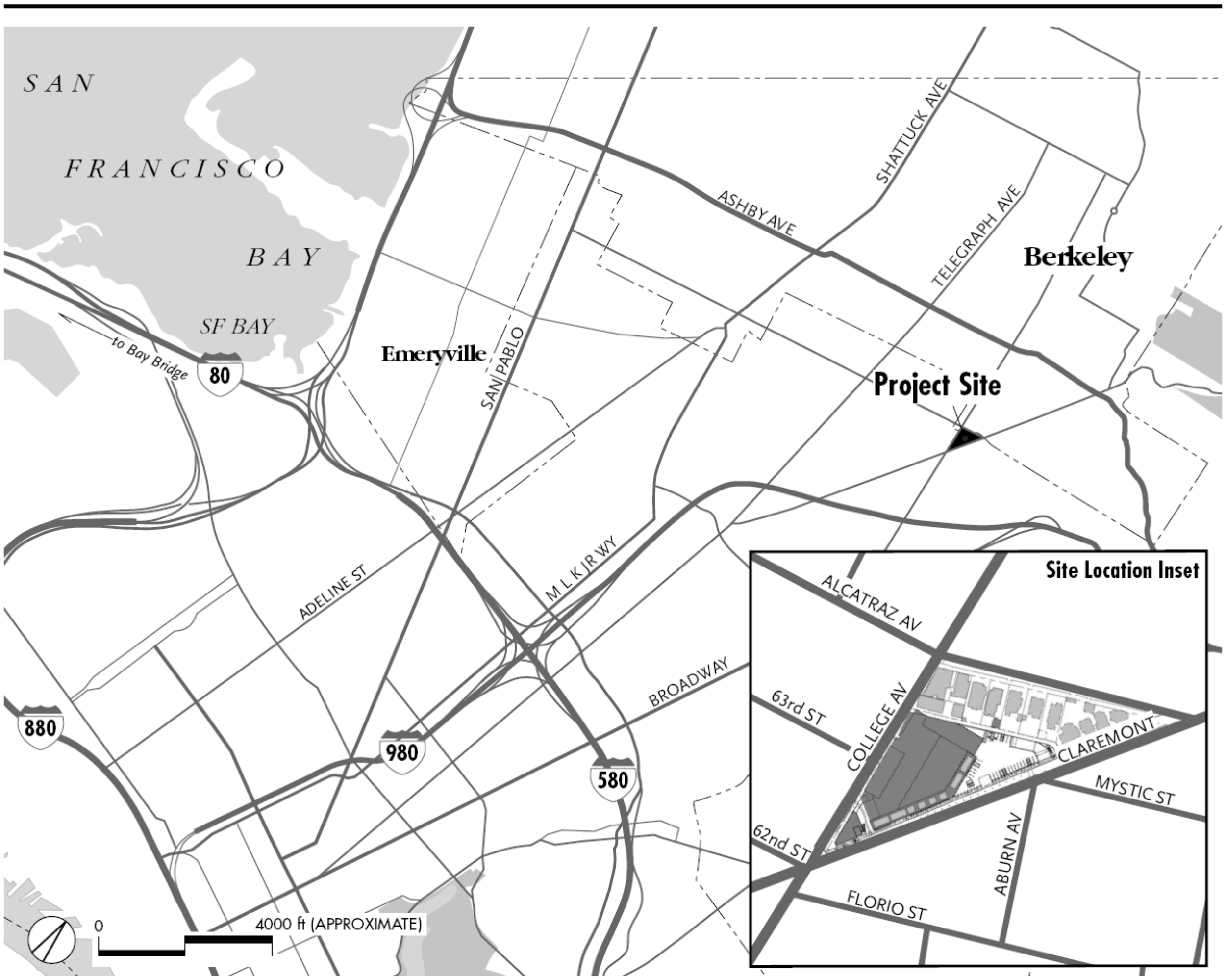
3.1.1 Project Location and Access

The 2.1-acre project site is located at 6320 College Avenue, at the northeast corner of College and Claremont Avenues in the Rockridge District of Oakland (see Figure 3-1). Both College and Claremont Avenues are major arterial streets serving north Oakland, and the site is located in a well established, neighborhood-oriented retail district that is surrounded by relatively dense residential development. Figure 3-2 is an aerial photograph of the project site and surrounding area, while Figure 3-3 is a street map depicting the primary access routes serving the site. As can be seen on Figure 3-3, both College and Claremont Avenues have connections to the Highway 24, a regional freeway and to Ashby Avenue (State Highway 13), while College Avenue connects with Alcatraz Avenue a short distance north of the site, where Alcatraz Avenue becomes an important arterial street providing access to points west.

Local access to the site is primarily from College and Claremont Avenues, both of which have multiple curb cuts permitting auto access, and both of which are transit routes with bus stops adjacent to the site. In addition, 63rd Street connects with College Avenue opposite the site, while both 62nd Street and Florio Street connect with College and Claremont Avenues at the adjacent signalized intersection. These streets, as well as Mystic Street and Auburn Avenue, on the east side of Claremont Avenue, are local residential streets and provide access to the surrounding residential areas.

The Oakland General Plan land use classification for the site is Neighborhood Center Mixed Use, and the Zoning designation for the site is C-31, Special Retail.

The site consists of two parcels of land, Assessor's Parcel Number 048A-7070-001-01 and 007-01, and is owned by Safeway, Inc. The triangular shaped parcel has approximately 670 feet of frontage on Claremont Avenue and 430 feet of feet frontage on College Avenue. The parcel's 400 foot long northern boundary is on the Oakland city limit line, and abuts eight residential parcels, as seen in Figure 3-2.



Source: During Associates

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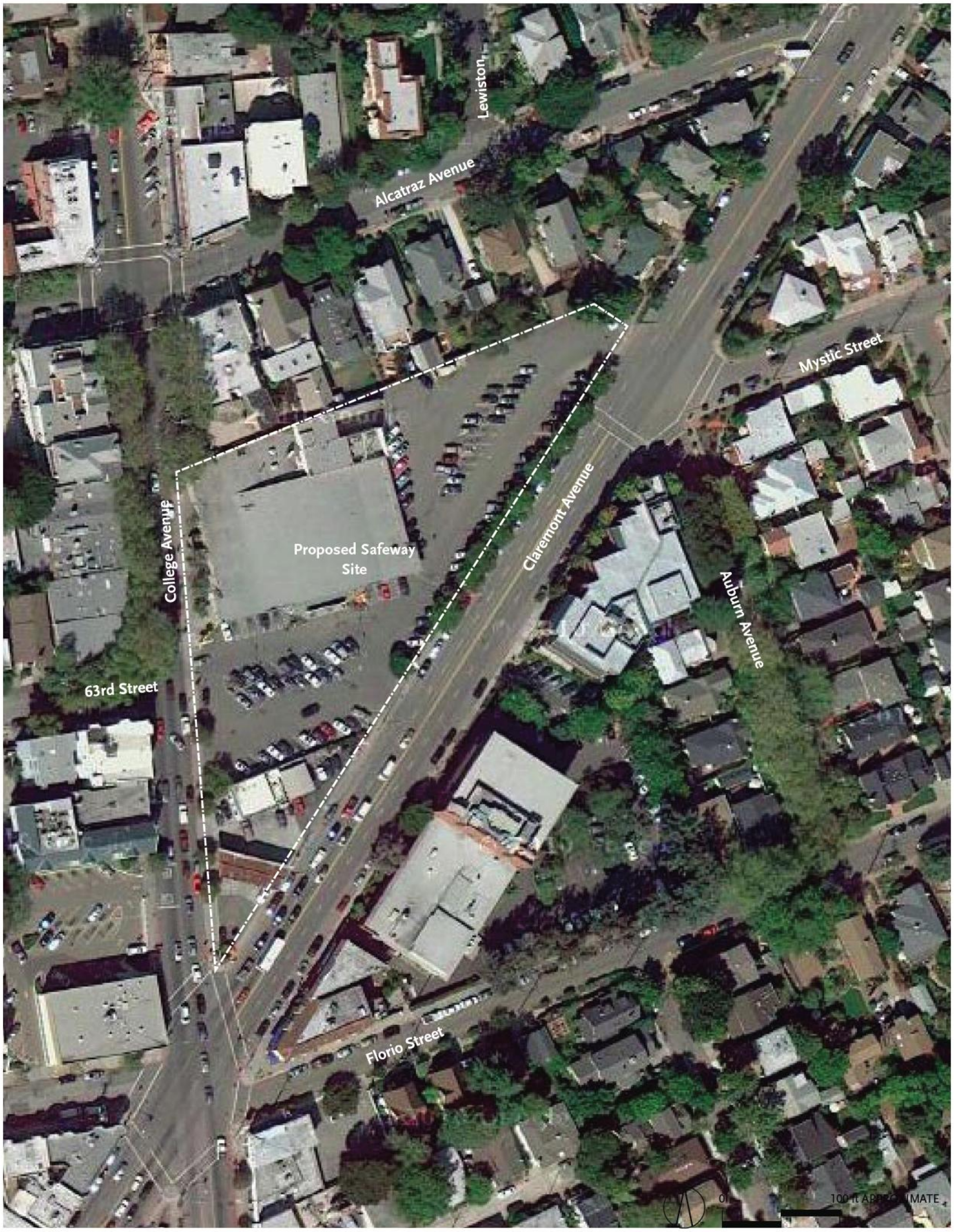
Proposed Project Location Figure 3-1



Source: During Associates

11-12-10

Aerial Photograph of Project Site Figure 3-2

Source: During Associates

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Street Map Showing Regional Access Figure 3-3

3.1.2 Existing Project Site Characteristics

Existing Buildings and Uses

The project site is occupied by an existing Safeway grocery store and a Union 76 gasoline station, which was closed in late 2009 and is now surrounded by a security fence. The Safeway store has approximately 24,260 square feet of floor space in a single-story masonry building on a flat concrete pad. The store's perimeter walls are approximately 16 to 17 feet tall, with an arched roof that rises up to about 21 feet high. The existing Safeway store was built around 1964, and its design is similar to other Safeway stores built around that time. It provides approximately 106 parking spaces on the east and south sides, and a loading dock and trash compactor/recycler are located along the north side of the site. The parking lot can be accessed from two driveways on College Avenue and two on Claremont Avenue. The northern boundary of the site is marked by a wooden fence and by the northern wall of the Safeway store, which is built on the property line.

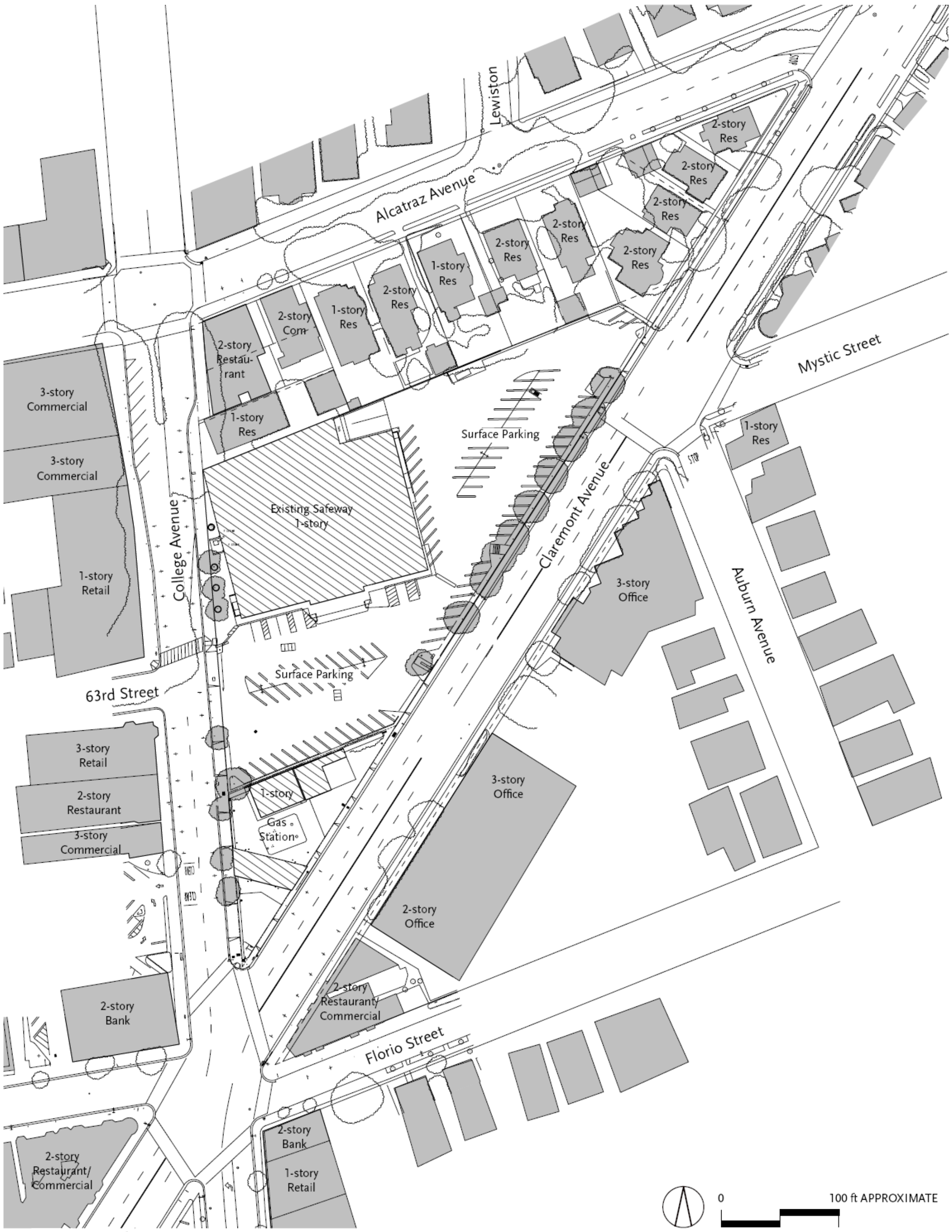
The southern corner of the site is occupied by the former Union 76 gasoline station and auto repair garage. It now consists of a vacant shop with about 1,120 square feet, a covered service area, and a canopy over the gasoline pump areas. The gas station site is paved and contains several underground gasoline storage tanks. It is currently surrounded by a security fence and is inaccessible from the adjacent streets. When the gas station was in operation it could be accessed from either College or Claremont Avenue. Figure 3-4 is a site plan showing the existing development on the site, while photographs of the existing site are shown in Figures 3-5 and 3-6.

Topography

The project slopes generally to the southwest, and has been graded accommodate the existing development. The Safeway store is on a flat building pat at approximately elevation 208. The low point on the site (elevation 203) is at the southwest corner, where the College and Claremont Avenue right-of-ways intersect. The high point, at the northeast corner is about 220 feet, so there is about 17 feet of topographic change across the site. The rise is greater along Claremont Avenue where the street climbs almost 20 feet as it passes by the site; College Avenue also climbs, but less than 6 feet as it passes by the site, from south to north. The parking lot at the front of the Safeway store, adjacent to College Avenue is relatively level, but the lot along the Claremont Avenue frontage slopes up to the northeast, and a retaining wall separates the parking lot from the Claremont Avenue sidewalk along a portion of the site's frontage.

Surrounding Area Characteristics

The project site is located in an established neighborhood commercial area in the urban North Oakland Planning Area. Land uses surrounding the site in the adjacent Oakland and Berkeley neighborhoods are predominately residential, and a large proportion of the homes are more than 80 years old.



Source: Lowney Architecture

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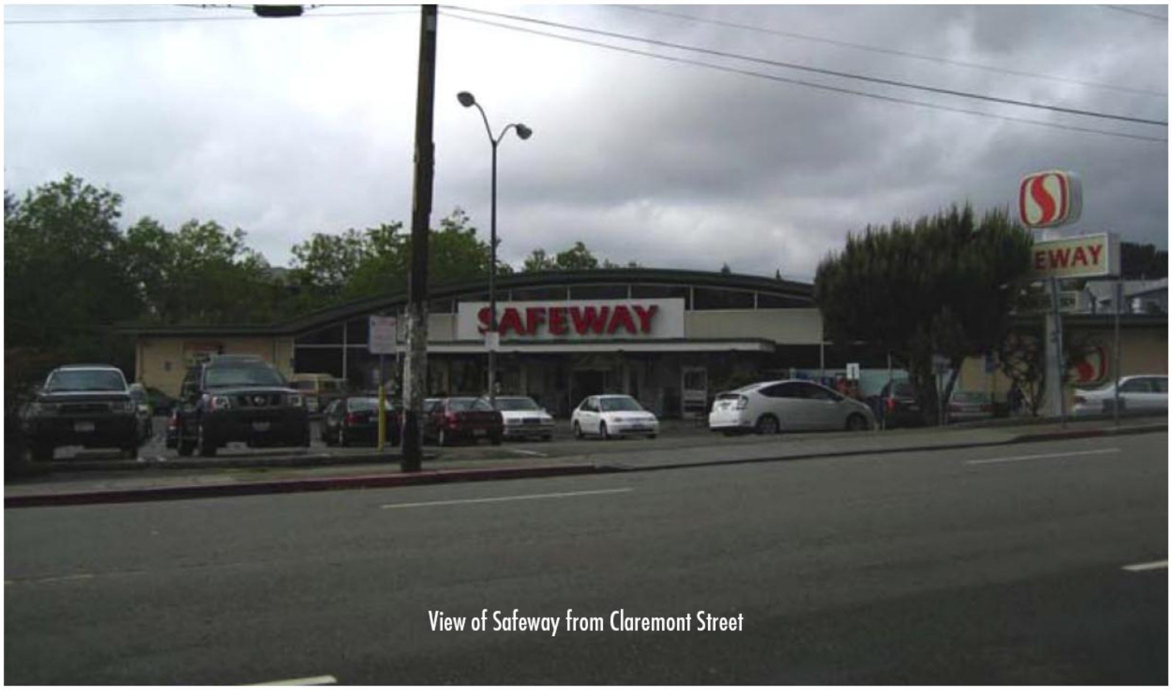
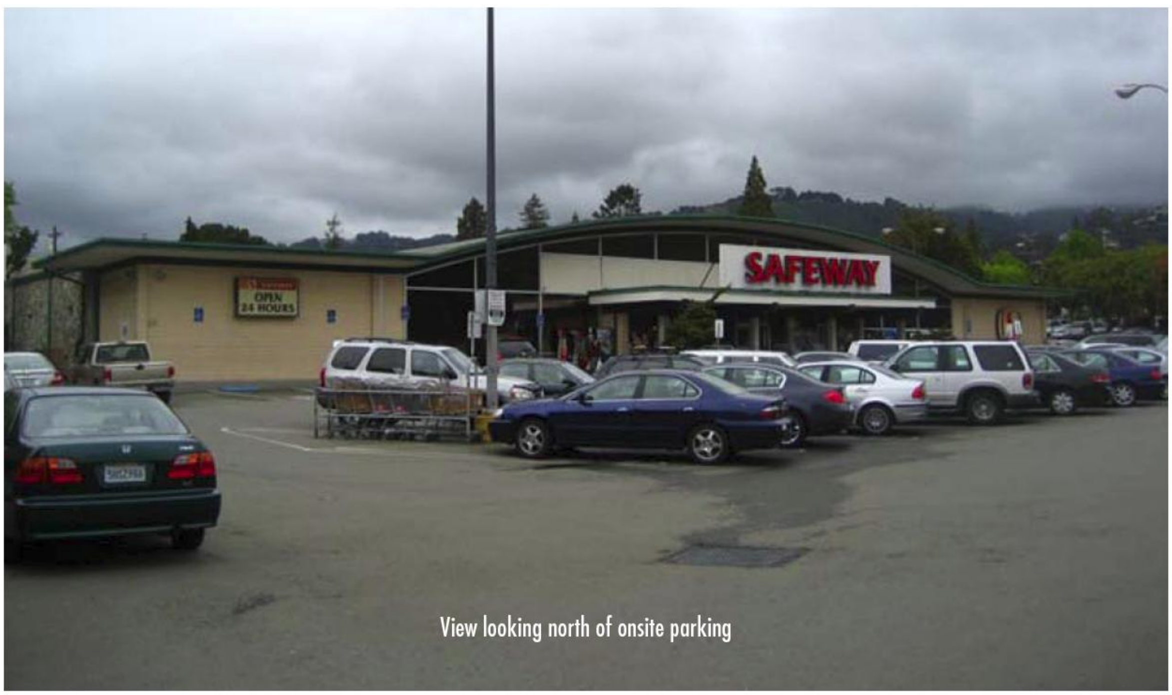
Existing Site Plan Figure 3-4



View of Safeway from Claremont Street



View looking north of onsite parking

Source: Lowney Architecture

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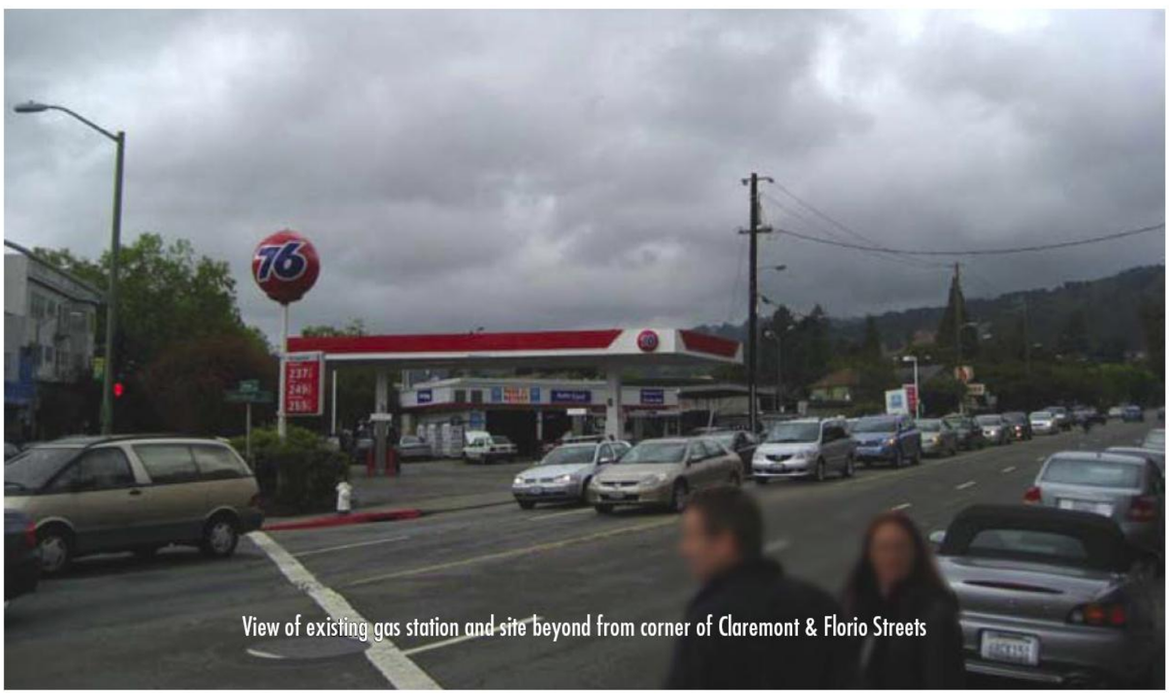
Photos of Existing Site Figure 3-5

View of existing gas station looking north from corner of College & Claremont Streets



View of existing gas station and site beyond from corner of Claremont & Florio Streets

Source: Lowney Architecture

11-15-10

Photos of Existing Site Figure 3-6

The College Avenue commercial district was also developed in the early 20th century, and while there has been more redevelopment of the commercial properties than of the residential properties, some of the buildings go back to that era. The commercial development along Claremont Avenue opposite the site is generally more recent, and the buildings are more massive. Most structures in the area are two or more stories high, although none have more than four stories. The Alameda County Blood Bank building, at 43 feet high, is the tallest building in the neighborhood.

Although both Claremont and College Avenues are arterial streets, College Avenue is narrower where it passes by the site, and has significant pedestrian activity, drawn to the shops and stores found there. It also has a dense street tree canopy, adding to the ambience and pedestrian comfort.

3.2 Objectives of the Proposed Project

Safeway, Inc., the project applicant, seeks to achieve the following objectives through implementation of the proposed project:

- Revitalize the College Avenue/Claremont Avenue 2.1-acre site by demolishing the existing approximately 24,260-square-foot store, parking lot, and service station—all 1960s suburban style, and inconsistent with current C-31 Zoning and General Plan and replacing it with a design and uses consistent with both the zoning and General Plan: a larger urban two-story building that would contain a Safeway grocery store and as many as seven (7) new, ground floor individual retail tenants and a restaurant.
- Provide sufficient new store area to offer a more comprehensive range of retail services and products to Safeway's customers, including: an on-site, "from scratch" bakery; a pharmacy; expanded floral offerings; an expanded deli (including warm food table, and prepared catering food items); a "service" meat and seafood service (as compared to the pre-packaged items currently available); and a greatly expanded produce section.
- Create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of Safeway's customers.
- Create additional street-front retail opportunities similar in scope and scale to the retail frontage on College Avenue.
- Establish a gateway presence at this important intersection in the Rockridge neighborhood.
- Create the opportunity, for a mix of grocery store anchor and small retail tenants, to generate pedestrian activity on a portion of College Avenue which now does not encourage pedestrian activity or comparison shopping, thus stimulating economic vitality at the College/Claremont corner.
- Provide sufficient off-street parking to serve the needs of Safeway and retail shoppers that will be inviting, well-lit, and safe, but with surface-level parking reduced as much possible to create more room for commercial and pedestrian uses.
- Consolidate the existing four driveway entrances on College Avenue to one to improve the continuity of retail facilities, traffic flow and pedestrian safety while retaining an important vehicular access point from College Avenue.

- Design the new two-story structures to have a pedestrian scale similar to that of the surrounding neighboring commercial buildings along College Avenue, and provide a buffer to the lower scale residential neighbors adjacent to the site.
- Add approximately 77 full-time new union jobs at the Safeway store.
- Create new areas of publicly accessible open space, plazas, and seating areas (on both floors) that will enhance the surrounding neighborhood and establish at this end of College Avenue an attractive and inviting setting for pedestrian shopping. Construct a Leadership in Energy and Environmental Design (LEED)-building, with native and drought-tolerant trees and planting.
- Improve the current situation for abutting neighbors by moving and covering or enclosing loading docks, trash, recycling and other noise-producing equipment.
- Develop a project with minimal environmental disruption.
- Complete the project on schedule and within budget.

3.3 Proposed Project Characteristics

This section describes, through text and graphics, the components of the proposed project, which, combined with all parts of this chapter, constitute the CEQA "Project" analyzed in this EIR.[1]

3.3.1 Overview

The proposed project would involve demolition of all of the existing buildings on the site and the construction of a new two-story structure that would house a new, larger Safeway Store with 51,510 square feet on the second floor, a 2,744-square-foot restaurant, and "up to" seven ground floor retail shops totaling 7,913 square feet of floor area. Customer parking would be provided on the ground floor, while Safeway deliveries and employee/supplier parking would be accommodated on the upper floor.

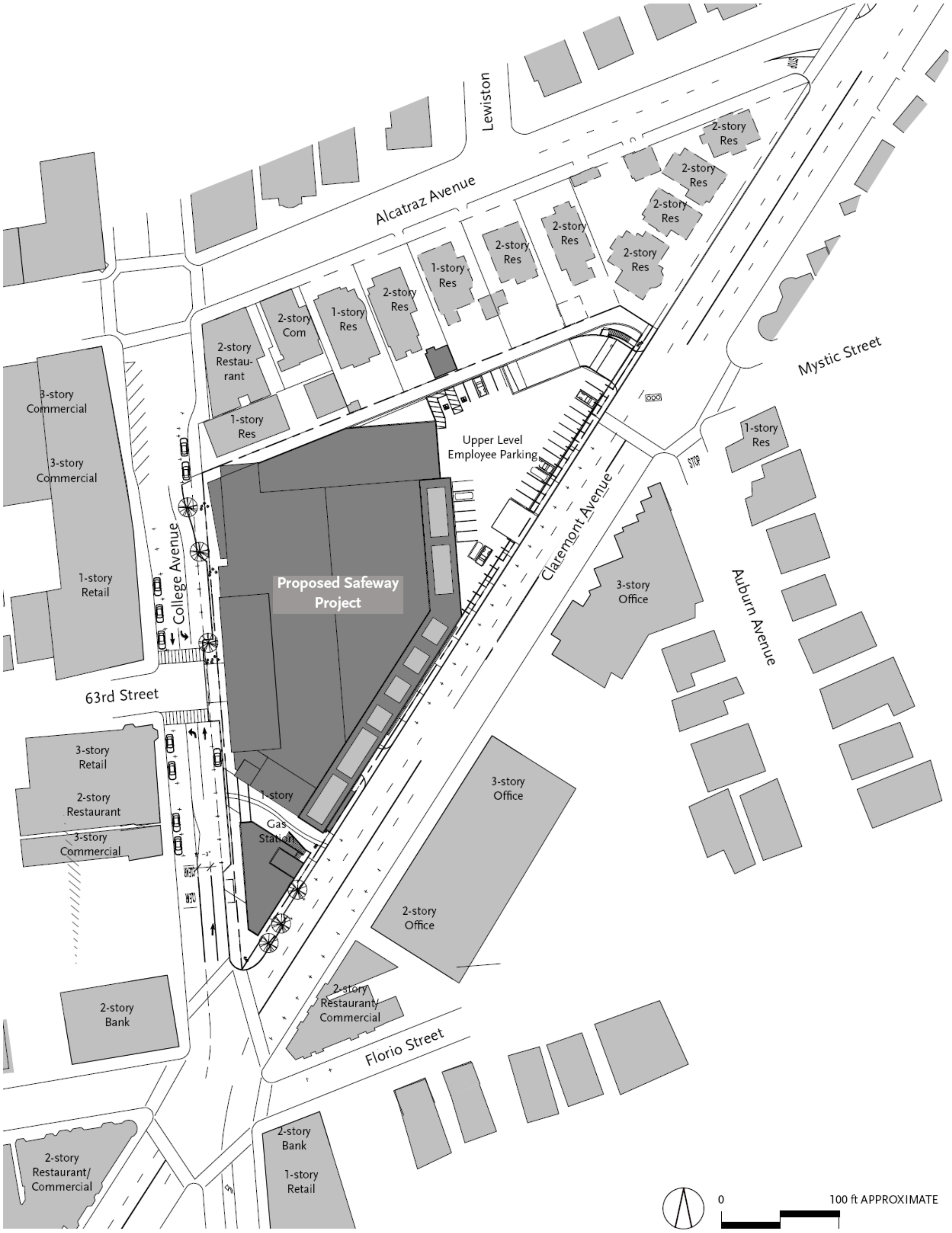
3.3.2 Demolition and Site Clearance

Construction of the proposed project would commence with the closure of the existing Safeway store, followed by the erection of secure construction fencing around the perimeter of the site. The existing store, former gas station structures, paving, and other surface features would then be demolished. The buried gasoline storage tanks would also be removed, as would all the existing landscaping plants, including all 21 of the existing trees planted along the Claremont and College Avenue sidewalks adjacent to the site. Seven of these trees are greater than 9 inches in diameter; the largest is 16 inches in diameter.

3.3.3 Proposed New Construction

The site plan for the proposed new development is shown in Figure 3-7. There would be a total of approximately 62,167 square feet of retail floor area, with the 51,510-square-foot Safeway store on the upper level, a 2,744-square-foot full service restaurant, and seven small retail shops would be located at ground level, fronting on College Avenue and on the proposed pedestrian "walk street" to be located near

[1] CEQA Guidelines Section 15378 defines "Project" as "the whole of the action" which has the potential for resulting in physical changes in the environment.



Source: Lowney Architecture

11-15-10

Project Site Plan Figure 3-7

the College/Claremont corner. The ground-floor plan, Figure 3-8, depicts the retail shops and "walk street," along with the covered, ground level customer parking area. Figure 3-9 shows the layout of the Safeway Store level, along with the loading dock cut into the store, and the employee/supplier parking that would be provided on this level and separated from the customer parking.

The sizes of the commercial tenant spaces would range from 435 square feet to 2,744 square feet—the latter being the large restaurant space at the College/Claremont corner. In all, the project calls for a total of 10,657 square feet of retail and restaurant tenant space.

Figure 3-8 also shows the layout of the first floor of the integrated parking structure. As can be seen, there would be an entrance opposite 63rd Street on the College Avenue side, an entrance off Claremont Avenue relatively close to College Avenue, and a ramp providing access to Claremont Avenue at the northeastern corner of the site, opposite the intersection of Mystic Street, Auburn Avenue and Claremont. The applicant is proposing to signalize the Mystic, Auburn, Claremont intersection as part of the project. The ground floor would have two lobbies, with stairways, escalators, and elevators to provide pedestrian access to the Safeway Store above and to the sidewalk on College Avenue and the on-site "walk street." A total of 144 parking spaces would be provided on the ground floor.

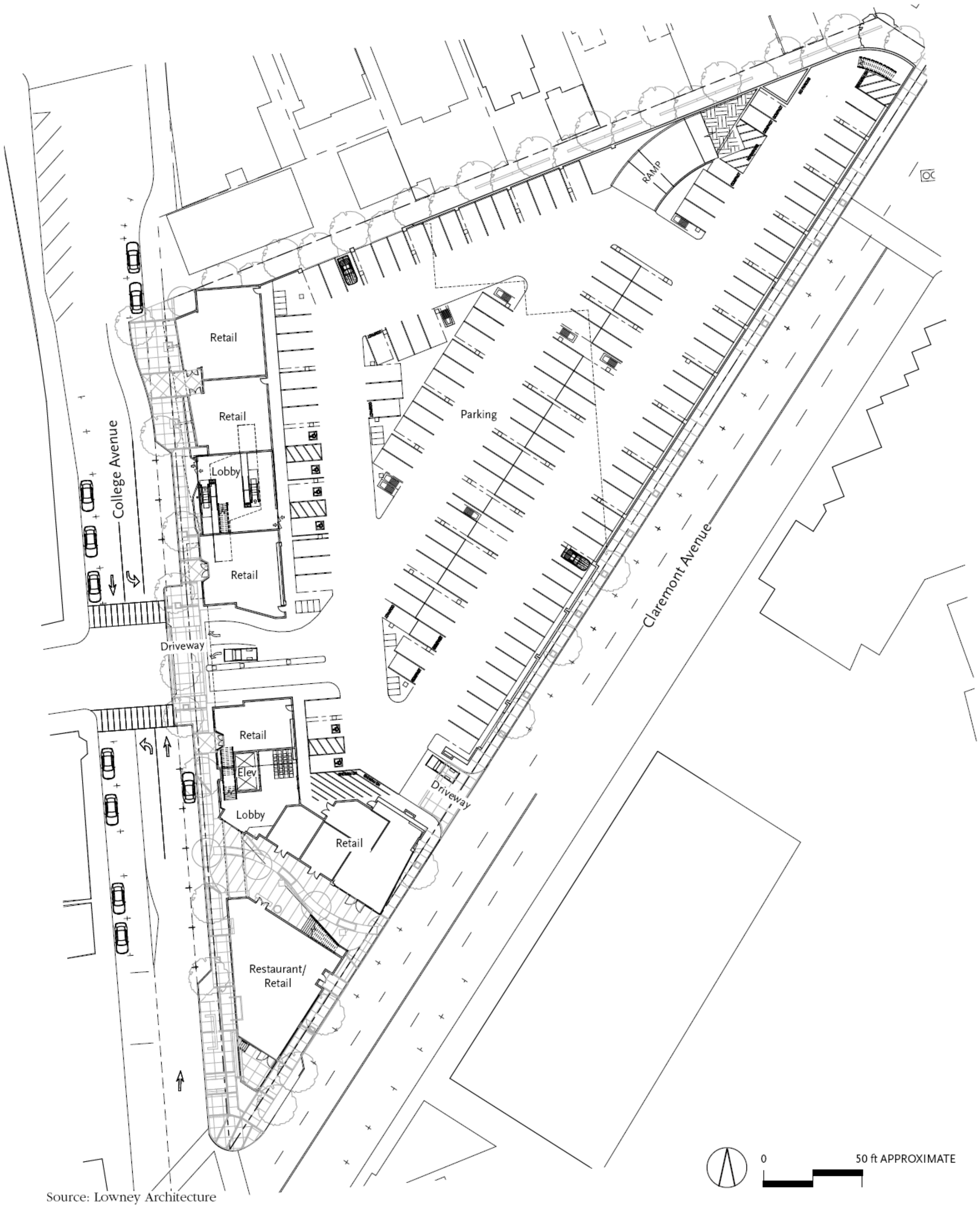
Figure 3-9 shows the Safeway level. The polygon shaped store would be accessed via the stairways, escalators, and elevators on the College Avenue side, with goods deliveries occurring at the store level, via a ramp that would bring the trucks in and out via Claremont Avenue to an enclosed loading dock. The Safeway trucks and employees would access the store's loading ramp via a separate driveway on Claremont Avenue midway between the entrances to the lower level parking. There would be 22 parking spaces on the upper level, plus maneuvering area for the trucks. The upper level spaces would be assigned to employees and suppliers, and would not be available to customers.

Figure 3-9 also depicts the roof top terrace over the free-standing commercial shop proposed at the College/Claremont corner. Access would be provided from the Safeway store via a pedestrian bridge over the "walk street," or from an exterior stairway to the "walk street."

Elevations and sections are shown in Figures 3-10 to 3-13. The exterior of the building would generally have painted plaster surfaces, drawing from a palette of four muted colors, in gray, taupe and beige tones, with significant additions of stacked limestone, corrugated metal and glass in the storefronts.

The 10-foot-wide landscaped setback from the northern property line can also be seen on Figures 3-8 and 3-9, and is depicted in the architectural rendering shown in Figure 3-19. Except for an intrusion from tenant space 1, on College Avenue, this setback would run the length of the parcel's northern boundary, and would be landscaped for its entire length with a mix of screen trees (Chinese Hackberry, Southern Magnolia and Brisbane Box). The existing Safeway store and parking lot has no setback from the adjoining residential lots to the north.

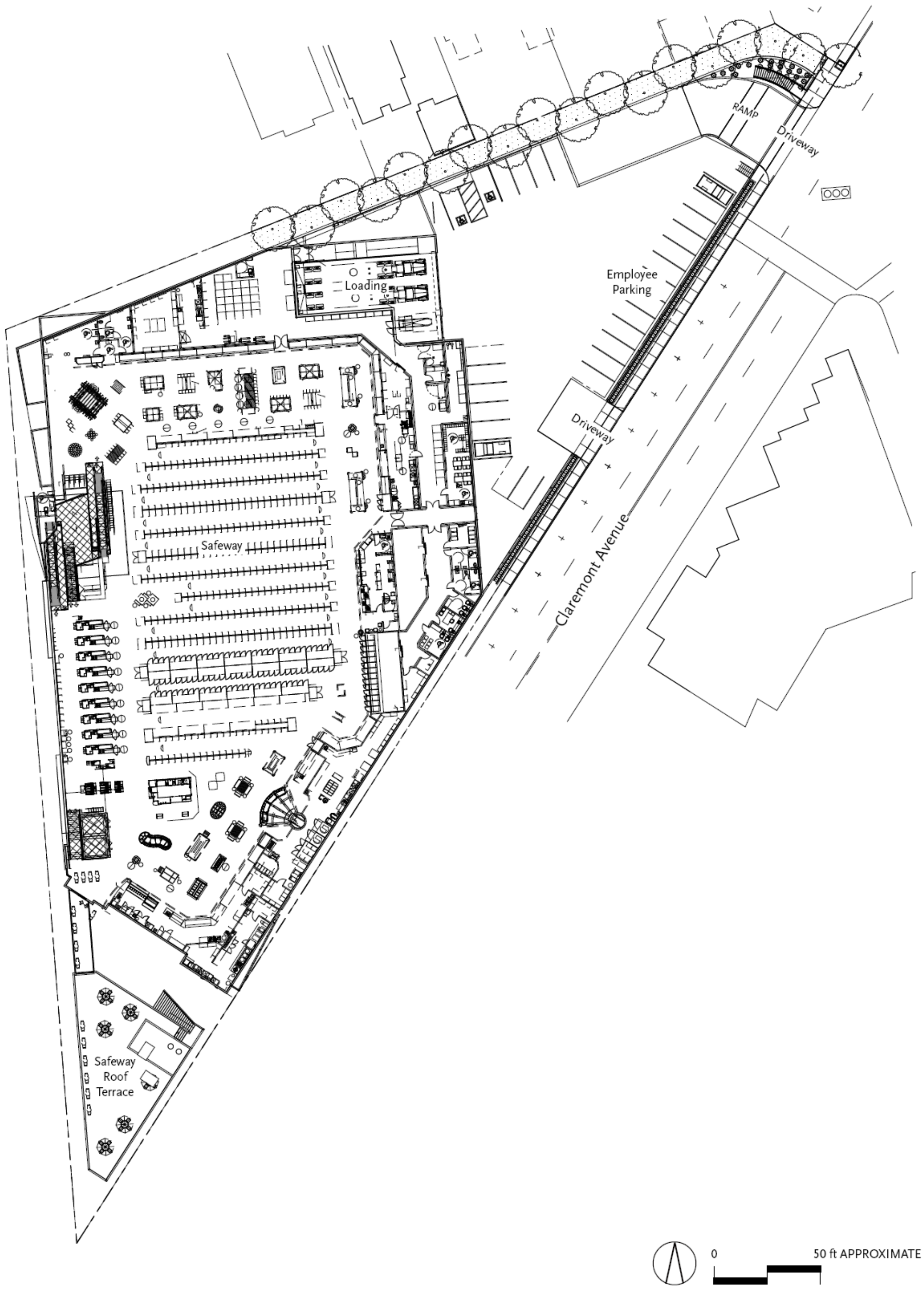
Text continues on page 3-19.



Source: Lowney Architecture

6-24-11

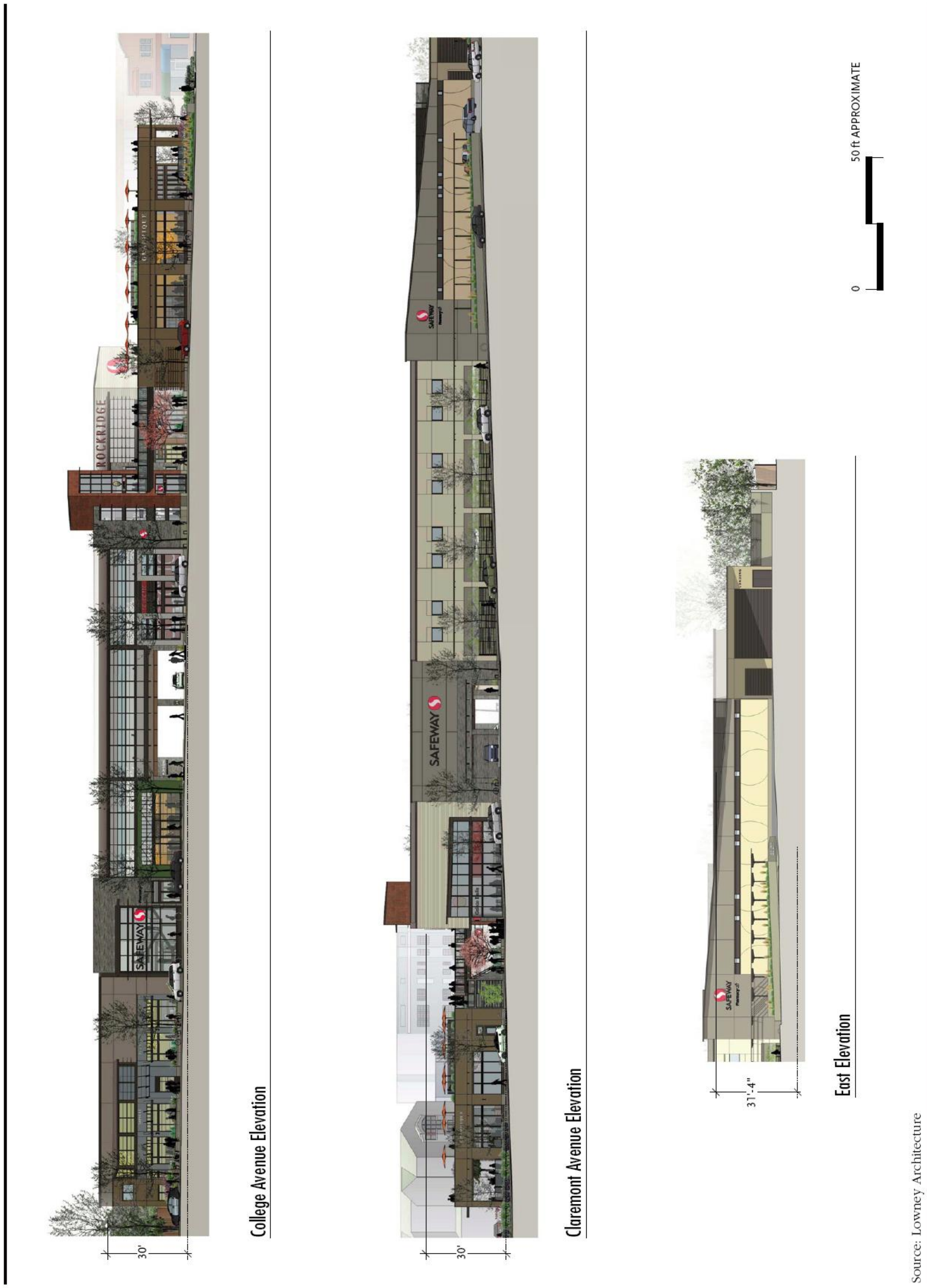
Proposed Ground Floor Plan Figure 3-8



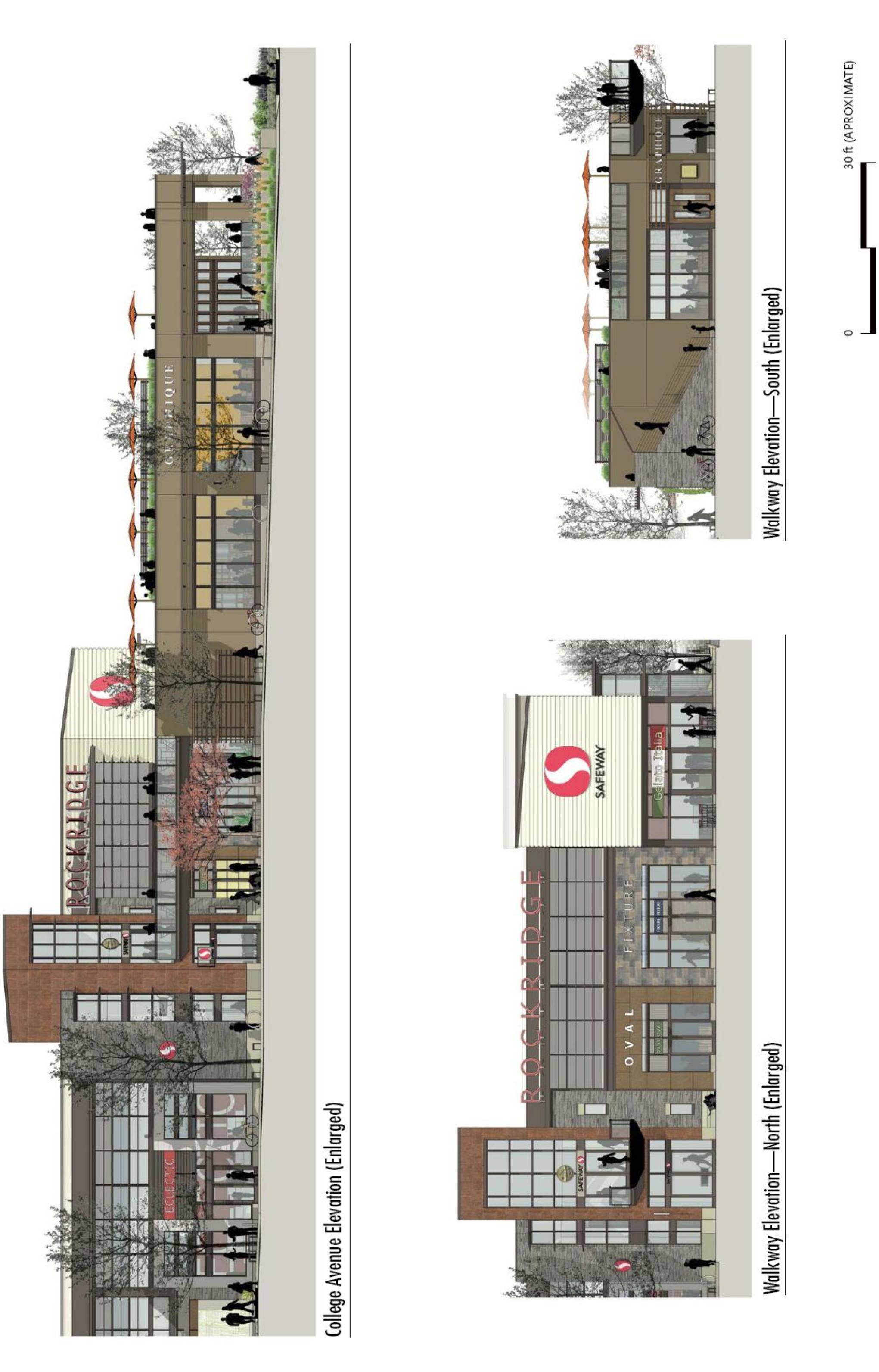
Source: Lowney Architecture

6-24-11

Proposed Safeway Level Plan Figure 3-9



Proposed Project Elevations Figure 3-10



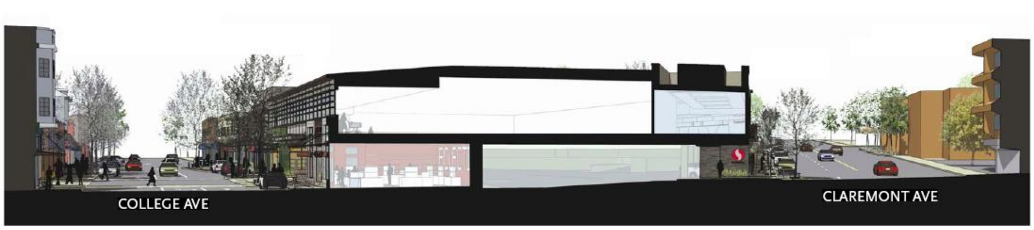
Source: Lowney Architecture

11-15-10

Proposed Project Elevations **Figure 3-11**

Section at Walkway (not-to-scale)

Section at Building Corner (not-to-scale)

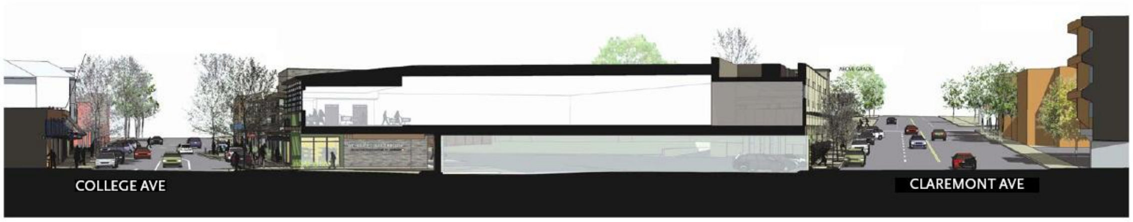


Section Near 63rd Street (not-to-scale)

Source: Lowney Architecture

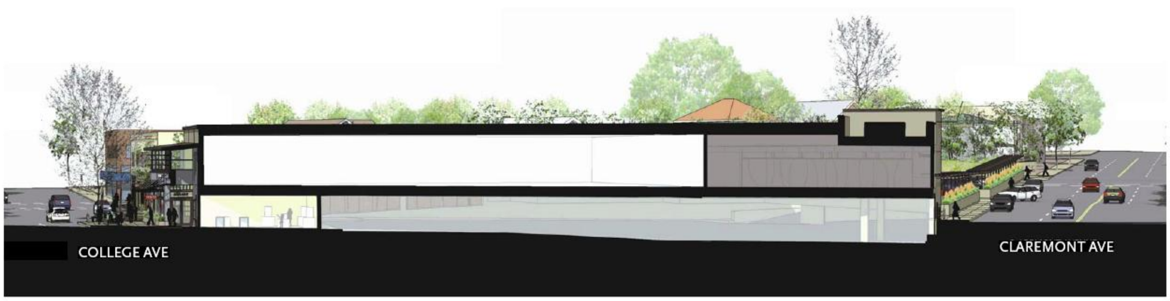
11-16-10

Proposed East–West Sections Figure 3-12



Section at Parking Entrance (not-to-scale)

Section at Northern Neighbors (not-to-scale)



Section at North End of Retail (not-to-scale)

Source: Lowney Architecture

11-16-10

Proposed Project Sections Figure 3-13

The roof of the Safeway store would be at elevation 236, approximately 33 feet above the low point of the site (at the College/Claremont corner), 30 feet above College Avenue at the northwestern corner of the site and 16.5 feet above Claremont Avenue at the high point of the site, in the northeast corner. The signature tower at the southwest corner of the Safeway store would be forty feet high above College Avenue, elevation 250.5 feet.

The architect's schematic renderings of the project from several selected public viewpoints in the vicinity are shown in Figures 3-14 through 3-19.

Parking

In all, the project would provide a total of 171 parking spaces, 144 for commercial customers and 27 on the upper floor for Safeway employees and suppliers. The plans call for eight (5%) of the spaces to be sized for compact cars, while eight would be handicapped accessible as per ADA standards. The project would also be designed to provide 68 short-term and 15 long-term bike parking spaces. The auto parking provided would be 15 spaces short of the City of Oakland's parking required for a project of this configuration, while there would be 47 more bike parking spaces provided than required, per City standards.

Although exclusive bicycle facilities are not provided on College or Claremont Avenues or 63rd Street, most bicyclists would approach the project site from these three streets. Project customers would use the short-term bicycle parking (i.e., bicycle racks) along project frontage and project employees would use the long-term bicycle parking provided in the underground parking garage.

Landscaping

The project's landscaping would be concentrated around the perimeter of the site, with emphasis on the creation of a landscaped buffer between the project and the residential lots to the north, and on creating attractive pedestrian spaces and successful transitions to the adjoining streetscapes.

On the College Avenue frontage the sidewalks would bulb out at the north end of the site, at the crosswalk area at 63rd Street and at the triangular corner where Claremont and College Avenues intersect. Pedestrian-oriented amenities would be installed in these locations, including benches, bike racks, a bus shelter, and planting areas. In addition, the plans call for specialty paving at the shop entrances and on the "Walk Street." Contained planters with bamboo would be installed along a portion of the Claremont Avenue frontage, to screen street views into the parking garage, and a steel trellis with plants below would define the edge of the upper level parking area.

Text continues on page 3-26.

View of walkway entrance from south corner of 63rd Street & College Avenue

South corner of project as seen from intersecton of College & Claremont Avenues

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-14

View looking south down College Avenue from Wood Tavern

View looking north up College Avenue from the corner of 63rd Street

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-15

View looking south down College Avenue from Safeway entrance

View looking east through walkway from College Avenue

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-16

View of retail building at corner of Claremont & College Avenues

View looking south at facaed and garage entrance along Claremont Avenue

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-17

View of interior of parking garage along Claremont Avenue

View of Safeway rear facade and employee parking along Claremont Avenue

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-18

Aerial view of roof terrace at corner of College & Claremont Avenues

Aerial view of parking ramp and setback at neighbors

Source: Lowney Architecture

11-16-10

Architectural Renderings Figure 3-19

Transportation Features

The proposed project would also make the following modifications to the transportation system surrounding the project site:

- Signalize the Claremont Avenue/Mystic Street/Safeway Driveway intersection.
- Provide left-turn lanes on northbound and southbound College Avenue into 63rd Street and the Safeway driveway. The new left-turn lanes are accommodated by widening College Avenue on the east side.
- Provide pedestrian bulb-outs on the east side of the 63rd Street/Safeway Driveway/College Avenue intersection on both the north and south crosswalks across College Avenue.
- Provide a pedestrian bulb-out on the project corner of the College Avenue/Claremont Avenue intersection.
- Provide a bus bulb-out on northbound College Avenue just north of Claremont Avenue and move the existing bus stop from south of Claremont Avenue to north of Claremont Avenue.
- Provide a short pedestrian only street between College Avenue and Claremont Avenue near the south end of the project site with fronting retail uses.

3.4 Discretionary Actions and Other Planning Considerations

Pursuant to the CEQA Guidelines (Section 15051), the City of Oakland is the Lead Agency responsible for preparation of this EIR. The EIR is intended to provide CEQA clearance for all required discretionary actions for the project. The Planning Commission will make decisions on the required discretionary actions. At the time this EIR was prepared, the discretionary actions and other considerations and approvals anticipated to be required for the project include those listed below, without limitation.

3.4.1 City of Oakland

- **Conditional Use Permits** – The project would be required to obtain a four Conditional Use Permits, as follows:
    1. General Food Sales (Planning Code 17.48.040)
    2. Alcohol Beverage Sales (Planning Code 17.48.040)
    3. Size in excess of 7,500 square feet ((Planning Code 17.48.080)
    4. Driveways on College and Claremont Avenues ((Planning Code 17.48.070)
- **Variance** (Planning Code Chapter 17116) - The project would be required to obtain a Variance from the City’s off-street parking requirements, because the auto parking proposed is 15 spaces short of the City’s requirements.
- **Design Review** (Planning Code Chapter 17.136.120) – Design review approval is required for a proposal also requiring Conditional Use Permit reviews or a variance.

- **Tree Removal Permit** (Municipal Code Chapter 12.36) – Pursuant to the City's Protected Trees Ordinance, the project sponsor would be required to obtain a Tree Removal Permit prior to removal of any trees over 9" in diameter, of which 7 are proposed to be removed.
- **Demolition Permits** (Municipal Code 15.36) – The project would require administrative approval of demolition permits to demolish existing buildings and structures on the project site.
- **Encroachment and Construction Permits** (Municipal Code 12.08) – The project would require City approval of encroachment and obstruction permits to work within and close to various public rights-of-way.
- **Excavation Permits** ((Municipal Code 12.12) – The project would require City approval of excavation permits to conduct excavation activities on the project site.
- **Compliance with Oakland's Standard Conditions of Approval –** The project would be required to comply with Oakland's *Standard Conditions of Approval and Uniformly Applied Development Standards*, many of which are specifically referenced in the CEQA Initial Study on the project because their application would reduce potentially significant environmental impacts to a less than significant level.
- **A Tentative Parcel Map –** A Tentative Subdivision map would have to be approved and recorded for the proposed commercial condominiums (the commercial spaces).

3.4.2 Other Agencies

Portions of the project would require review and approval by a number of other public and quasi-public agencies and jurisdictions that have purview over specific aspects of the project. It is anticipated that these other agencies will rely upon this EIR in their review and decision-making processes. A list of these other agencies and their jurisdictional permits and approvals include the following:

- **San Francisco Bay Regional Water Quality Control Board (RWQCB) –** Acceptance of a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards and conditions for all previous contamination at the site have been met.
- **Bay Area Air Quality Management District (BAAQMD)** – Compliance with BAAQMD Regulation 2, Rule 1 (General Requirements) for all portable construction equipment subject to that rule.
- **East Bay Municipal Utility District (EBMUD)** – Approval of new service requests and new water meter installations.
- **Alameda County Flood Control and Water Conservation District (ACFWCD)** – Enforcement of the Stormwater Quality Management Plan and Best Management Practices (BMPs) included in the Alameda Countywide Clean Water Program's Stormwater Pollution Prevention Permit (SWPPP). This is done in conjunction with the City of Oakland, one of 18 co-permittees.
- **California Department of Toxic Substances Control (DTSC) -** Ensuring compliance with state regulations for the generation, transportation, treatment storage and disposal of hazardous waste.

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CHAPTER 4

Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures

This Draft EIR has been prepared in accordance with CEQA, as amended (Public Resources Code Section 21000, et seq.), and the CEQA Guidelines (California Code of Regulations Sections 15000 through 15378).

This chapter contains the analysis of the proposed project's potential environmental effects. This chapter describes the existing setting for each topic, the potential impacts that could result from the proposed project, relevant plans and policies, and Standard Conditions of Approval that would minimize or avoid potential adverse environmental effects that could result from the proposed project, and identifies mitigation measures necessary to reduce the potential impacts resulting from the proposed project.

The following provides an overview of the scope of the analysis included in this chapter, organization of the sections, the methods for determining what impacts are significant, and the applicability of the City's Uniformly Applied Development Standards and Standard Conditions of Approval.

Environmental Topics

Based on the analysis contained in the October 2009 Initial Study, with implementation of the City of Oakland's Standard Conditions of Approval, the project was found to result in less than significant impacts for the majority of the checklist topics including aesthetics, agriculture, biological resources, cultural resources, geology/soils, hazards and hazardous materials, hydrology/ water quality, land use/planning policy, mineral resources, population/housing, public services, recreation, and utilities/service systems. Based on the Initial Study, the Notice of Preparation indicated that an EIR would be prepared, that would focus on the potential air quality, noise, and transportation/traffic impacts. In response to comments received during the scoping process, this EIR also analyses potential impacts associated with f land use plans and policies and visual quality.

The following Sections in this chapter analyze the environmental topics as listed below and presented in the Table of Contents at the front of this document:

4.1 Land Use Plans and Policies

4.2 Visual Quality and Shadow

4.3 Transportation, Circulation, and Parking

4.4 Air Quality

4.5 Greenhouse Gases

4.6 Noise

Format of Environmental Topic Sections, Impact Statements, and Mitigation Measures

Each environmental topic section generally includes two main subsections:

- *Existing Setting*, which includes baseline conditions, regulatory setting, Thresholds/Criteria of Significance, and identification of applicable Standard Conditions of Approval (which are discussed below); and
- *Impacts Analysis*, which identifies and discusses the potential impact and cites applicable Standard Conditions of Approval and mitigation measures that would, to the extent possible, reduce or eliminate adverse impacts identified in this chapter.

This EIR identifies all impacts with an abbreviated designation that corresponds to the environmental topic addressed (e.g., "HAZ" for hazardous materials). The topic designator is followed by a number that indicates the sequence in which the impact statement occurs within the section. For example, "Impact HAZ-1" is the first (i.e., "1") hazardous materials impact identified in the EIR. All impact statements are presented in bold text.

The Impact Classification (discussed below) of the project prior to incorporation of Oakland's

Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval (also discussed below), or implementation of mitigation measures, is stated in parentheses immediately following the impact statement.

Similarly, each mitigation measure is numbered to correspond with the impact that it addresses. Where multiple mitigation measures address a single impact, each mitigation measure is numbered sequentially. For example "Mitigation Measure HAZ-1" is the first mitigation identified to address the first hazardous materials impact (i.e., "HAZ"). All mitigation measure statements are presented in bold text.

Thresholds/Criteria of Significance

Under CEQA, a significant effect is determined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code Section 21068). Each *Impact Analysis* discussion in this chapter is prefaced by criteria of significance, which are the thresholds for determining whether an impact is significant.

This criteria of significance used in this EIR are from the City of Oakland's Thresholds/Criteria of Significance Guidelines. The City has established these Thresholds/Criteria of Significance Guidelines to help clarify and standardize analysis and decision-making in the environmental review process in the City of Oakland. The Thresholds are offered as guidance in preparing environmental review documents. The

City requires use of its Thresholds unless the location of the project or other unique factors warrants the use of different thresholds. The Thresholds are intended to implement and supplement provisions in the CEQA Guidelines for determining the significance of environmental effects, including CEQA Guidelines Sections 15064, 15064.5, 15065, 15382, and Appendix G, and form the basis of the City's Initial Study and Environmental Review Checklist (although one was not prepared for this proposed project).

The Thresholds are intended to be used in conjunction with the City's *Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval* (see discussion below), which are incorporated into projects regardless of the determination of a project's environmental impacts.

Uniformly Applied Development Standards and Conditions of Approval

The City's Conditions of Approval and Uniformly Applied Development Standards Imposed as Conditions of Approval (referred to in the EIR as "Standard Conditions of Approval" or Conditions of Approval) are incorporated into projects as conditions of approval regardless of a project's environmental determination. As applicable, the Standard Conditions of Approval are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects.

In reviewing project applications, the City determines which Standard Conditions of Approval are applied, based upon the zoning district, community plan, and the type(s) of permit(s)/approval(s) required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which Standard Conditions of Approval apply to a specific project. For example, Standard Conditions of Approval related to creek protection permits will only be applied to projects on creekside properties.

All relevant Standard Conditions of Approval have been incorporated as part of the proposed project. Because Standard Conditions of Approval are mandatory City requirements, the impact analysis assumes that these will be imposed and implemented by a project. If a Standard Condition of Approval would reduce a potentially significant impact to less than significant, the impact is determined to be less than significant and no mitigation is imposed. Standard Conditions of Approval are not listed as mitigation measures.

The Standard Conditions of Approval incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System [NPDES] permit requirements, Housing Element-related mitigation measures, California Building Code, and Uniform Fire Code, et al.), which have been found to substantially mitigate environmental effects. Where there are peculiar circumstances associated with a project or project site that will result in significant environmental impacts despite implementation of the Standard Conditions of Approval, the City will determine whether there are feasible mitigation measures to reduce the impact to less than significant levels.

Impact Classifications

The following level of significance classifications are used throughout the impact analysis in this EIR:

- **Less than Significant (LS) –** The impacts of the proposed project, either before or after implementation of standard conditions of approval and/or feasible mitigation measures, do not reach or exceed the defined Threshold/Criteria of Significance. Generally, no mitigation measure is required for a LS impact.
- **Potentially Significant (PS)** – The impact of the proposed project may reach or exceed the defined Threshold/Criteria of Significance, however it is not evident that, even in the theoretical worst-case standard conditions, a significant impact would occur. Where feasible, standard conditions of approval and/or mitigation measures are identified to reduce the PS impact to LS.
- **Significant (S)** – The impact of the proposed project is expected to reach or exceed the defined Threshold/Criteria of Significance. Feasible mitigation measures and/or standard conditions of approval may or may not be identified to reduce the significant impact to a less than significant level.
- **Significant Unavoidable (SU)** – The impact of the proposed project reaches or exceeds the defined Threshold/Criteria of Significance. No feasible mitigation measure is available to reduce the S impact to LS. In these cases, feasible mitigation measures are identified to reduce the S impact to the maximum feasible extent, and the significant impact is considered SU. Impacts are also classified as SU if a feasible mitigation measure is identified that would reduce the impact to LS, but the approval and/or implementation of the mitigation measure is not within the City of Oakland's or the project applicant's sole control, in which case the analysis cannot presume implementation of the mitigation measure and the resulting LS impact. It is important to clarify that SU is an impact classification that only applies *after* consideration of possible mitigation measures.
- **No Impact (N)** – No noticeable adverse effect on the environmental would occur.

Environmental Baseline

Overall, pursuant to Section 15125(a) of the CEQA Guidelines, this EIR measures the physical impacts of the proposed project against a "baseline" of physical environmental conditions at and near the proposed project. As determined by Section 15125(a), the environmental "baseline" reflects circumstances as they existed at the time the NOP of the EIR was published, which was in October 2009. The environmental baseline thus includes the operation of the now closed Union 76 gas station on the site, which operated until November 2009. In most cases, the baseline condition relevant to the environmental topic being analyzed is described within each environmental topic section in this chapter. In some cases (such as Section 4.2, Visual Quality and Shadow), discussion of the baseline condition is detailed or restated in the Impacts Analysis to provide the impact analysis in the most reader-friendly format and organization. The baseline also includes the policy and planning context in which the project is proposed. This is discussed in detail within Section 4.1, Land Use, Plans and Policies, and identifies any inconsistencies between the proposed project and applicable, currently adopted plans and policies.

Due to the fact that no intersection counts were taken prior to the closure of the gas station, the "existing conditions" scenario used in the traffic analysis (Chapter 4.3) relied on actual intersection traffic counts taken after the gas station was closed, and correspondingly excluded gas station trips from the number of trips generated on the project site under the "existing conditions" scenario. Because the increment between this lower number of estimated "existing" trips and the number project-generated trips is larger than the increment between the actual trips generated as part of the environmental baseline and the number of project-generated trips, the approach used in the traffic analyses resulted in an overstated, and thus conservative, estimate of the project's traffic impacts.

Cumulative Analysis

Approach

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impact." Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulative considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. These impacts can result from a combination of the proposed project together with other projects causing related impacts. "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." The City of Oakland's analysis approach specifies that "past, present, existing, approved, pending and reasonably foreseeable future projects" should be included as part of the cumulative analysis.

Context

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of aesthetics. In assessing aesthetic impacts, only development within the vicinity of the project would contribute to a cumulative visual effect. In assessing air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions is the best tool for determining the cumulative effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary.

Generally, to establish a partial baseline for cumulative analysis, the City of Oakland's Major Projects list was used, in part, to determine past, present, existing, approved, pending and reasonably foreseeable future projects in the vicinity of the project. The geographic areas near the project site include North Oakland, South Berkeley, and Rockridge.

Major projects from the City's Major Projects list that pertain to the proposed project vicinity are summarized below. The major projects listed below are not inclusive of all possible past major projects; projects not listed were no longer maintained on the City's list as of March 2010 but are part of the baseline assumptions for the analysis in this EIR. Additional development projects that are not on the City's Major Projects list have also been considered for the cumulative assessment of certain topic areas and are identified in the appropriate environmental topic section in Chapter 4 of this Draft EIR. The transportation analyses (and transportation-related traffic and air quality) used the Alameda County

Congestion Management Analysis (ACCMA) travel demand model which requires inputs at the traffic analysis zones (TAZ) level.

Project Name	Components
City of Oakland	
2538 Telegraph Avenue	• 97 residential units • 9,000 s.f. commercial space
MacArthur Transit Village Project	• +540 residential units • 30,000 s.f. retail/commercial space
Kaiser Permanent Medical Center Building	• Master Plan for new Hospital Phase II • 1,216-space parking structure • Hospital building (346 beds, approx. 1.06 MSF) • Central Utility Plan Phase II • Demolition of existing hospital tower and low-rise (except for recent emergency Department addition and Fabiola Building) • Conversion of ground floor • Parking on Site 7 (38 spaces) to accommodate an additional 6,000 s.f. of retail • Conversion of Emergency Department addition to temporary medical services use • Construction of parking lot of approximately 189 spaces • Construction of new Central Administration MSB (approx. 60,000 s.f.)

Source: City of Oakland, 2010.

Project Name	Components
City of Berkeley	
2200 Oxford Street David- Brower Center	• 206 spaces an underground parking garage • 33,000 s.f. office space • Conference center with 200-seat lecture hall • 1,300-s.f. gallery • 3,000-s.f. restaurant • 96 below-market-rate residential units • 8,000 s.f. of retail space
1700 University Mixed-Use Project	• 60 residential units above ground-floor retail uses • 113 residential units • 45-ft. and 55-ft.-high buildings
920 Heinz Avenue – West Berkeley Bowl Project	• 83,990 s.f. retail, administrative offices, and associated storage space over an underground parking garage • 3,670 s.f. prepared food area • 3,400 s.f. of assembly space to be used periodically for meetings or events • Two stories, 40 ft in height.

Project Name	Components
3075 Adeline Street, Berkeley, Ed Roberts Campus (ERC) Office Building	• 149,081-s.f. eastern parking lot Ashby BART station • 86,057-s.f. 2-story, office building • 118-space parking garage with 36 additional attendant parking spaces • Work spaces for eight enterprises • A 60-seat café, health fitness center, and small childcare center
1885 University Avenue	• 156 rental dwelling units • 14,390 s.f. of retail floor area • 157-space parking garage

Source: City of Berkeley, 2011.

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4.1 Land Use, Plans and Policies

4.1.1 Environmental Setting

The project site is located in an established neighborhood commercial area in the urban North Oakland Planning Area in the City of Oakland. The site consists of two parcels of land at the intersection of Claremont and College Avenues, both major arterial streets. The site has a total surface area of about 2.1 acres and a triangular configuration with approximately 670 feet of frontage on Claremont Avenue and 430 feet of frontage on College Avenue. The northern boundary of the site is about 400 feet long and abuts eight residential parcels. The northern boundary is contiguous with the Oakland/Berkeley city limit line, and the parcels immediately north of the site are in the City of Berkeley. All of the contiguous lots are residential; one fronts on College Avenue (3217 College), one on Claremont Avenue (3306 Claremont) and the other six front on Alcatraz Avenue (2704-2724 Alcatraz).[2] The northern boundary of the site is marked by a wooden fence and the north wall of the existing Safeway store, which is built on the property line.

The College Avenue frontage is defined by a 10-foot wide sidewalk, with several street trees as well as some landscaping trees planted adjacent to the sidewalk on the Safeway property. College Avenue has significant pedestrian traffic on this block, drawn to the shops and stores found there. It is a successful, even congested, neighborhood shopping area with banks, a pharmacy, a produce store, a meat market, a bakery/coffee shop, the Safeway grocery store, a bookstore, several personal services businesses, restaurants and other establishments. College Avenue is also an important transit corridor, with bus stops on both sides of the street in this block.

Unlike College Avenue, Claremont Avenue is not a pedestrian-oriented retail street, as the buildings along Claremont opposite the site are predominately multi-story office buildings. Claremont Avenue slopes up adjacent to the site, climbing about 18 feet between the intersection with College Avenue and the northeastern corner of the site, whereas College Avenue rises about 5 feet along the site's western boundary.

The College/Claremont intersection is large and complex, with two arterial streets crossing at a shallow angle, and two additional offset streets entering from the east (Florio Street) and from the west (62nd Street). The intersection is signalized and features six separate crosswalks. At 40 feet wide, College Avenue adjacent to the site is narrow for an arterial street; Claremont is 56 feet wide where it passes by the site, a more typical width for an arterial street.

The predominant land use in Oakland and Berkeley neighborhoods surrounding the site is residential. The area was actively developed in the early 20th century and a large proportion of the homes are more than 80 years old. Many of the commercial buildings on College Avenue were also developed in the early 20th century, although there has been more redevelopment of commercial properties than of residential properties. The gas station on the project site (recently closed) was first developed in 1920, while the existing Safeway store was built in 1964.

2 One parcel on Alcatraz (2704) is a residential style building occupied by a commercial use. The lot does not extend back to the Safeway site and, hence, is not a contiguous parcel.

The majority of the buildings in the vicinity of the project are multi-story structures, but none have more than four floors, with the tallest being the Alameda County Blood Bank building opposite the site on Claremont Avenue, at 43 feet high. There are two 40-foot tall buildings on College in the project block. All but three of the adjoining residential structures are two-story buildings, and three of these are 30 to 32 feet in height. The existing Safeway store and the now vacant gas station are both single-story buildings.

Aside from the commercial development along College and Claremont Avenues, virtually all of the land within a one-third to one-half mile radius of the project site is devoted to single-family residential development.

4.1.2 Regulatory Setting

The main documents that pertain to land use, density and new development within and around the project site are the City of Oakland's *General Plan, Land Use and Transportation Element* (LUTE) and the City of Oakland's *Planning Code*. In addition, the Oakland *Pedestrian Master Plan*, the *Bicycle Master Plan*, and "Transit First" policy are relevant with respect to the project's street frontages.

Conflicts with a *General Plan* or Zoning do not inherently result in a significant effect on the environment within the context of CEQA. As stated in Section 15358(b) of the CEQA Guidelines, "[e]ffects analyzed under CEQA must be related to a physical change." Section 15125 (d) of the Guidelines states that EIRs shall discuss any inconsistencies between the proposed project and applicable General Plans.

Further, Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on *environmental* policies and plans, asking if the project would "conflict with any applicable land use plan, policy or regulation … *adopted for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). Even a response in the affirmative, however, does not necessarily indicate that project would have a significant effect, unless a physical change would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed elsewhere in this document.

Regarding a project's consistency with the *General Plan* in the context of CEQA, the Oakland General Plan states the following:

The General Plan contains many policies, which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e. in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Act (CEQA).[3]

(a) Land Use and Transportation Element. The Land Use and Transportation Element (LUTE) is intended to guide development within the City of Oakland.

3 City Council Resolution No. 79312 C.M.S., June 2005.

The project site is within the LUTE's Neighborhood Center Mixed Use area along College Avenue.[4] According to the *General Plan*, the intent and desired character of this designation is the following:

The Neighborhood Center Mixed Use classification is intended to identify, create, maintain and enhance mixed-use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office active open space, eating and drinking places, personal and business services, or smaller scale educational, cultural or entertainment uses.

Future development within this classification should be commercial or mixed uses that are pedestrian-oriented and serve nearby neighborhoods, or urban residential with ground floor commercial.

The maximum FAR (Floor-Area Ratio) for this classification is 4.0 … Vertical integration of uses … is encouraged.[5]

The Policy Framework in the LUTE sets forth a series of Objectives and Policies geared to achieving the City's goals for Oakland's neighborhoods. Some of the Objectives and Policies pertinent to the proposed project are noted below, followed by an evaluation of the project's conformance or nonconformance with these policies.

Objective N1: Provide for healthy, vital, and accessible commercial areas that help meet local consumer needs in the neighborhoods.

Policy N1.1: Concentrating Commercial Development. Commercial development in the neighborhoods should be concentrated in areas that are economically viable and provide opportunities for small scale, neighborhood-oriented retail.

Policy N1.2 Placing Public Transit Stops. The majority of commercial development should be accessible by public transit. Public transit stops should be placed at strategic locations in Neighborhood Activity Centers and Transit-Oriented Districts to promote browsing and shopping by transit users.

Policy N1.4 Locating Large-Scale Commercial Activities. Commercial uses which serve long term retail needs or regional consumers and which primarily offer high volume goods should be located in areas visible or amenable to high volumes of traffic …

Project Consistency:

The 6200 and 6300 blocks of College Avenue, on which the site is located, provide a prototypical example of a vibrant, economically viable, small-scale neighborhood-oriented retail district. The existing Safeway store has been in operation on this site for 46 years and is a well-established commercial outlet that has been drawing customers to this commercial district since it opened. The proposed project would maintain the Safeway grocery store and add eight new commercial storefronts, including a restaurant, while eliminating one (long established, but recently closed) gasoline station. The net effect would to further concentrate commercial opportunities in this successful neighborhood-oriented retail district. In this respect the project would conform to Objective N1 and Policy N1.1.

4 *General Plan,* Land Use Diagram

5 *General Plan, Land Use and Transportation Element*, p. 146.

The proposed Safeway store would be approximately twice the size of the existing grocery store on a site that is about 20 percent larger, due to the inclusion of the gas station parcel. The LUTE does not address the scale of commercial enterprises in terms of store size, but provides some guidance in terms of the nature of the commercial activity. This is seen by comparing Policies N1.1 and N1.4, quoted above. Policy N1.4 defines Large Scale Commercial activities as those that serve long term retail needs or regional consumers, while in Policy N1.1, small scale retail is qualified by the term neighborhood-oriented retail. Although much larger than the existing Safeway store, the proposed store would continue to primarily stock groceries, which are typically replenished by households on a weekly or more frequent basis (short-term). The store would not be focused on a regional market (a characteristic of large-scale commercial) as there are many other grocery stores in the region. Accordingly, the land use proposed is appropriately classified as small scale neighborhood commercial retail, as contrasted to large scale commercial.

It is also noted that the maximum FAR for Neighborhood Center Mixed Use Classification is 4.0. This provides specific guidance as to the maximum scale of development anticipated by the *General Plan* in this land use classification. The project as proposed would be well within this scale, with an FAR of 0.72.

The project would be consistent with Policy N1.2, in that transit access will be improved relative to current conditions. A bus shelter and more seating will be added to improve transit accessibility and the bus stop will be strategically relocated so that it will be convenient for patrons of the grocery store, the new shops and the concentration of existing shops in the vicinity of 63rd Street.

In summary, the proposed project generally would be consistent with the LUTE in terms of both the nature of the commercial activity and the scale of the development.

Policy N1.5: Designing Commercial Development. Commercial development should be designed in a manner that is sensitive to surrounding residential uses.

Project Consistency:

The proposed design calls for a 10-foot buffer area (where there is presently no buffer) between the new grocery store and the residential parcels to the north. In addition, the new design calls for an enclosed loading dock and walls that would reduce truck and auto noise impacts on the adjoining residential parcels. The new design demonstrates greater sensitivity to these residential uses than the existing store's design. The effects of this are evaluated in more specific detail in Land Use Impacts and Noise Impacts, below.

Policy N1.6: Reviewing Potential Nuisance Activities. The City should review any proposed new commercial activities that have the potential to create public nuisance or crime problems, and should monitor those that are existing. These may include isolated commercial or industrial establishments located within residential areas, alcoholic beverage sales activities (excluding restaurants, adult entertainment, or other entertainment activities).

Project Consistency:

The proposed project involves the (continued) sale of alcoholic beverages on the site. The applicant has applied for a new conditional use permit to continue this practice. It will involve reviews and recommendations by the Oakland Police Department consistent with Policy N1.6 and other applicable regulations. The project is not an isolated commercial activity in a residential neighborhood, and would conform to Policy N1.6. Other potential public safety and crime prevention impacts are evaluated below in Land Use Impacts.

Policy N1.8: Making Compatible Development. The height and bulk of commercial development in "Neighborhood Mixed-Use Center" and "Community Commercial" areas should be compatible with that which is allowed for residential development.

Project Consistency:

With a main roof height of 30 to 33 feet above grade, a maximum (tower) height of 44.5 feet, and a FAR of 0.72, the project would be substantially taller and bulkier than the existing development on the site. However, there are 3 to 4 commercial or mixed-use buildings opposite the site on College Avenue that are taller than the proposed project and have greater FARs (they are three-story buildings on small lots). In addition, all but one of the office buildings opposite the site on Claremont Avenue are as tall as, or taller than, the proposed project. Furthermore, they lie on higher topography, and appear to have higher FARs. The single-family residential buildings to the north of the site range from 20 to 32 feet in height, and three of them are as tall as, or taller than, the proposed project.[6]

Based on this, it is concluded that the project would be generally consistent with Policy N1.8.

Objective N5: Minimize conflicts between residential and non-residential activities while providing opportunities for residents to live and work at the same location.

Policy N5.2: Buffering Residential Areas. Residential areas should be buffered and reinforced from conflicting uses through the establishment of performance-based regulations, the removal of non-conforming uses and other tools.

Project Consistency:

As noted above, the proposed design calls for a 10 foot wide, landscaped buffer area between the new grocery store and the residential parcels to the north, a solid wall along the northern boundary, an enclosed loading dock, an enclosed trash compactor and enclosed customer parking, all of which would improve buffering and reduce the potential land use conflicts between the Safeway store and the adjoining residences, relative to existing conditions. These buffering measures would all work to bring the project into conformance with Policy N5.2. Their effectiveness is evaluated in more specific detail in Land Use Impacts, Noise Impacts, and Visual Impacts, below.

Objective N10: Support and create social, informational, cultural and active economic centers in the neighborhoods.

6 These residences are in the City of Berkeley. The applicable Berkeley Zoning is R-2, which permits structures to have up to 3 stories and a maximum height of up to 35 feet (with an Administrative Use Permit). Berkeley Municipal Code, 23D.28.070.

Policy N10.1: Identifying Neighborhood "Activity Centers." Neighborhood Activity Centers[7] *should become identifiable commercial, activity and communication centers for the surrounding neighborhood. The physical design of neighborhood activity centers should support social interaction and attract persons to the area. Some attributes that may facilitate this interaction include plazas, pocket parks, outdoor seating on public and private property, ample sidewalk width, street amenities such as trash cans and benches, and attractive landscaping*.

Project Consistency:

The project design endeavors to implement Policy N10.1 by including a variety of design features intended to compliment the pedestrian-oriented nature of the College Avenue activity center. These include the second floor roof terrace at the apex corner of the site, the "walk street," a pedestrian plaza, and new sidewalks, bulb-outs, street furniture, bike racks and landscaping along the College Avenue frontage.

TRANSPORTATION OBJECTIVES – T2 & T6 (Policies T2.2 & T6.2)

(2) Bicycle Master Plan.[8] The Bicycle Master Plan is the City of Oakland's official policy document that addresses the development of facilities and programs to enhance the role of bicycling as a viable transportation choice in Oakland. The Bicycle Master Plan is part of the LUTE Element of the *General Plan*. It defines City policies and recommends actions that would encourage and support bicycle travel improvements.

To develop Oakland as a bicycle-friendly community, the Bicycle Master Plan identifies goals related to bicycle infrastructure, education, coordination and accommodation. The Plan identifies Claremont Avenue as a street for bike lanes (Class 2) and College Avenue is classified as a primary bikeway with a designation as an Arterial Bike Route (Class 3A). The text indicates that arterial bicycle routes may be designated where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. These streets should promote shared use with lower posted speed limits (preferably 25 mph), shared lane bicycle stencils, wide curb lanes and signage.

Data in the Plan indicates that North Oakland has one of the highest proportions of bike ridership (mode share) in the City, and that College Avenue has the highest accident rate (bike accidents per mile) of any arterial in the City.

Project Consistency:

The project is generally consistent with the goals of the Bicycle Master Plan, in that it would not adversely affect the feasibility of implementing bike lanes on Claremont Avenue, nor would it add new impediments to the operation of College Avenue as an Arterial Bike Route. The closure of the large curb cuts at the former gas station site may marginally reduce the potential for auto/bike conflicts and improve safety at a major approach to and from the Claremont/College intersection.

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7 The project site is in the Rockridge Activity Center as shown on the City Structure diagram in the Policy Framework (LUTE, p. 32)

8 City of Oakland, Bicycle Master Plan, December 2007.

Finally, the project plans call for bike racks at 4 locations along the College Avenue frontage plus a large rack (16 bicycles) on the Claremont frontage near the intersection with College Avenue. Bike parking may also be provided inside the garage.

(3) Pedestrian Master Plan.[9] The Pedestrian Master Plan (PMP) is the City of Oakland's policy and planning document relating to pedestrian safety, pedestrian access, pedestrian amenities and education related to walkable communities. The PMP contains several policies and action items that are relevant to the proposed project:

Policy 1.1. Crossing Safety. Improve pedestrian crossings in areas of high pedestrian activity where safety is an issue.

Action 1.1.1: Consider the full range of design elements – including bulb outs and refuge islands – to improve pedestrian safety.

Project Consistency:

The project architects specified a new signalized design for the intersection at 63rd with a widened sidewalk and shortened crosswalk. The transportation analysis (see, Transportation and Traffic Impacts, below.) has determined that the signalization is not warranted under existing plus project conditions, but may be warranted under 2035 cumulative conditions, and recommends that the signalization be deferred and that bulb-outs to assist pedestrian movements should be installed initially. The new traffic signal on Claremont Avenue at the project entrance would include pedestrian signals, as specified by the City during final design. In summary, pedestrian access and safety has been considered in the project design and the transportation impacts analysis, and the project is consistent with Policy 1.1 and Action 1.1.1.

Policy 2.3. Safe Routes to Transit. Implement pedestrian improvements along major AC transit lines and at BART stations to strengthen connections to transit.

Action 2.3.1. Develop and implement street designs (like bus bulb-outs) that improve pedestrian/bus connections.

Project Consistency:

AC Transit Route 51 runs on College Avenue past the site and is one of the busiest routes in the transit system. The project plans include a new bus shelter and additional nearby seating. This bus stop would be relocated in accordance with AC Transit policies.

PMP Policy 3.2. Land Use. Promote land uses and site designs that make walking convenient and enjoyable.

Action 3.2.1. Use building and zoning codes to encourage a mix of uses, connect entrances and exits to sidewalks, and eliminate "blank walls" to promote street activity.

Action 3.2.2. Promote parking and development policies that encourage multiple destinations within an area to be connected by pedestrian trips.

9 City of Oakland, Pedestrian Master Plan, November 12, 2002.

Action 3.2.3. Consider implementing "pedestrian only" areas in locations with the largest pedestrian volumes.

Project Consistency:

The project is in generally consistent with this policy and action items. It proposes a mix of commercial uses, entrances and exits are connected to the sidewalks (the existing Safeway entrance is not), and the existing "blank wall" on College Avenue would be eliminated and replaced with storefront commercial spaces. However, the project does not include any residential units, which would further promote a pedestrian environment.

While the proposed parking would primarily support shopping at Safeway, its layout and proximity to the new and existing small commercial shops on College would effectively promote parking once and walking to multiple destinations. A number of commenters on the Initial Study noted that the existing Safeway parking lot is currently used in this way; the project would increase the number of potential shopping destinations in close walking distance.

The project design specifically includes a "pedestrian only" "walk street" with excellent access to shops, cafes, and a terrace, in conformance with Action 3.2.3.

(4) City of Oakland "Transit First" Policy. The City of Oakland adopted a "Transit-First" Resolution in October 1996. It declares the City's support for public transit and other alternatives to single-occupant vehicles. This policy favors modes that have the potential to provide the greatest mobility for people rather than vehicles.

Project Consistency:

The bus stop on the College Avenue frontage (currently adjacent to the Alcatraz intersection) is proposed to be relocated to a new position approximately 70 feet north of the intersection with Claremont Avenue. It would be fitted with a bus shelter and bench, amenities that the existing bus stop lacks. The new stop would be closer to the store and the added features could enhance mass transit usage These improvements are in conformance with the "Transit-First" Policy. See, also Transportation and Traffic, below.

(5) City of Oakland Planning Code. The City of Oakland Planning Code[10] implements the policies of the *General Plan* and other City plans, policies and ordinances. The Planning Code divides the City into zones, each of which is assigned different land use and development regulations. These regulations direct the construction, nature and extent of building use.

Zoning. The project site is within the **C-31 Special Retail Commercial Zone**.[11] The C-31 Zone is "intended to create, preserve, and enhance areas with a wide range of retail establishments serving both short and long term needs in attractive settings oriented to pedestrian comparison shopping, and is typically appropriate along important shopping streets having a special or particularly pleasant character."[12]

10 City of Oakland, Municipal Code, Title 17.

11 City of Oakland, Municipal Code, Chapter 17.48.

12 City of Oakland, Municipal Code, Section 17.48.010.

A wide range of residential, civic, and commercial uses are allowed in this zoning district, either as a matter of right or with Conditional Use Permits. Pursuant to Section 17.48.040, the proposed project would require Conditional Use Permits for general food sales, alcoholic beverage sales and for the full service restaurant proposed in one of the commercial spaces. Under section 17.40.080 a Use Permit would be required because the project includes a single commercial space with over 7,500 square feet (i.e. the grocery store at 51,510 square feet) and, under section 17.48.070, a Use Permit would be required for the off- street parking and driveway on the ground level.

The zoning regulations also provide a height limit of 35 feet for commercial buildings (Section 17.48.140), and sets front, side and rear yard requirements (Section 17.48.150). It is noted that the Code, in section 17.108.030 allows decorative features covering less than 10% of the roof area to exceed the height limit by up to 15 feet. None of the yard requirements in this section are applicable to this project, although, separately, section 17.108.100 requires a 10-foot minimum rear yard when a commercial property abuts a residential zone.[13]

Additional cross-referenced sections of the Planning Code that are directly applicable to the project include regulations regarding parking and loading requirements, bicycle parking requirements, and recycling space allocation requirements.

Under the Parking and Loading requirements (Chapter 17.116) the project would require a total of 186 parking spaces (194 spaces less an eight-space reduction for additional bicycle parking.) As designed, the project provides 171 parking spaces, and the applicant has requested a zoning variance to permit less than the required number of spaces.

With respect to the loading requirements, Section 17.116.140 requires two unloading berths for general food sales and retail between 25,000 and 49,999 square feet and three berths for stores between 50,000 and 99,999 square feet. The design calls for two unloading berths, although, with 51,510 square feet for the supermarket, the project falls just within the three berth range. Safeway has requested a variance to allow two berths.

Section 17.117.110 requires one long-term bicycle parking space for every 12,000 square feet general food sales and 1 short-term space for every 2,000 square feet. For general retail sales, the requirement is one long-term space for every 12,000 square feet with a minimum of two spaces and one short-term space for every 5,000 square feet, with a minimum of 2 spaces.

Section 17.118.030 requires commercial projects to provide 2 cubic feet of recycling space per 1,000 square feet of floor area.

Finally, it should be noted that the eight proposed tenant spaces, which range in size from 462 to 3,172 square feet, would also be subject to the C-31 zoning regulations, and future tenants would have to independently comply with applicable City permits and approval requirements.

Project Consistency: The proposed project would continue and expand the existing, permitted, land use on the site (general food sales, alcohol sales) and add seven general commercial spaces and a restaurant to

[13] Technically, this requirement may not apply because the residential zone is in a separate jurisdiction (the City of Berkeley), however, the 10-foot rear yard has been incorporated into the project.

create new pedestrian comparison shopping opportunities, consistent with the overall intention and purpose of the C-31 zoning district regulations.

In approving the necessary Conditional Use Permits and applying other applicable provisions of the Planning Code the Oakland Planning Commission has broad discretion with respect to the details of specific conditions and interpretations of the Code's provisions and procedures, including design review. The analysis in this EIR with respect to the land use consistency is based on the information currently available, and will be further developed in the more detailed work of the Planning Commission during the public review process and consideration of the project approvals.

As noted, general food sales with alcoholic beverage sales are permitted in the C-31 Zoning District, with Conditional Use Permits. The proposed new Safeway store, at 51,510 square feet is twice the size as the existing store and more than six times the size of store that could be permitted as a matter of right (i.e. without a Conditional Use Permit). However, the overall project, with a FAR of 0.72 is less than one forth the size of the maximum built area and mass that is specified for this area in the Oakland *General Plan*. (See, (1) Land Use and Transportation Element, above.) Accordingly, the size of the project would appear to conform to the general parameters of the Planning Code established for this District.

The project's design is within the applicable height and setback regulations set forth in the Zoning Code. The project would also meet applicable zoning regulations for bicycle parking and recycling space.

The project would require a variance to the City's zoning requirements to address a shortfall of 15 parking spaces. A variance also would be required because the project proposes two loading spaces (three spaces would be required without a variance).

4.1.3 Impacts and Mitigation Measures

Significance Criteria

Implementation of the proposed project would have a significant land use impact if it would:

1. Physically divide an established community.
2. Result in a fundamental conflict between adjacent or nearby land uses.
3. Result in a fundamental conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the *General* plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment; or,
4. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan.

Community Integrity

Impact LU-1: The project would replace the existing Safeway store and add more storefronts and parking, but would not result in the physical division of the established neighborhood retail area. (No Impact)

The physical division of an established community typically refers to the construction of a major physical feature (such as a major freeway or railroad) or removal of means of access (such as a road or bridge) that would impair mobility within an existing community, or between a community and outlying areas.

College Avenue in the vicinity of the College/Claremont triangle experiences high amounts of vehicular, pedestrian, and transit activity, and is recognized as a vibrant and successful neighborhood commercial area. The existing Safeway store has been a fixture in this neighborhood for 46 years, and is a draw for customers that patronize other retail venues in the area as well. By replacing the Safeway store and adding more storefronts for additional shops and restaurants, as well as more parking, the proposed project would complement and expand, not divide, this established neighborhood retail area. No adverse impacts with respect to the division of the community are projected.

Mitigation: None required.

Conflict with Adjacent Land Uses

Impact LU-2: The project would not result in a fundamental conflict between adjacent and nearby land uses. (Less than Significant).

The uses immediately adjacent to the project site include residences to the north and two arterial streets. The project design includes a 10-foot landscaped buffer between the residential lots (all but one of which have fences along their property lines that range from 6 to 12 feet tall). The proposed new structures on the site would be as much as 10 feet taller than the existing Safeway store (which is built on the property line), and would extend along the full width of the parcel. Currently about two-thirds of the north property line abuts the existing surface parking and a surface loading dock, and one-third is occupied by the Safeway building. Since the site slopes up from west to east, the maximum height differential between the residential and the commercial buildings would occur near College Avenue (about 30 feet), gradually declining to only about 6 feet at Claremont Avenue.

Because of the 10-foot setback, the visual and shading effects of the taller new building would be little changed from existing conditions with respect to those residential lots that lie adjacent to the existing Safeway building, which abuts the property line. Because of the rising topography, the buffer zone could provide separation and visual shielding between the project and the yards and homes of the two or three residential parcels adjacent to the eastern (Claremont) side of the site.

The two or three mid-block residential parcels would have the new walls of the parking structure rising 10 to 15 feet above grade, 10 feet from their rear fences. Occupants of these parcels could note the change in visible building mass from the rear, upper-story widows, but the project would be minimally visible from the rear yards, because of the existing tall fences along the rear property lines. The reconstructed loading docks and maneuvering area, which are now immediately adjacent to the residential fences, would be moved to the upper level of the new store and enclosed to reduce noise from the unloading process. The engine noise from truck maneuvering would also be reduced to the extent that line-of-sight access between the trucks and the yards and windows of the homes would be blocked by the concrete floor and parapets on the parking structure.

The project's landscaping plans call for extensive tree planting in the buffer strip along the northern boundary. These trees would, over time, filter, soften and even hide views of the project's buildings when seen from the adjacent residences. The trees proposed are: Japanese Hackberry (*celtis sinensis*), a fast growing, deciduous, shade tree, 40+ feet tall, and with seeds that attract birds and squirrels; Southern Magnolia (*magnolia grandifloria*), a broadleaf evergreen, with showy, fragrant spring flowers that can reach 60 feet in height; and Brisbane Box (*lophostemon confertus*), a leafy evergreen that grows to a height of 35+ feet. As these trees mature, they would augment the 10-foot-wide horizontal buffer with a vertical screen of vegetation that would eventually create a visual separation between the adjoining residential and commercial land uses that currently exists. In conclusion, the combination of the screening provided by and in the buffer zone and the relocation and enclosure of the loading docks, would reduce any potential commercial/residential land use conflicts with respect to these homes; the potential impact would be less-than-significant.

Mitigation: None required.

Conflicts with Applicable Plans, Policies and Regulations

Impact LU-3: The project would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. (No Impact)

The relationship of the proposed projects with Oakland's *General Plan* and zoning regulations is discussed in the preceding section. If the project is approved with the appropriate Conditional Use Permits and Variances made on the basis of findings as set forth in the Zoning Code, the project would conform with these applicable plans and regulations.

Mitigation: None required.

Conflict with Conservation Plans

Impact LU-4: The project would not conflict with habitat conservation plans or natural community conservation plans. (No Impact)

There are no applicable habitat conservation plans or natural community conservation plans, and the project would have no impacts with respect to either.

Mitigation: None required.

Cumulative Land Use, Plans and Policies Impacts

The geographic context considered for the cumulative land use, plans and policies impacts includes the surrounding area that, when combined with the proposed project area, could result in cumulative land use, plans and policies impacts. Given the nature of the potential impacts analyzed for this topic, the geographic scope would generally include the College Avenue and Claremont Avenue commercial corridors and surrounding areas within one-half mile of the project site.

Impact LU-5: The proposed project, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, does not reveal any significant adverse cumulative impacts in the area. (Cumulative Impact: Less than Significant)

Past projects in this area are included in the existing setting described in Environmental Setting, above. Present projects would include any projects currently under construction, and reasonably foreseeable future projects are those that could be developed or occur, within the geographic context area. There are no approved or pending projects in this area. As concluded in this section, the proposed project would not result in any significant impacts resulting from physically dividing an established community or conflicting with any land use plan, policy or regulation adopted for purpose of avoiding or mitigating an environmental effect. The proposed project site is a triangular parcel bounded by College and Claremont Avenues on two sides, and by residential parcels on the third side. Other development could not combine with the proposed project to result in a cumulative effect on an established community. Similarly, because the proposed project does not result in a conflict with a land use plan, policy or regulation in manner that could result in a significant environmental effect, whether other present or future development would have such a conflict, the effect would not combined to create cumulative "conflict." In addition, past projects have, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the *General Plan* and the *Planning Code* to ensure land use compatibility. Therefore, it is not anticipated that the proposed project, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, would result in a cumulative impact with respect to land use, plans and policies. Thus, the proposed project would not result in a significant cumulative land use, plans and policies impact.

Mitigation: None required.

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4.2 Visual Quality

The Initial Study on pages 17 to 27 discusses and evaluates the ten areas of potential aesthetic impacts as identified on the CEQA environmental checklist, and concludes that there are no potentially significant impacts. In response to comments received during the scoping process , this section includes further discussion and analysis of the existing visual conditions for the project site and vicinity and analyzes the potential for the project to affect the visual character of the project area, and views from surrounding public areas. Pursuant to the City's amendment to the Oakland General Plan (City of Oakland, 2005), as well as Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts that may result from the project.

4.2.1 Environmental Setting

This assessment of visual quality focuses on the built environment. The project site before and after the building of the proposed project are shown in Figures 4.2-1 through 4.2-8.

The following summary describes the built environment on the project site and in the project site vicinity. Site descriptions are provided in Chapter 3, Project Description and Section 4.1, Land Use, Plans and Policies, which focuses on existing land uses. The visual setting of the project area reflects the characteristics of the project area's existing uses, street grids, and natural and manmade features.

Project Site and Vicinity

The project site is located at the north end of College Avenue's Rockridge neighborhood commercial area, characterized by a variety of commercial buildings and store-front shops fronting the street, many with upper level residential and office uses. Generally, the commercial strip along College Avenue quickly transitions into the surrounding dense, small-lot residential neighborhood, which features predominately single-family, older homes on attractive tree lined streets.

While the project site adjoins a residential street to the north, it is an atypically pie-shaped wedge, formed by the crossing of College and Claremont Avenues, and has commercial frontage, and major arterial streets, on two of its three sides.

These arterial streets contribute in important ways to the site's visual setting. College Avenue is a north-south arterial running parallel to the ridgeline of the Oakland hills to the east, and has relatively little elevation change. Claremont Avenue, by contrast, angles up toward the hills, climbing 20 feet as it passes by the site, (compared to College Avenue's 6-foot rise). As a result the project site has an obvious slope, down to the southwest.

College Avenue is also narrower than Claremont Avenue (40 feet vs. 56 feet wide) and lined by tall, stately sycamore trees in the block adjacent to the site.[14] This block also has a dense concentration of

[14] College Avenue is 40 feet wide adjacent to the site, but becomes about 10 feet wider past the Berkeley border, immediately north of the site. The landscape trees along the site frontage on College Avenue are different (pepper and bottlebrush trees) and much smaller. The sycamore trees, however, dominate the block.

Source: Lowney Architecture
11-16-10

Photo View Areas Figure 4.2-1

Source: Lowney Architecture

11-16-10

Existing and Project Views of Intersection at College and Claremont Avenues Figure 4.2-2

Source: Lowney Architecture
11-16-10

Views of Existing Flatiron Building, Gas Station and Proposed Corner Infill Figure 4.2-3

Typical Existing Retail—Across from Proposed Project

Existing site

View of proposed project from Cole Coffee

Source: Lowney Architecture
11-16-10

Views of College Avenue Streetscape Figure 4.2-4

Source: Lowney Architecture

11-16-10

Views of College Avenue Streetscape Figure 4.2-5

Source: Lowney Architecture

11-16-10

Views of College Avenue Streetscape Figure 4.2-6

Existing building on northwest corner

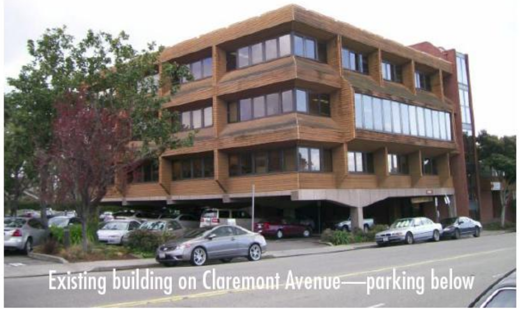
Existing view south

Proposed view south

Source: Lowney Architecture

11-16-10

Views at Intersection of College and Alcatraz Avenues Figure 4.2-7



Source: Lowney Architecture

11-16-10

Views at Intersection of College and Alcatraz Avenues Figure 4.2-8 small commercial, food and service businesses with a strong pedestrian presence, while the side of Claremont Avenue opposite the site is developed with office buildings, and does not have a dense street tree canopy or extensive pedestrian activity. The site is very visible to northbound travelers on both College and Claremont Avenues, primarily because the long, octagonal intersection of those streets opens up views that bring the angular corner of the site into prominence. A gasoline station has been on this corner for decades, but was recently closed and fenced. The structures on the gas station site also stand out because the site has no landscaping to screen or filter views of them.

The existing Safeway store is hidden behind the gas station when viewed from the south, but the Safeway sign is visible and the open parking lot and the front of the store quickly come into view for travelers heading north on Claremont Avenue, just past the intersection. Views from College looking south and from the other direction on Claremont are more filtered and less direct. On College Avenue, the most apparent feature of the store is the windowless, rock covered sidewall. The building is set at an angle to the sidewalk, and leaves a wider, almost plaza-like space in front of the 63rd Street crosswalk, with newspaper racks, street trees and landscaping trees on the Safeway site, and also with an unmarked store exit door and ramp. An enclosed trash storage area abuts the sidewalk in the middle of the store's wall.

The front of the store faces the parking lot, not a street, and is not visible to viewers traveling south on College Avenue. Northbound travelers on College Avenue come up quickly upon the store, because both the store and the Safeway sign are partially obscured behind the gas station, and by street trees. Southbound travelers on Claremont Avenue also don't see the store until they are almost beside it, because the entire site lies well below the street level, and the parking lot occupies the entire Claremont Avenue frontage. The parking lot is open and un-landscaped. It is illuminated at night by two double-fixture light standards, which appear to mirror the street light fixtures on Claremont.

The existing Safeway store is a single-story building, with perimeter walls that are 16 to 17 feet tall and an arched roof that rises to 20 to 21 feet , centered over the entrance. The gas station service building is small in terms of area and height (14 feet), and the taller canopy over the gas pumps is at least as prominent as the gas station service building. Together, these two buildings are on one of the largest land parcels in the neighborhood, but they are among the shortest, and least bulky.[15] Also, with the possible exception of the nearby Bank of America the structures on the site are the only buildings in the neighborhood with such prominent parking, unscreened from street view. In these respects, the existing store and gas station have a less-urban/more-suburban quality, with a design that is more representative of the car culture of the 1960s, as contrasted with the surrounding compact and denser urban residential environment of an earlier street-car culture.

The site is bounded on the north by the backyards of a street of residential buildings (the 2700 block of Alcatraz Avenue – in the City of Berkeley – plus one residence on College and one on Claremont Avenues). The two lots closest to College Avenue back up against the windowless wall of the Safeway Store, which is built to the property line. The remaining homes are separated from the store's parking lot, and loading dock, by fences, most of which have a thick covering of ivy. Some of the fences rise up to 12 feet in height, gradually decreasing to 6 to 7 feet tall as the fence line approaches Claremont Avenue. The fences block visual access to the parking lot from the backyards and the first- or, in some cases, second-story windows of the homes. A Safeway semi-trailer is permanently parked near the loading dock, and is

[15] The Shell gasoline station at the southern corner of the intersection is also short and has low lot coverage.

visible from the adjoining home, as well as the parking lot. A recycling/compacting machine is positioned along the fence, as well.

4.2.2 Regulatory Setting

Local Plans and Policies

City of Oakland General Plan

Oakland General Plan policies that pertain to visual quality relevant to the proposed project and its vicinity are contained within the General Plan Open Space and Conservation Element (OSCAR), and the

The General Plan's Land Use and Transportation Element (LUTE). While most of the objectives and policies in the LUTE focus on land use and transportation considerations, some of the policies indirectly address visual and aesthetic considerations as listed below:

- Particular attention should be paid to (a) views of the Oakland Hills from the flatlands; …and (d) panoramic views from Skyline Boulevard. (*OSCAR Policy OS-10.1*)
- New development should minimize adverse visual impacts and take advantage of opportunities for new vistas and scenic enhancement. (*OSCAR Policy OS-10.2*)
- Designing Commercial Development. Commercial development should be designed in a manner that is sensitive to surrounding residential uses. (*LUTE Policy N1.5)*
- Making Compatible Development. The height and bulk of commercial development in "Neighborhood Mixed-Use Center" and "Community Commercial" areas should be compatible with that which is allowed for residential development. (*LUTE Policy N1.8:)*
- Undergrounding Utility Lines. Electrical, telephone and related distribution lines should be undergrounded in commercial and residential areas, except where special local conditions such as limited visibility of the poles and wires make this unneeded. (*LUTE Policy N12.4) …*

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

Several of the City's Standard Conditions of Approval are relevant to visual quality and are noted in the Initial Study. These include Standard Conditions related to the design and performance of night lighting fixtures to prevent them from casting unnecessary light and glare onto adjacent properties (Standard Condition AES-1), Standard Conditions related to the removal and replacement of trees on the site (Standard Conditions BIO-2 and BIO-3). If the proposed project is approved by the City, then all applicable Standard Conditions of Approval would be adopted as conditions of approval and required of the project to help ensure less-than-significant impacts to visual quality. The Standard Conditions of Approval are incorporated and required as part of the project, so they are not listed as mitigation measures. Standard Conditions of Approval applicable to potential visual quality impacts due to the project include:

SCA AES-1 1: Lighting Plan
Prior to the issuance of an electrical or building permit. The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

City of Oakland Planning Code

In accordance with the Oakland Planning Code, Chapter 17.136, the proposed project shall be subject to Design Review by the Oakland Planning Commission. Design Review considers the visible features of a project and the project's relationship to its physical surroundings. Although independent of CEQA and the EIR process, design review is focused on ensuring quality design, and at avoiding potentially adverse visual effects. In completing Design Review the Commission must find:

- That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration give to site, landscape, bulk, height, arrangement, texture, materials, colors and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding areas. Only elements of the design which have some significant relationship to outside appearance shall be considered, *(Section 17.136.050 (B) (1)).*
- That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area. (*Section 17.136.050 (B) (2*)).

4.2.3 Impacts and Mitigation Measures

Significance Criteria

The proposed project would have a significant impact on the environment, if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or locally designated scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;
- Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986);
- Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
- Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;

- Cast shadow on an historic resource, as defined by CEQA Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5;
- Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses.
- Create winds exceeding 36 mph for more than 1 hour during daylight hours during the year.

The first three criteria related to scenic vistas, scenic resources, and visual character are discussed below. The last seven criteria related to day or nighttime light and glare; shadows on solar appliances, open spaces and/or historic resources; exceptions to polices and regulations for light; and hazardous winds were all analyzed in the Initial Study and were determined to be less than significant. Therefore they are not discussed in this EIR.

Impacts

Scenic Vistas or Resources

Impact AES-1: The proposed project would not adversely affect a scenic vista or substantially damage scenic resources within a State or locally designated scenic highway. (Less than Significant)

A scenic vista can be defined as an expansive view from a public place, a highway, or roadway corridor that is accessible to many people, usually related to natural features (hills, ridges, waterways, shorelines, etc.), but not exclusively (urban skylines, parks, etc.). The analysis of the project's effect on scenic vistas and whether the project would substantially damage scenic resources, focuses on changes to existing, notable public viewsheds that would result from implementation of the project. Because of existing development at the project site and in its vicinity, scenic resources and views at and through the project site and vicinity are generally limited to long-range views of the Oakland hills to the north and northeast, which are only available when looking northward between or above the existing Safeway store and gas station buildings. Given the existing land use patterns, views of and through the project site would not qualify as scenic vistas.

As noted in the Initial Study, the project site is not visible from a state or locally designated Scenic Highway, and would not affect scenic resources along a scenic highway.

The views of the site available from the south and from the parking lot are that of an urban environment, the context of which is defined by the hills and ridgelines to the east, with extensive residential development in a mature urban forest. The view up Claremont Avenue offers a particularly pleasant vista with the line of the street ending at the base of the steep hills, framed by the ridgeline above.

The new project would frame the vistas looking north on Claremont and on College Avenues. The project would provide a new foreground element in the vista looking northeast on College Avenue, but it would not have a substantial adverse effect on this vista. The project would also add a new structural element to the vista enjoyed by travelers down Claremont (southbound). The new Safeway would be more apparent from longer distances than the existing store, but it would be to the side of the primary focus of view, which looks southwest to the cranes in the Port and the Bay beyond, and would not block any views. Along Claremont, the building would be lower than the office buildings on the southeast side of the street. The landscaping along the sidewalk (linear planters, a trellis above, and bamboo screening along the parking garage) would soften the edges and add visual interest. The project would not significantly modify the views along the Claremont corridor nor block views to the East Bay hills, and would not have significant adverse impacts on this vista.

Two neighborhood residential streets, 63rd Street, and Mystic Street, have T intersections with College and Claremont Avenues, respectively, and views down these street look directly onto the project site. Both streets are narrow and have thick street tree cover, creating tightly focused fields of view.

The view from 63rd Street looks through the open parking lot to the office building on Claremont Avenue behind, while the view down Mystic Street ends at the wall of the existing Safeway Store. The project would change the view down 63rd Street from the existing wall to the proposed entrance to the parking garage and the store above, which would contain horizontal window lines with three types of glass and/or metal trim.

The view down Mystic Street would terminate at the wall of the new Safeway store, near the loading dock, filtered through the landscape planters, plantings and trellis along the Claremont Avenue sidewalk.

Because the fields of view are so narrow and the existing views feature commercial buildings, the project would not result in a substantial degradation of these views and no significant impacts on the views of the East Bay Hills would occur.

Mitigation: None required.

Visual Character

Impact AES-2: The proposed project would alter the existing visual conditions on the project site, but would not substantially degrade the existing visual character or quality of the site and its surroundings. In addition, it would be consistent with the City of Oakland Design Review criteria for non-Residential projects. (Less than Significant)

The proposed project would result in a change to the visual character of the site by the proposed demolition of the existing on-site structures and the new construction of a new building containing a supermarket, garage, surface parking, and commercial shops.

The project site is at an urban corner, and the close-range views in all directions are characteristically urban, with a variety of building styles, massing and heights. The visual quality of the existing site development is affected by layout and design and the extent to which it is integrated into the commercial area and the site's topography. The limited landscaping affects the visual quality as well, particularly on College Avenue where it contrasts with the pattern established on the rest of the block.

The proposed project would add a second level of building area over much of the site, with enclosed parking on the ground level behind a row of new shops fronting on College, and with the Safeway store on the second level, along with open employee parking and enclosed loading docks. The development would step down to a single-story building with a rooftop plaza at the apex of the site, and with the rising topography along Claremont Avenue, the roof of the parking structure would be below grade at the upper corner of the site. Figure 4.2-2 compares the existing view from the south with the architect's rendering from the same viewpoint. The increased height and bulk of the proposed development would be of similar scale when compared with the existing buildings on the other corners. The decorative tower, at about 40 feet high, would be a major new visual element when seen from the south, although it would be similar in height with several nearby buildings on both College and Claremont Avenues.

The proposed Safeway Store would be twice as large as the existing store, and the total developed floor area on the overall site would be greater, as would the number of parking spaces. The customer parking would be in back of the storefronts, generally hidden from street view. The increased height and added bulk of the project would be visible from both College and Claremont Avenues, but not out of scale with the existing pattern of development, as taller and bulkier (e.g., higher FAR) buildings are found in close proximity to the site.

College Avenue Frontage. The single-story building on the corner and the row of eight storefronts (plus the Safeway entrance lobby) would add visual variety and pedestrian appeal on College Avenue, and could add to the vitality of the shopping area. The "walk street" with its small shops, and the rooftop terrace and bridge would contribute to the ambiance and visual appeal. By reducing the visibility of parked cars and eliminating the gas station, the auto-orientation of the site would be visually reduced. By adding the small shops, the walking and sitting areas and other amenities, the east side of College Avenue would be more compatible with the west side, and the site appearance would be more pedestrian than auto-oriented. The proposed buildings have been designed for this site (as contrasted with the existing, corporate name-identity architecture). The project would provide landscaping to soften its edges and integrate with the existing streetscape.

Adjoining Residences. The proposed project calls for a ten-foot landscaped buffer strip along the northern boundary of the site, which backs up to a row of residential lots. Near College Avenue, the project building would rise approximately 30 feet above grade, dropping to about 6 feet (the height of the fence) near Claremont. The existing Safeway store is built to the property line (no setback), and all of the residences currently have tall fences (as much as 12 feet high) in their back yards. The visual change from each of these residences would be different for each parcel, but for most of them there is likely to be little change in views from the back yard or first floor windows, because of the new building setback and the existing tall fences. Eventually, the landscape trees to be planted in the buffer will provide a vegetative screening of the site, from both ground level and second floor windows. The buffer would provide a visual transition and would be an improvement relative to existing conditions.

Claremont Avenue Frontage. The project would add a structure that would be 30 feet tall along almost one-third of the Claremont Avenue frontage, where no structures currently exist. There would be two separate buildings, divided by the "walk street" with its three small shops. The exterior surface of the larger, Safeway building would be divided into smaller visual units with the use of a variety of surface textures, colors, and architectural detailing including the storefront windows, upper level windows, landscaped portals in the lower parking level, three entrance driveways and linear planters and a trellis along the sidewalk. Although the building would be a new addition to this street frontage, which now overlooks the parking lot and much smaller store, it would not appear out of context given the commercial development on all corners of the Claremont/College intersection, nor would it be out of scale with the existing office buildings across Claremont Avenue.

For these reasons, the overall visual impacts of the project would be less-than-significant, and consistent with the City of Oakland Design Review criteria.

Mitigation: None required.

Cumulative Visual Quality Impacts

The geographic context used for the visual quality assessment of the proposed project encompasses areas surrounding the project site, which are depicted in existing setting photographs in the above figures.

Impact AES-3: Project construction activity and operations, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, would result in cumulative impacts related to visual character, views, aesthetics, shadow, or light and glare. (Less than Significant)

Implementation of the proposed project combined with cumulative development in the defined geographic area, including past, present, existing, pending and reasonably foreseeable future development, would not result in significant adverse changes to the visual environment, including visual character and views, light and glare, and shadow. New development would, in general, occur as redevelopment projects, by replacing existing development with more intense development as the project site vicinity is largely built out.

All future development that could occur in the project site vicinity would be required to adhere to established restrictions, guidelines, policies, and criteria that address building appearance, height, bulk, and configuration, and the type of land use. Thus, there would not be significant cumulative visual impacts, and the effect of the proposed project, in combination with other foreseeable projects, would be less than significant.

Mitigation: None required.

References – Visual Quality and Shadow

California Department of Transportation, The California Scenic Highway System, http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm, accessed December 2, 2008.

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City of Oakland, *Justification for Granting Non-Residential Design Review*. Available Online: http://www.oaklandnet.com/government/ceda/revised/planningzoning/zoningsection/Forms /Non-Residential%20Design%20Review%20findings%20(07-13-04).pdf, accessed September 9, 2009.

City of Oakland, *Envision Oakland, City of Oakland General Plan, Land Use and Transportation (LUTE)*

Element, as amended through March 24, 1998.

City of Oakland, *Open Space, Conservation and Recreation (OSCAR), An Element of the Oakland General Plan*, adopted June 1996.

City of Oakland, *Scenic Highways, An Element of the Oakland Comprehensive (General) Plan,* adopted September 1974.

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4.3 Transportation, Circulation and Parking

This section describes the transportation, circulation, and parking conditions, including transit services and pedestrian and bicycle facilities on the project site and its vicinity, and provides an analysis of the proposed project's potential impacts. Figure 4.3-1 illustrates the location of the proposed project and the local and regional street system. The analysis evaluates the traffic-related impacts of the proposed project during the weekday evening and Saturday evening peak hours. The analysis was conducted in compliance with City of Oakland and Alameda County Congestion Management Agency (ACCMA) guidelines. Traffic conditions are assessed at 15 critical intersections in the study area for the following six scenarios:

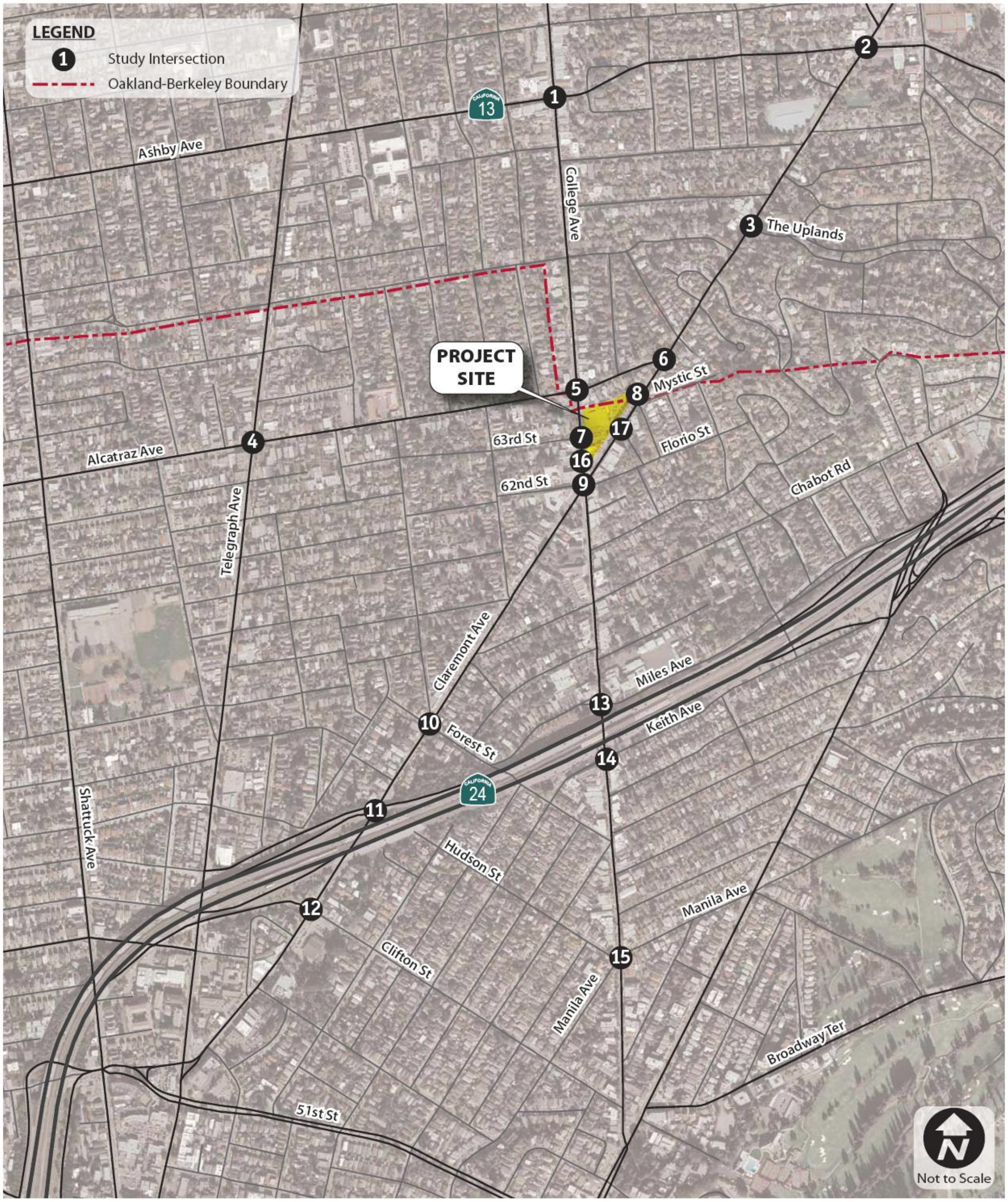
- ***Existing*** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- ***Existing Plus Project*** – Existing conditions plus project-related traffic.
- ***Near-Term (2015) No Project*** – Future conditions with planned population and employment growth and planned transportation system improvements for the year 2015. This scenario assumes no traffic growth at the existing Safeway site. Traffic projections were developed using the Alameda Countywide Travel Demand Model provided by the ACCMA (ACCMA Model).
- ***Near-Term (2015) Plus Project*** – Future forecasted conditions for the year 2015, as determined in the Near-Term No Project scenario, plus project-related traffic.
- ***Cumulative (2035) No Project*** – Future conditions combined with past and present developments with planned population and employment growth and planned transportation system improvements for the year 2035, combined with past and present developments. This scenario assumes no traffic growth at the existing Safeway site. Traffic projections were developed using the ACCMA Model.
- ***Cumulative (2035) Plus Project*** – Future forecasted conditions for the year 2035, as determined in the Cumulative No Project scenario, plus project-related traffic.

4.3.1 Existing Setting

The existing transportation-related context in which the proposed project would be constructed is described below, beginning with a description of the study area and the street network that serves the project site. Existing transit service, bicycle and pedestrian facilities, and on- and off-street parking in the vicinity of the project site are also described. Intersection and roadway levels of service are defined and current conditions for roadways and intersections in the project vicinity are summarized. This subsection also discusses planned transportation improvements in the project vicinity.

Study Area

Intersection operations at 15 intersections in the vicinity of the project site, as depicted in Figure 4.3-1, were evaluated during the weekday evening (4:00 PM to 7:00 PM) and Saturday evening (4:00 PM to 7:00 PM) peak periods for Existing, 2015 and 2035 conditions.



Source: Fehr & Peers

11-17-10

Project Study Area Figure 4.3-1

The following study intersections are located in the City of Berkeley:

1. Ashby Avenue/College Avenue (*signalized*);
2. Ashby Avenue/Claremont Avenue (*signalized*);
3. The Uplands/Claremont Avenue (*signalized*);
4. Alcatraz Avenue/College Avenue (*signalized*);
5. Alcatraz Avenue/Claremont Avenue (*unsignalized*);

The following study intersections are located in the City of Oakland:

6. Alcatraz Avenue/Telegraph Avenue (*signalized*);
7. 63rd Street/College Avenue (*unsignalized*);
8. Mystic Street/Auburn Avenue/Claremont Avenue (*unsignalized*);
9. College Avenue/Claremont Avenue/62nd Street (*signalized*);
10. Forest Street/Claremont Avenue (*signalized*);
11. Hudson Street/State Route (SR) 24 Westbound On-Ramp/Claremont Avenue (*signalized*);
12. Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue (*signalized*);
13. Miles Avenue/College Avenue (*signalized*);
14. Shafter Avenue/Keith Avenue/College Avenue (*signalized*);
15. Hudson Street/Manila Avenue/College Avenue (*signalized*);

These intersections were selected in consultation with City of Oakland staff. In general, study intersections were selected where the proposed project would increase volumes by 30 or more peak-hour vehicle trips, or by 10 or more peak-hour vehicle trips at intersections already operating at unacceptable conditions during peak hours. The study intersections are shown on Figure 4.3-1.

Existing Roadway Network

Regional vehicular access to the site is provided by State Route 24 (SR 24), SR 13 and Interstate 580 (I-580), while local access is provided via College, Claremont, Alcatraz and Telegraph Avenues. These and other major roadways in the study area are described below.

State Route 24 (SR 24) is an east-west regional freeway located 0.4 miles south of the project site, extending between Walnut Creek to the east and downtown Oakland to the west. SR 24 becomes Interstate 980 (I-980) west of the I-580 interchange. Four lanes are generally provided in each direction on this freeway near the project site. Average daily traffic on SR 24 between SR 13 and Broadway ramps is 146,000 vehicles per day. Access between the project site and SR 24 is provided via Claremont Avenue, Keith and Miles Avenues.

State Route 13 (SR 13) is an east-west arterial located 0.4 miles north of the project site, extending between I-80 in Berkeley to I-580 in Oakland. SR 13 is also classified as Ashby Avenue west of Claremont Avenue. One lane is provided in each direction near the project site. A second travel lane is also provided along parts of Ashby Avenue in the peak direction during peak commute periods by prohibiting on-street parking on one side of the street. SR 13 is a freeway south of the SR 24 interchange, with two lanes per direction. Average daily traffic on SR 13 between College and Claremont Avenues is 16,800 vehicles per day.[1] Access between the project site and SR 13 is provided via College and Claremont Avenues.

Interstate 580 (I-580) is an east-west regional freeway extending between US-101 in Marin County and I-5 south of Tracy. Generally, four lanes are provided in each direction on this freeway near the project site. Average daily traffic on this freeway is 220,000 vehicles per day, west of the SR 24 interchange.[16] Access between the project site and I-580 is provided via SR 24 or SR 13.

College Avenue is a north-south arterial that extends from the University of California, Berkeley campus to Broadway in Oakland. College Avenue borders the project site to the west and provides one lane of traffic in each direction.

Claremont Avenue is a northeast-southwest arterial that extends from Telegraph Avenue in Oakland to Grizzly Peak Boulevard in Berkeley. Claremont Avenue borders the project to the east and provides two lanes of traffic in each direction in the vicinity of the project site.

Telegraph Avenue is a north-south arterial that extends from the University of California-Berkeley campus to Broadway in Oakland. Telegraph Avenue provides two lanes of traffic in each direction.

Alcatraz Avenue is an east-west arterial that extends from Claremont Avenue to San Pablo Avenue. Alcatraz Avenue provides one lane of traffic in each direction

Other local streets near the project site include the following:

62nd Street is an east-west street that extends from Overland Avenue in Emeryville to College Avenue in Oakland. 62nd Street provides one lane of traffic in each direction.

63rd Street is an east-west street that extends from Overland Avenue in Emeryville to the northern Safeway driveway along College Avenue. 63rd Street provides one lane of traffic in each direction.

Miles Avenue is a one-way east-west local street between the SR 24 Westbound Off-Ramp and Forest Street. Miles Avenue is two lanes east of College Avenue and one lane west of College Avenue.

Keith Avenue is a one-way two-lane east-west local street between College Avenue and Broadway. West of College Avenue, Keith Avenue becomes Shafter Avenue.

Existing Transit Service

Transit service providers in the project vicinity include Alameda-Contra Costa Transit District (AC Transit) which provides local and Transbay bus service with connections to the Transbay Terminal in San Francisco and Bay Area Rapid Transit (BART) which provides regional rail service. Figure 4.3-2 shows the existing transit services provided near the project site. Each service is described below.

[16] Caltrans Traffic Volumes on the State Highway System, 2009.

Source: Fehr & Peers

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Existing Transit Routes Near Project Site Figure 4.3-2

AC Transit

The Alameda-Contra Costa Transit District (AC Transit) is the primary bus service provider in 13 cities and adjacent unincorporated areas in Alameda County and Contra Costa County, with Transbay service to destinations in San Francisco, San Mateo and Santa Clara Counties. Four AC Transit bus routes operate within two blocks of the project site. The characteristics of the AC Transit routes operating in the project area are summarized in Table 4.3-1. The nearest bus stops to the project site are on northbound and southbound College Avenue just south of Alcatraz Avenue, as well as south of Claremont Avenue, and on northbound and southbound Claremont Avenue just south of Mystic Street.

Local adult fares, as of May 2011, are $2.00, and youth and senior fares are $1.00. A transfer to other local AC Transit lines is an additional $0.25. Transbay adult fares are $4.00 and provide a free transfer to or from connecting AC Transit lines. Ten-day and 31-day passes are also available for both local and Transbay services. Fares are paid on the bus, and passengers must have exact change. AC Transit also honors Clipper (i.e., Translink), a universal fare card, which was introduced to the entire Bay Area region in the spring of 2008. In addition, UC Berkeley students can ride free on all AC Transit routes with a Class Pass sticker affixed on student identification cards.

As of March 28, 2010, Line 7, which operated along College and Claremont Avenues, was discontinued and Line 51 was split into two routes, Line 51A and 51B; Line 49 is a new route in the study area. Table 4.3-2 shows the capacity and loads (passengers) of the AC Transit routes serving the project site and vicinity based on 2009 data from AC Transit. Average and maximum load factors are also shown in Table 4.3-2. AC Transit Line 49 is not included in Table 4.3-2 because it is a new line and no load data is available at this time. Load factor is defined as the ratio of occupied seats to the number of seats on the bus. Average load factor averages load data over the length of a bus route. Maximum load factor is the peak load point (the location along the route where the bus is most crowded). A load factor of 100 percent or more indicates that the bus operates at or above its seated capacity. As shown in Table 4.3-2, Line 7 and Line E had excess capacity, with average daily load factors of 29 percent or less, and maximum daily load factors of 50 percent or less. Line 51 had an average load factor of 49 percent or less, however the maximum load factor exceeded 100 percent in both directions at the stops near the project site.

Bay Area Rapid Transit (BART)

BART provides regional rail transit service to Alameda, San Francisco, Contra Costa, and San Mateo Counties. Weekday service is provided from 4:00 AM to 1:00 AM, while Saturday and Sunday service is provided from 6:00 AM to 1:00 AM, and 8:00 AM to 1:00 AM, respectively. Trains have a typical headway of 15 minutes on weekdays and 20 minutes on Saturday and Sundays. The nearest BART station to the project site is the Rockridge station, which is about one-half mile south of the project site.

Table 4.3-1 AC Transit Service Summary

Line	Route	Nearest Stop	Weekday		Weekend	
			Hours	Headway	Hours	Headway
Local Routes						
49	Rockridge BART Station to Ashby and Berkeley BART Stations	Claremont Ave at Mystic Street	6:00 AM to 11:00 PM	30 minutes	7:00 AM to 9:00 PM	60 minutes
51B	Rockridge BART Station to Berkeley Marina	College Ave at Alcatraz Ave	5:00 AM to 1:00 AM	8 to10 minutes (peak); 20 minutes (off-peak)	5:00 AM to 1:00 AM	15 minutes (peak); 20 minutes (off-peak)
851	Alameda to Berkeley BART Station	College Ave at Alcatraz Ave	12:00 AM to 6:00 AM	60 minutes	12:00 AM to 6:00 AM	60 minutes
Transbay Routes						
E	Parkwood Apartments to San Francisco Transbay Terminal	Claremont Ave at College Ave	6:00 AM to 8:30 AM and 4:30 PM to 7:30 PM	Between 30 and 60 minutes	Weekend Service Not Provided	

Source: AC Transit, April, 2010.

Table 4.3-2 AC Transit Loads, Boardings and Alightings (Average Weekday)

Bus Line	Stop Location	Direction	Average Capacity (Seats)	Avg. Load[1]	Avg. Load Factor[2]	Maximum Load[3]	Max. Load Factor[4]	Boardings ("On"s)[5]	Alightings ("Off"s)[6]
7[7]	College Avenue at Claremont Ave	NB	32	4.5	14%	7	22%	23	2
		SB		4.3	13%	7	22%	1	15
	Claremont Ave at Mystic Street	NB	32	4.6	14%	7	22%	4	0
		SB		4.7	15%	8	25%	0	27
51[8]	College Ave at Claremont Ave	NB	40	17.9	45%	43	**108%**	57	47
		SB		19.6	49%	42	**105%**	55	69
	College Avenue at Alcatraz Avenue	NB	40	19.3	48%	43	**108%**	224	76
		SB		19.7	49%	42	**105%**	46	167
E	Claremont Ave at Mystic Street	EB	40	7.4	19%	20	50%	3	23
		WB		11.7	29%	18	45%	11	3

Bold indicates maximum load factor above seating capacity.
1. Number of passengers on the bus averaged on a typical weekday.
2. Average load divided by average seated capacity.
3. Maximum number of passengers on the bus observed on a typical weekday.
4. Maximum load divided by average seated capacity.
5. Total number of passengers boarding the bus at this location on a typical weekday.
6. Total number of passengers alighting the bus at this location on a typical weekday.
7. As of March 28, 2010, this line was discontinued in the study area.
8. As of March 28, 2010, this line was split into two separate routes, Route 51A and 51B.

Source: 2009 Data provided by Howard Der, AC Transit, March 2010.

Existing Pedestrian and Bicycle Network

This section describes the existing pedestrian and bicycle facilities in the study area.

Existing Pedestrian Facilities

The project site is located in the Rockridge commercial district which is a major pedestrian destination in the City of Oakland. Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. The existing pedestrian facilities in the project vicinity are illustrated on Figure 4.3-3. Sidewalks are provided on both sides of all existing roadways in the study area. Striped crosswalks are provided on at least one approach for all study intersections, except at the southern Safeway driveways on College and Claremont Avenues. All signalized study intersections provide pedestrian signal heads. The College Avenue/Claremont Avenue/62nd Street intersection provides pedestrian push-buttons and audible signals on all six crossings.

In the vicinity of the project site, high visibility crosswalks with ladder striping are provided across College, Claremont and Alcatraz Avenues. A high visibility crosswalk (defined as a crosswalk with ladder or zebra striping that increase the visibility of the crosswalks to drivers as shown in the photograph) is provided on the north leg of the northern Safeway driveway across College Avenue. The City of Oakland's *Pedestrian Master Plan,* November 2002 (PMP) designates College, Claremont and Alcatraz Avenues as District Routes and 63rd Street as a Neighborhood Route. The PMP (page 48) states the following about these types of routes:

High-Visibility Crosswalk across College Avenue at 63rd Street

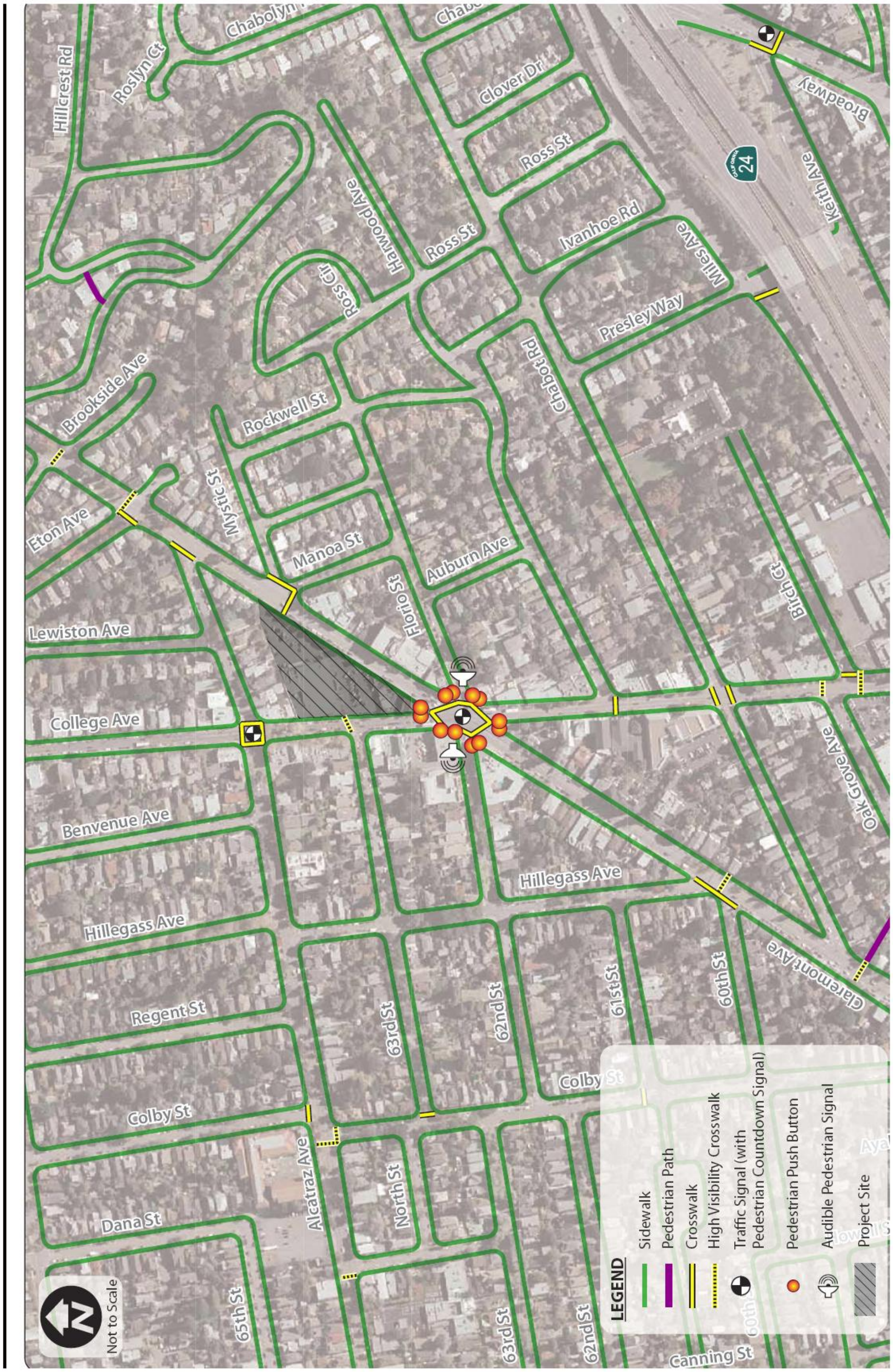
District routes have a more local function as the location of schools, community centers, and smaller scale shopping. They are often located within a single district and help to define the character of that district.

Neighborhood routes are local streets that connect schools, parks, recreational centers, and libraries. They are places for people to meet and they provide the basis for neighborhood life. They are used for walking to school, walking for exercise, and safe walking at night.

Existing Bicycle Facilities

Bicycle facilities can be classified into several types, including:

- ***Class 1 Paths*** – These facilities are located off-street and can serve both bicyclists and pedestrians. Recreational trails can be considered Class 1 facilities. Class 1 paths are typically 8 to 10 feet wide excluding shoulders and are generally paved.



Source: Fehr & Peers
11-15-10

Existing Pedestrian Facilities Near Project Site Figure 4.3-3

- ***Class 2 Bicycle Lanes*** – These facilities provide a dedicated area for bicyclists within the paved street width through the use of striping and appropriate signage. These facilities are typically 5 to 6 feet wide.
- ***Class 3 Bicycle Routes*** – These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is then designated as a bicycle route through the use of signage informing drivers to expect bicyclists.
- ***Class 3A Arterial Bicycle Routes*** – These facilities are found along some arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. Speed limits as low as 25 mph, shared lane bicycle stencils, wide curb lanes and signage are used to encourage shared use.
- ***Class 3B Bicycle Boulevards*** – These facilities are found along residential streets with low traffic volumes. Assignment of right-of-way to the route, traffic calming measures and bicycle traffic signal actuation are used to prioritize through-trips for bicycles.

Shared Lane Bicycle Stencil

Based on the City of Oakland's 2007 *Bicycle Master Plan Update* and City of Berkeley's 2005 *Bicycle Plan Update*, the existing and planned bicycle facilities in the project vicinity are shown on Figure 4.3-4. Existing bicycle facilities in the study area include a Class 3 bike route along Woolsey Street and a Class 3B bike boulevard along Hillegass Avenue.

Existing Parking Characteristics

Data was collected to assess current parking conditions at the off-street parking lot at the existing Safeway store and on-street parking spaces in the vicinity of the project site. Both off-street and on-street parking are discussed in detail below.

On-Site Parking Supply and Demand

Fehr & Peers surveyed the existing surface lot at the Safeway store to determine the peak parking supply and demand. The project site was surveyed during the peak period on Thursday, April 15, 2010 and on Saturday, April 17, 2010. Both days were sunny with local schools and UC Berkeley in regular session. Table 4.3-3 shows the parking supply and peak demand during the weekday and Saturday peak periods.

The site currently provides 105 parking spaces, with five spaces designated for use by persons with disabilities. About 71 percent of parking spaces were occupied during the weekday PM peak hour and 69 percent were occupied during the Saturday peak hour. There were at least 30 vacant on-site parking spaces available on both days, with most of the available parking spaces in the north end of the lot adjacent to Claremont Avenue. Considering the current parking demand at the site, the number of vacant parking spaces, and parking meters or parking restrictions on the adjacent streets, it is unlikely that many Safeway customers or employees currently park on-street. However, non-Safeway customers occasionally use the parking lot. Safeway monitors the parking lot and issues tickets to non-Safeway parkers.

Source: Fehr & Peers
11-15-10

Existing and Proposed Bicycle Facilities Figure 4.3-4

Table 4.3-3 Peak Period On-Site Parking Supply and Demand

Peak Hour	Parking Supply	Parking Demand[1]	Vacant Spaces	Percent Occupied
Weekday PM	105	75	30	71 %
Saturday	105	72	33	69 %

Notes:
1. Parking survey conducted on Thursday, April 15, 2010 and Saturday, April 17, 2010.

Source: Fehr & Peers, 2010.

Comparison with ITE Data

Table 4.3-4 compares the peak observed parking demand with the parking demand estimated using the Institute of Transportation Engineers' (ITE) *Parking Generation, 3rd Edition* methodology for a supermarket land use. As shown in the table, the current site has a slightly higher demand than estimated by ITE urban supermarket 85th percentile rates.[17] Considering that some non-Safeway customers also use the parking lot, ITE based rates provide a good estimate of actual parking demand generated by Safeway.

Table 4.3-4 Comparison of Parking Demand Observations and ITE Methodology

Land Use	ITE Code	Size[1]	Weekday	Saturday
Existing Observations	n/a	24.26 ksf	75	72
ITE Supermarket - Urban	850[2]	24.26 ksf	69	70

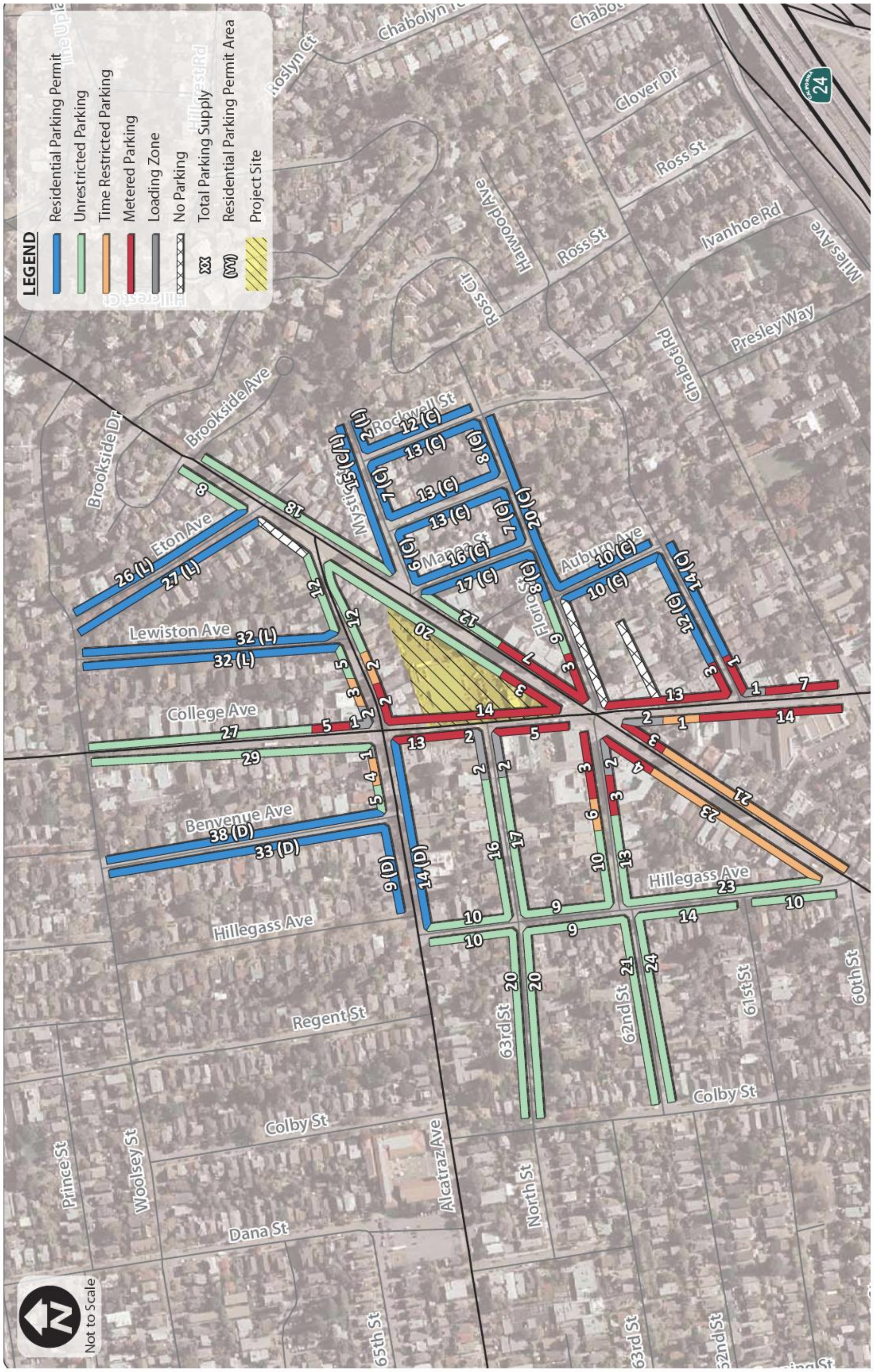
Notes:
1. KSF = 1,000 square feet
2. Following ITE *Parking Generation* demand rates used:
   - 85th percentile rate for urban supermarkets on weekdays = 2.83 spaces per KSF
   - ITE does not provide 85th percentile rates for urban supermarkets on Saturdays. The weekday 85th percentile to average ratio was applied to the Saturday average rate = 2.89 spaces per KSF.

Source: Fehr & Peers and *Parking Generation Manual* (3rd Edition), ITE, 2004.

Existing On-Street Parking

Fehr & Peers also surveyed on-street parking occupancy within two-blocks of the project site. Figure 4.3-5 summarizes parking supply around the project site. Most parking spaces in the commercial district along College Avenue are metered, while most on-street parking spaces in the surrounding areas are controlled by residential parking permits (RPP), which limit parking by non-residents to two hours or less

[17] 85th percentile is defined as the point at which 85 percent of the peak parking demand at similar sites surveyed for ITE fall below.



Source: Fehr & Peers
11-15-10

Existing On-Street Parking Supply Figure 4.3-5 during business hours on weekdays and Saturdays. Overall, about 980 on-street parking spaces are provided in the study area, including about 100 metered spaces.

Fehr & Peers conducted peak hour parking occupancy counts on Thursday, April 15, 2010 between 5:15 PM and 6:15 PM, and Saturday, April 17, 2010 between 5:15 PM and 6:15 PM. Figures 4.3-6 and 4.3-7 present the peak parking occupancies on Thursday and Saturday, respectively. The overall on-street parking occupancy in the study area is about 68 percent on Thursday and 70 percent on Saturday.

The effective capacity of on-street parking is around 90 percent, above which drivers search, circulate and wait for vacant spaces. This is not only an inconvenience, but also can cause congestion and potential blockage of vehicles on the public street system while waiting for an available space. In general, on-street parking on College Avenue between Woolsey Street and Chabot Road and on adjacent streets is at or near capacity (i.e., above 90 percent occupancy) during both weekday PM and Saturday peak hours. On Claremont Avenue and on residential streets further away from the project site, parking occupancy is generally less than 80 percent. The residential streets with RPP have lower occupancies than the residential streets without RPP.

Existing Traffic Conditions

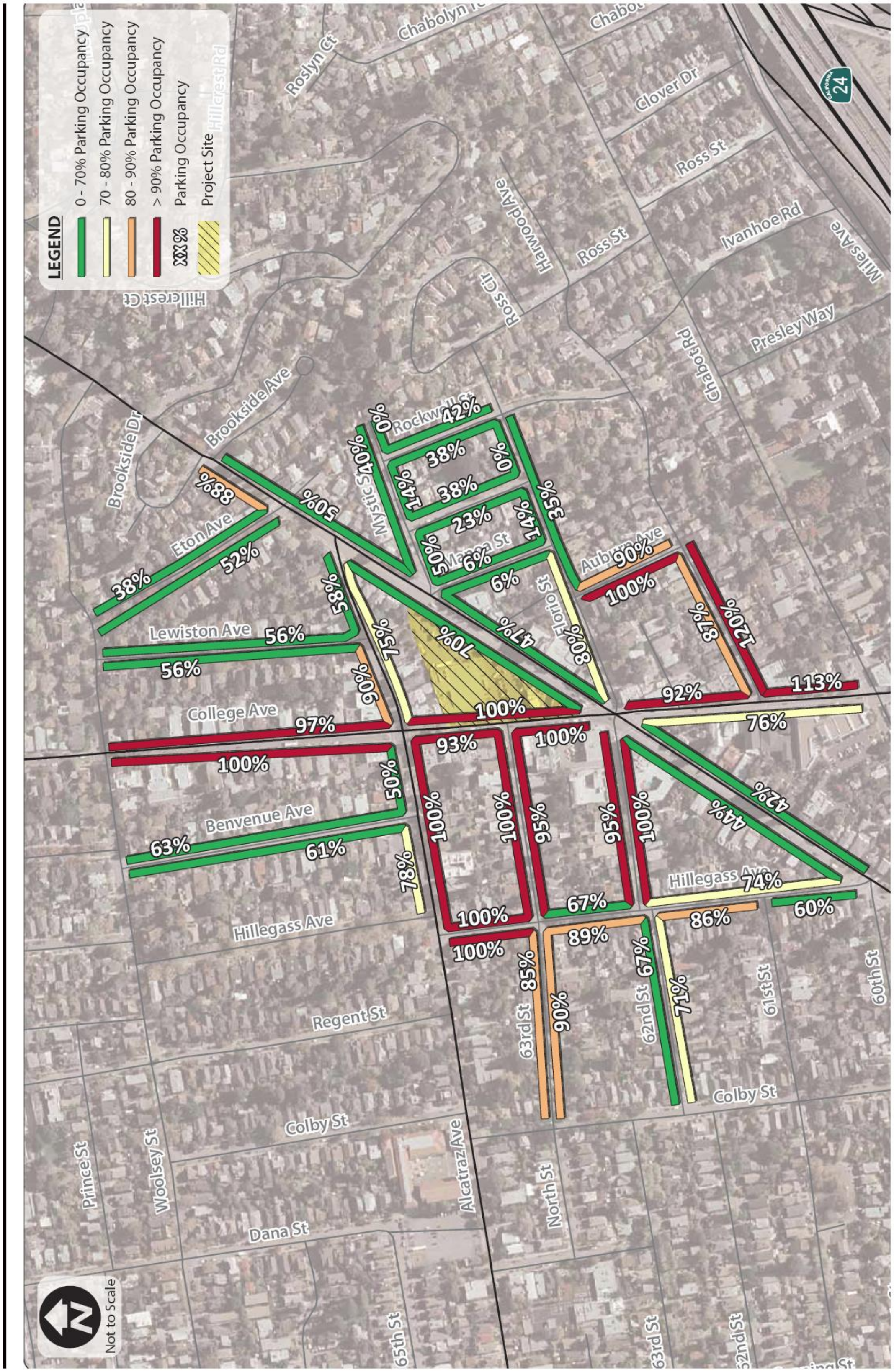
Intersection vehicle turning movement counts, as well as pedestrian and bicycle counts, were collected at the study intersections on Saturday March 13th, 2010 between 4:00 PM and 7:00 PM, and Tuesday, March 16th, 2010 between 4:00 PM and 7:00 PM, while area schools and UC Berkeley were in normal session. These time periods were selected because trips generated by the proposed project, in combination with background traffic, are expected to represent typical worst traffic conditions. Within the peak periods, the peak hours (i.e., the hour with the highest traffic volumes observed in the study area) are from 5:15 PM to 6:15 PM on weekdays and Saturdays.

The collected traffic volume counts consist of traffic volumes that travel through the study intersection. The counts do not include queued vehicles that cannot travel through the intersection during the peak hour. Fehr & Peers observed queues that were not cleared at the end of each signal cycle at the following intersection movements:

1. at Ashby Avenue/College Avenue intersection: northbound, southbound and eastbound approaches during the weekday PM peak hour, and Southbound and eastbound approaches during the Saturday peak hour
2. at Ashby Avenue/Claremont Avenue intersection: eastbound approach during the weekday PM peak hour, and southbound and eastbound approaches during the Saturday peak hour
3. at the Alcatraz Avenue/College Avenue intersection, northbound and southbound approaches during the weekday PM peak hour

Traffic volumes not served by the intersection during the peak hour were added to the vehicle turning movement counts to determine the peak hour demand volume and better estimate delay and LOS at the study intersections.

Field reconnaissance was also performed in which intersection lane configurations and signal operations data were collected. Intersection operations were also observed at the study intersections. In addition, the



Source: Fehr & Peers

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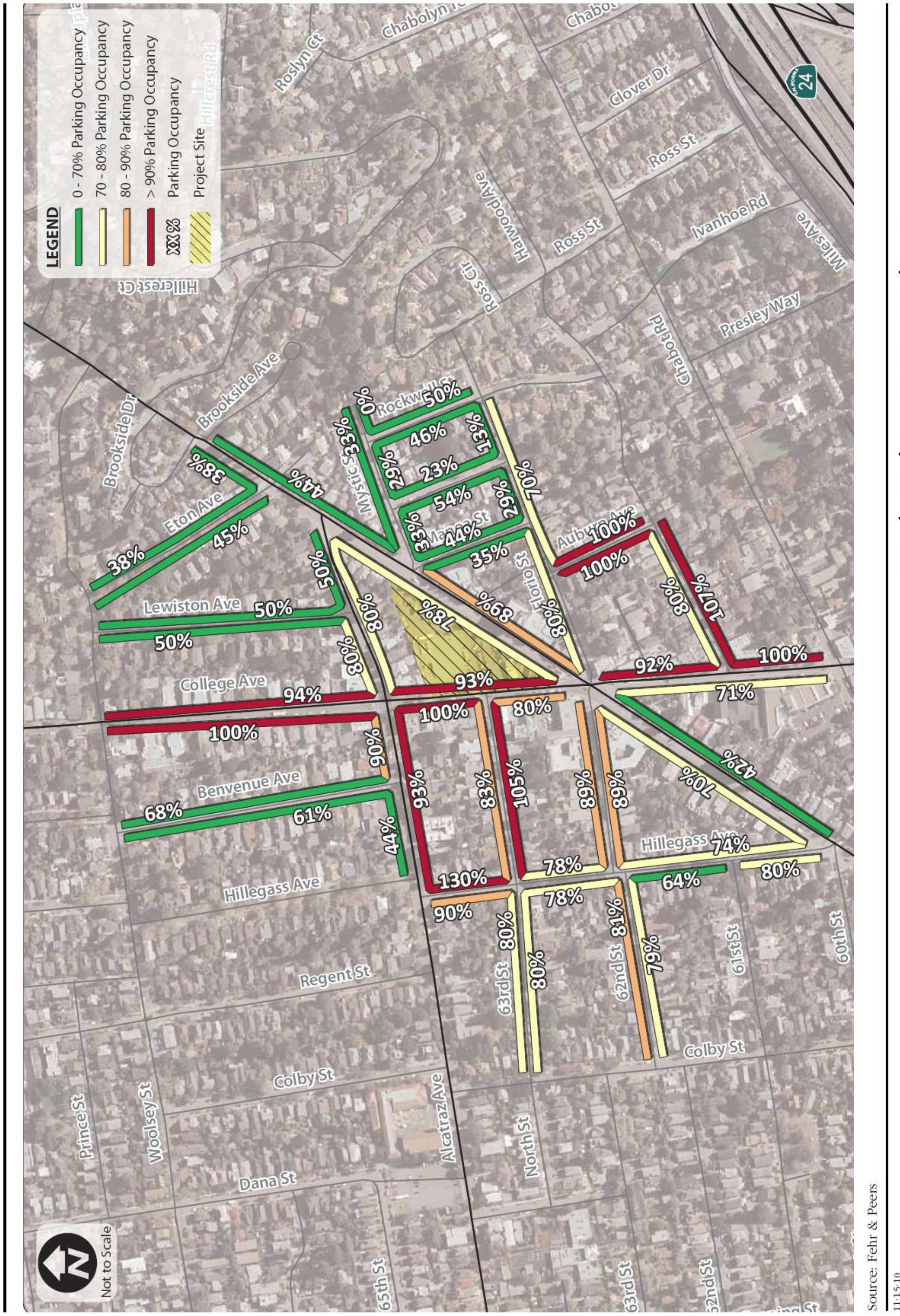
Figure 4.3-6 Weekday PM Peak Hour On-Street Parking Occupancy



Saturday Peak Hour On-Street Parking Occupancy Figure 4.3-7 cities of Oakland and Berkeley provided signal timing data for the signalized study intersections. Figure 4.3-8 shows the intersection vehicle turning movements, Figure 4.3-9 shows the intersection lane configurations and traffic controls, and Figure 4.3-10 shows the pedestrian and bicycle volumes at the study intersections. Appendix A provides the detailed traffic count data sheets.

Analysis Methodologies and Level of Service Standards

Intersection operations are described using the term "Level of Service" (LOS). Level of Service is a qualitative description of traffic operations from the vehicle driver perspective and consists of the delay experienced by the driver at the intersection. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays. Different methods are used to assess signalized and unsignalized (stop-controlled) intersections.

Signalized Intersections

Signalized intersection operations are evaluated using methods provided in the 2000 *Highway Capacity Manual* (HCM) and the Synchro traffic analysis software program. These methods evaluate average control delays and then assign an LOS. Control delay is defined as the delay associated with deceleration, stopping, moving up in the queue, and acceleration experienced by drivers at an intersection. Table 4.3-5 provides descriptions of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

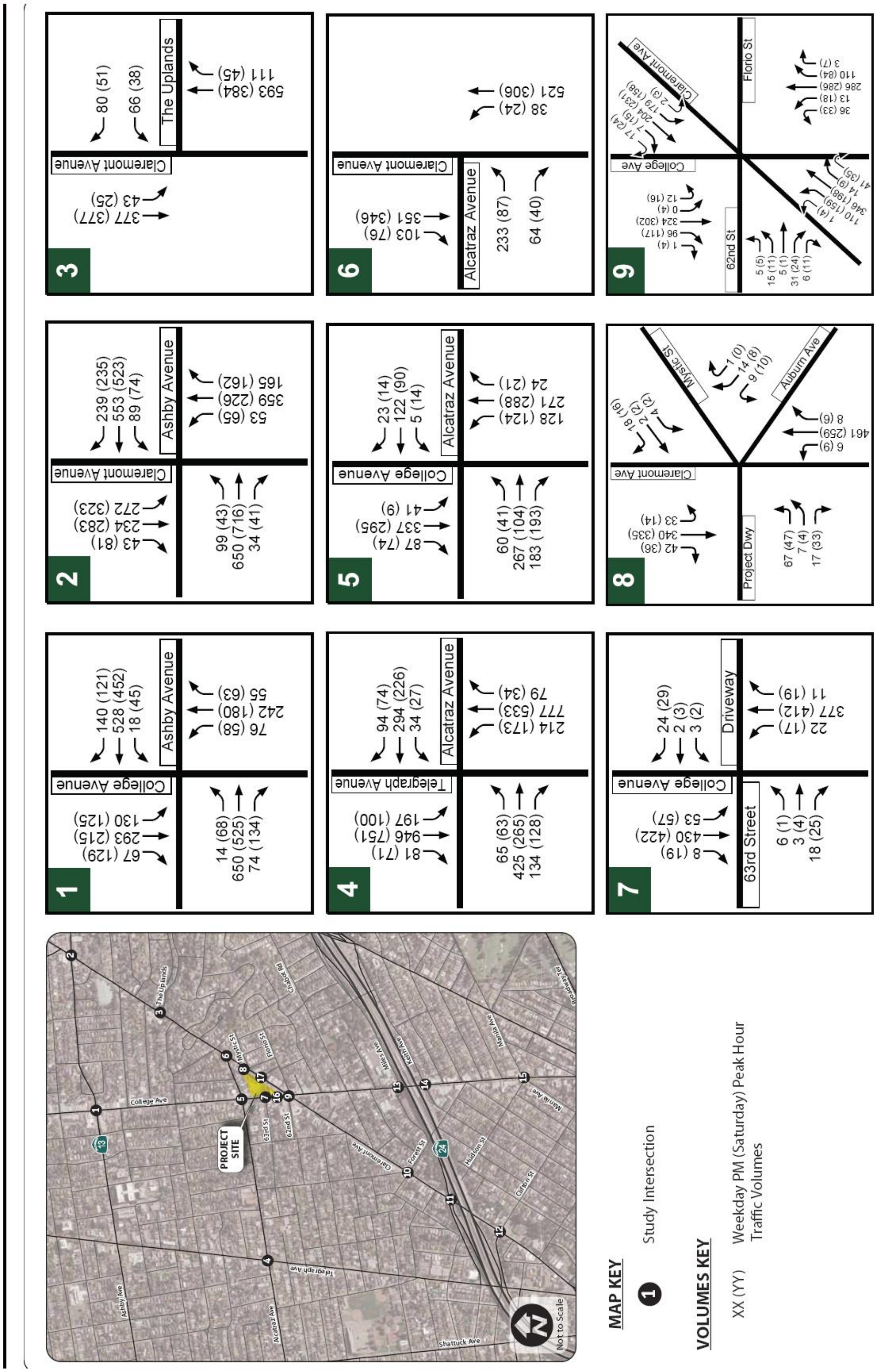
Unsignalized intersection LOS are also analyzed using the 2000 HCM and Synchro software. Delay is calculated for movements that are controlled by a stop sign or that must yield the right-of-way. The movement or approach with the highest delay is reported. The LOS ranges for unsignalized intersections are shown in Table 4.3-5. They are lower than the delay ranges for signalized intersections because drivers will generally tolerate more delay at signals.

Existing Intersection Operations

Existing operations were evaluated for the weekday PM and Saturday evening peak hours at the study intersections. The existing vehicle and pedestrian volumes were used with the existing lane configurations and signal timing parameters as inputs into the LOS calculations to evaluate current operations. Table 4.3-6 summarizes the intersection analysis results. As shown in Table 4.3-6, the following five intersections currently operate at an unacceptable LOS:

- The signalized Ashby Avenue/College Avenue intersection (intersection #1), located in the City of Berkeley, currently operates at LOS E during the weekday PM peak hour and at LOS F during the Saturday evening peak hour.
- The signalized Alcatraz Avenue/College Avenue intersection (intersection #5), located in the City of Berkeley, currently operates at LOS F during the weekday PM peak hour.

Text continues on page 4.3-26.



Source: Fehr & Peers

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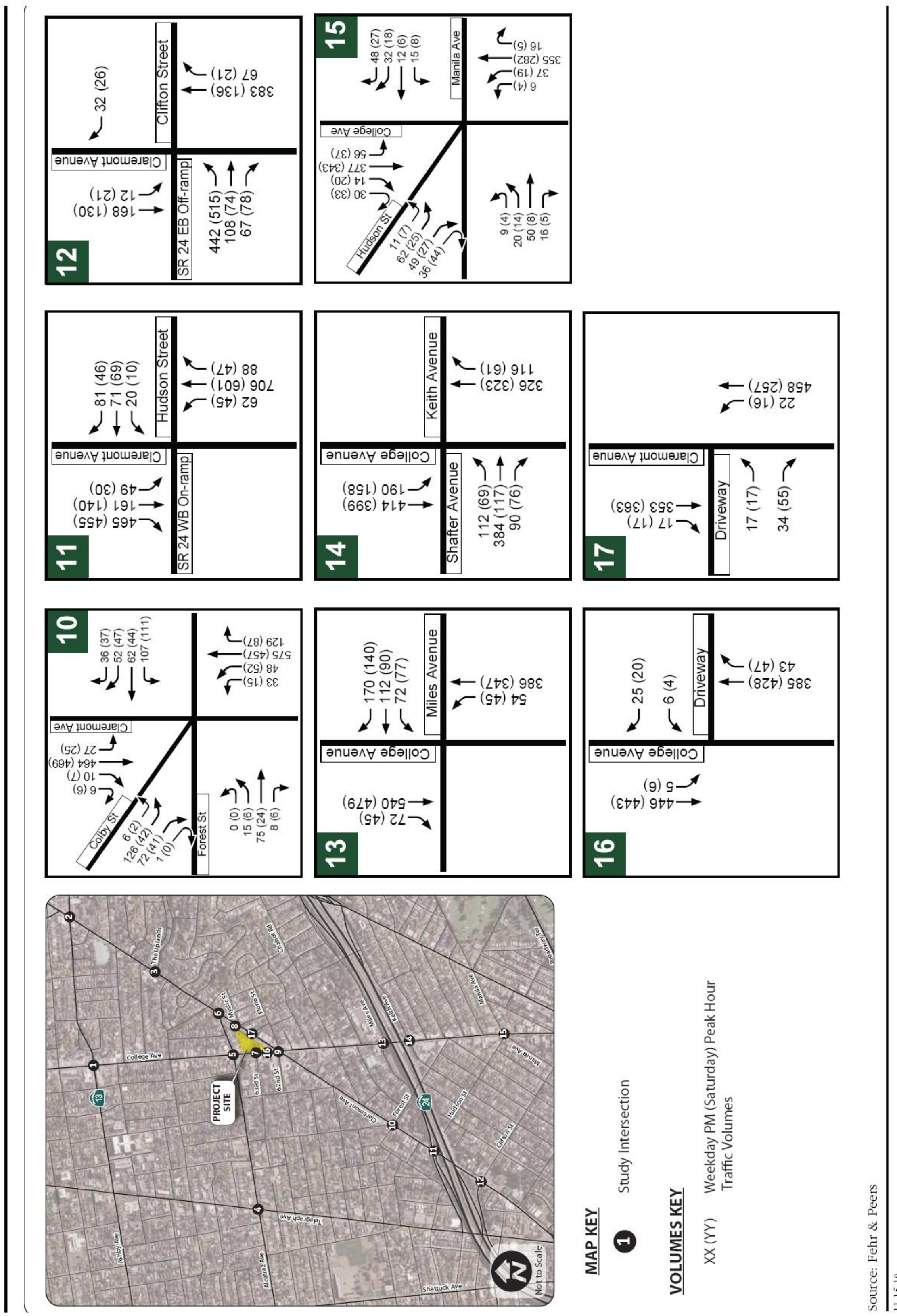
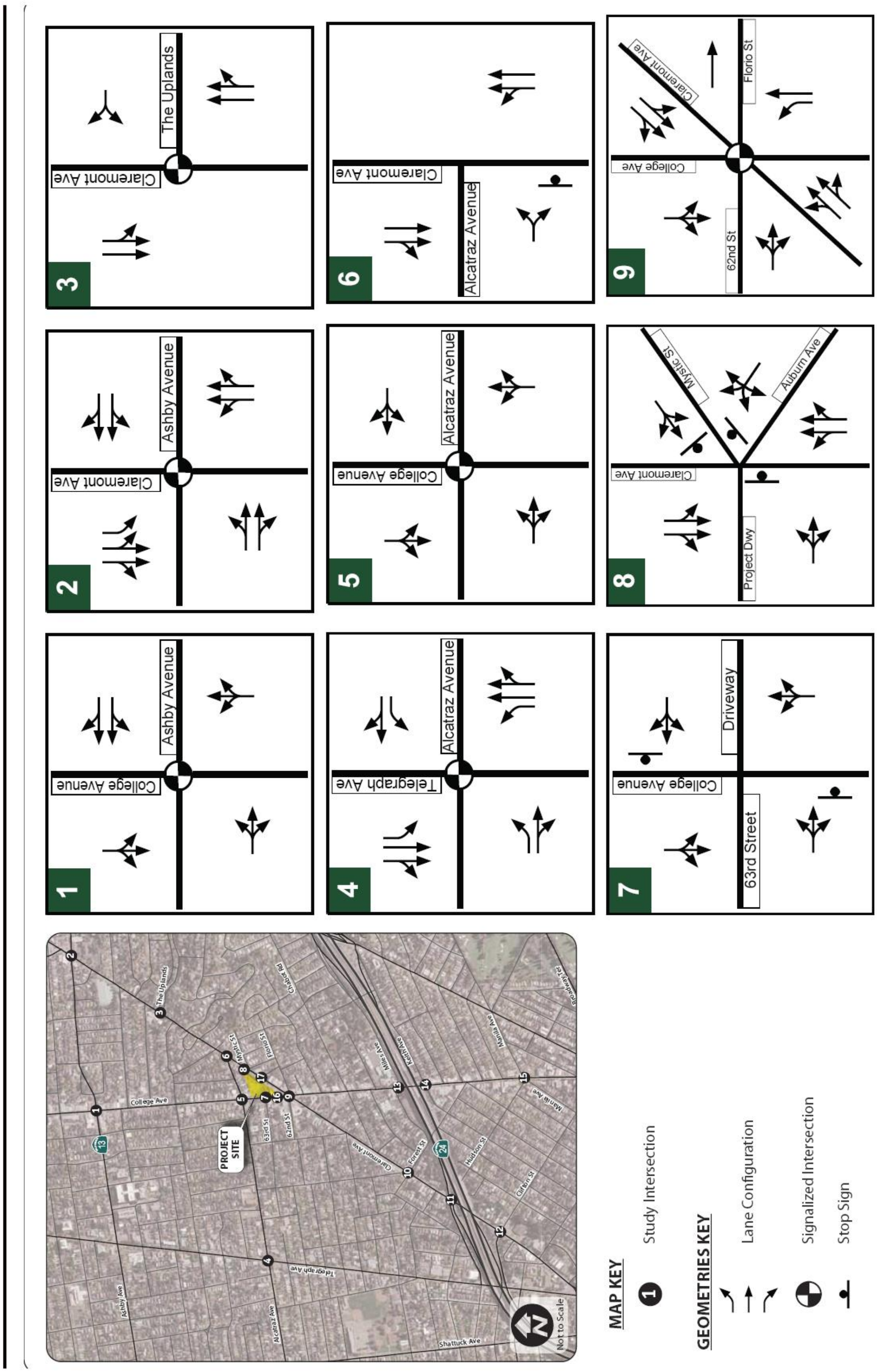
Existing Weekday and Saturday PM Peak Hour Traffic Volumes

Figure 4.3-8A

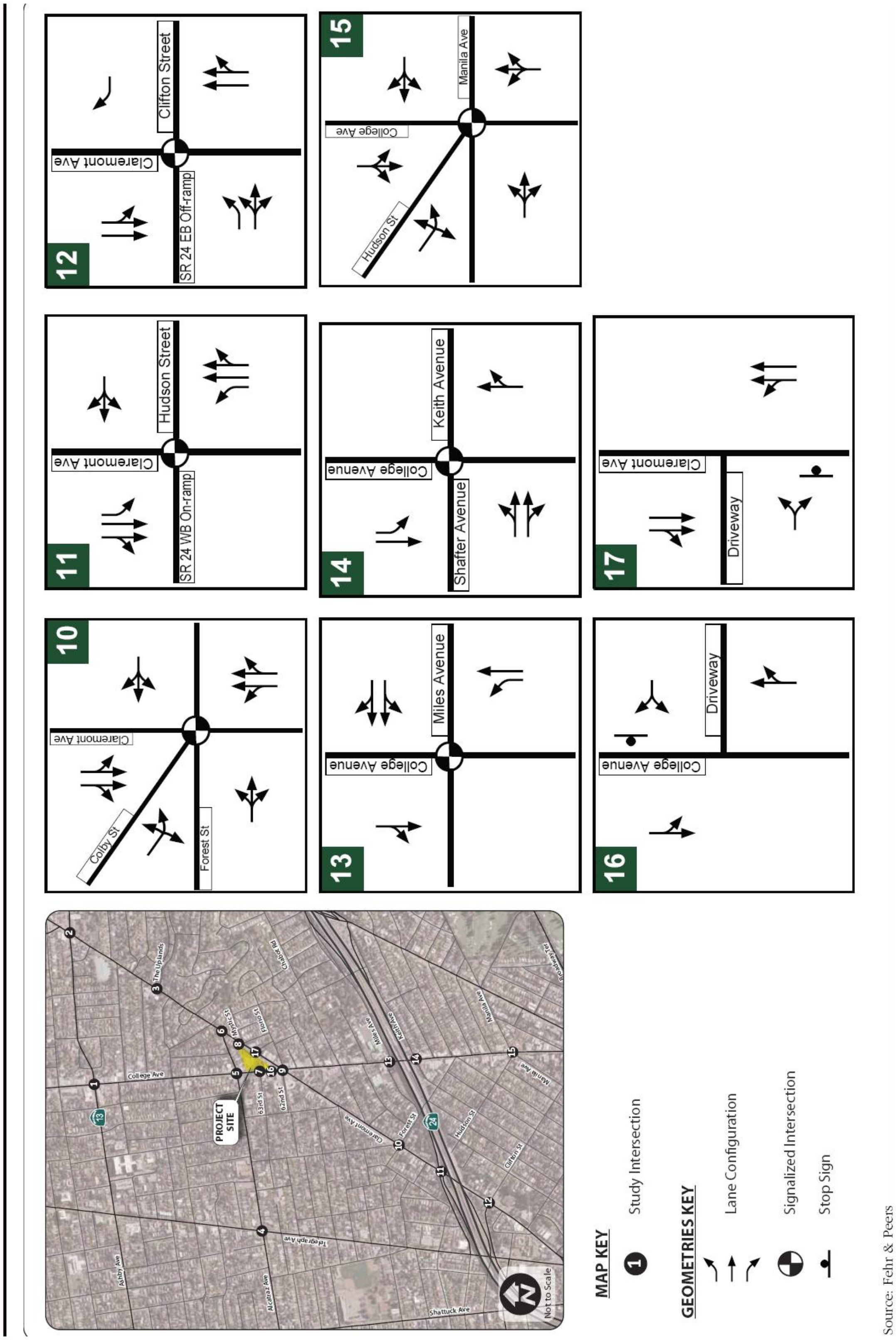


Existing Weekday and Saturday PM Peak Hour Traffic Volumes Figure 4.3-8B

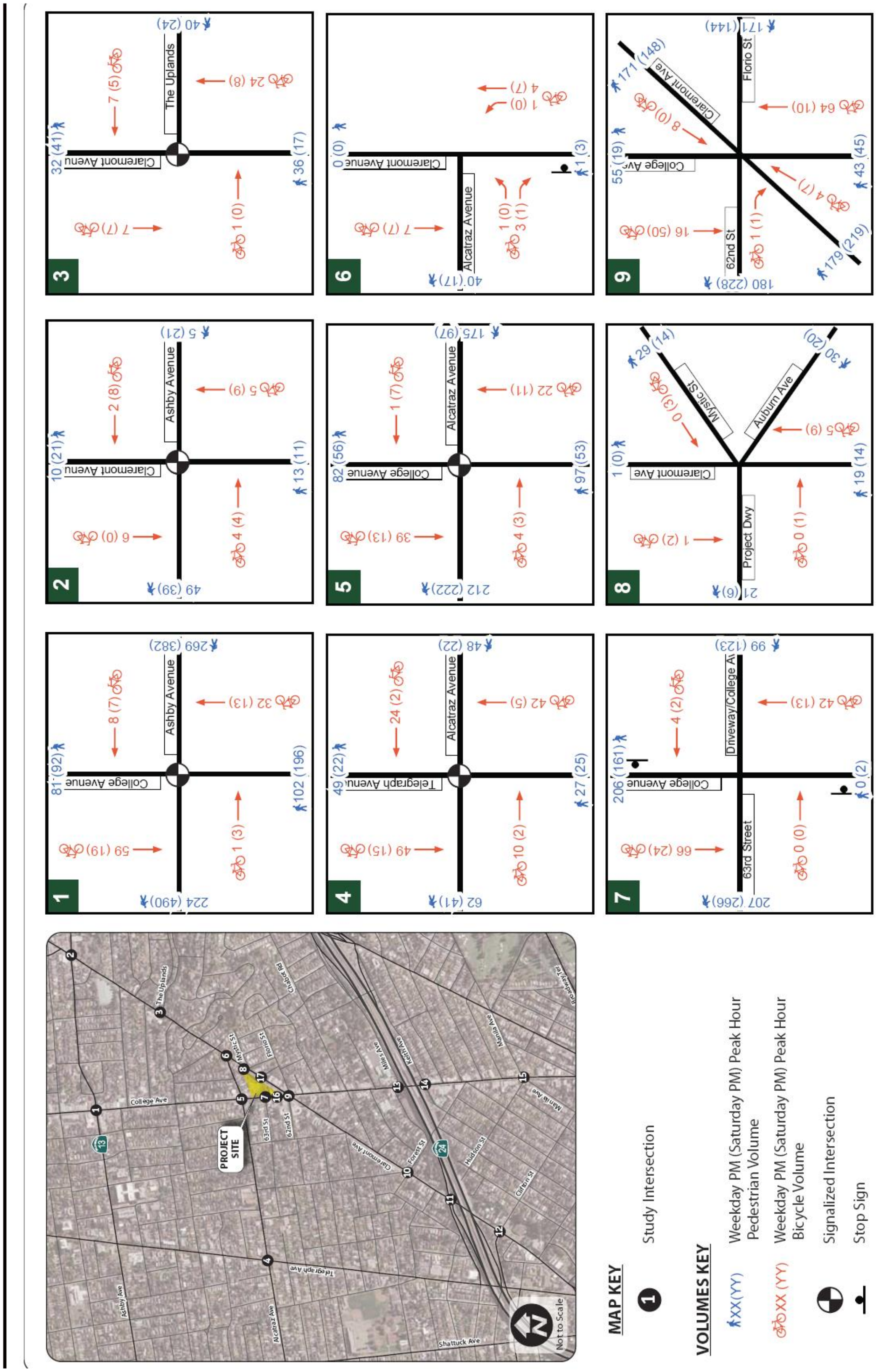


Source: Fehr & Peers

Existing Intersection Lane Configurations and Traffic Controls Figure 4.3-9A



Existing Intersection Lane Configurations and Traffic Controls Figure 4.3-9B



Source: Fehr & Peers

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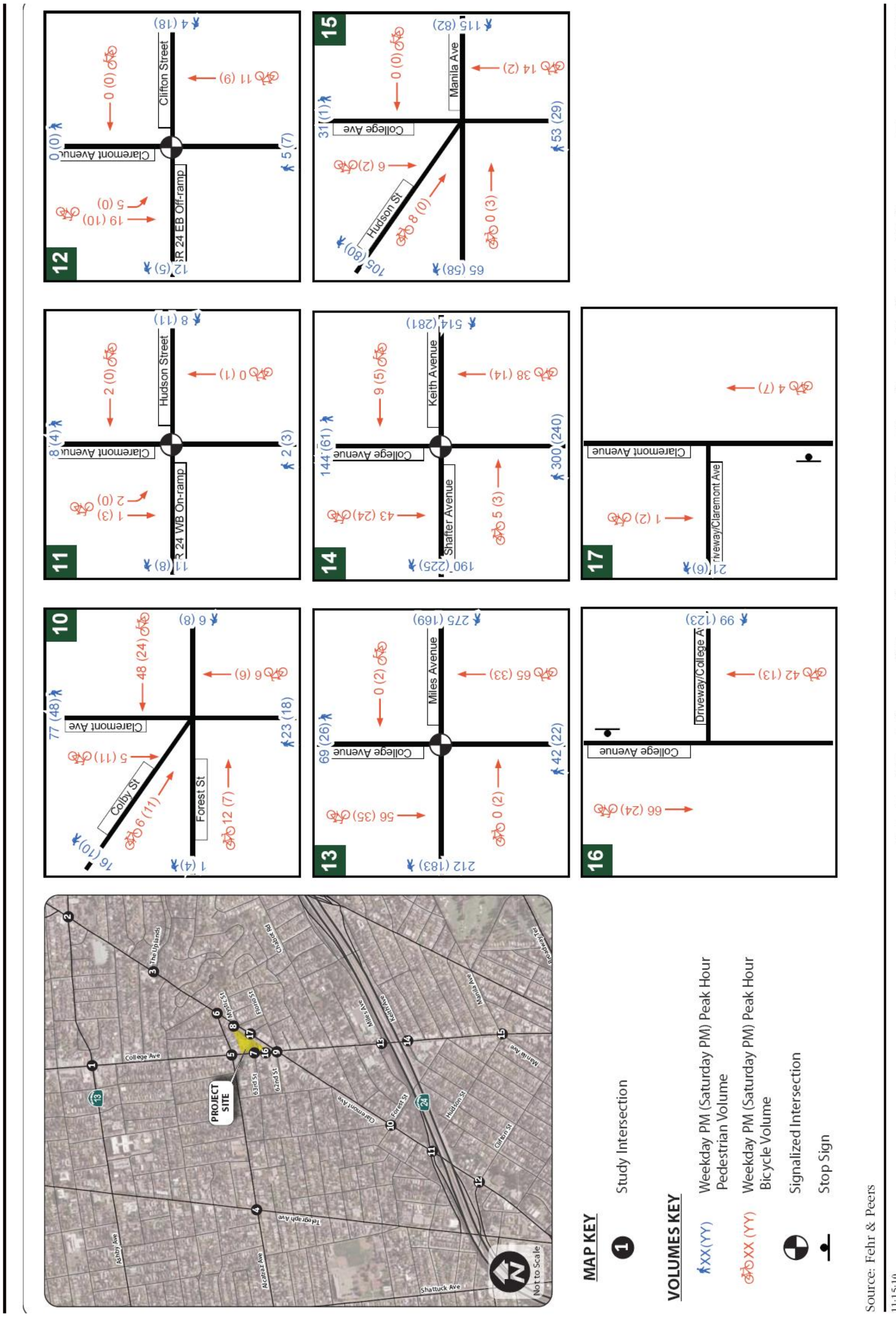
Existing Weekday and Saturday PM Peak Hour Bicycle and Pedestrian Volumes Figure 4.3-10A



Existing Weekday and Saturday PM Peak Hour Bicycle and Pedestrian Volumes

Figure 4.3-10B

Table 4.3-5 Intersection Level of Service Definitions

Unsignalized Intersections		Level of Service Grade	Signalized Intersections	
Description	**Average Total Vehicle Delay (Seconds)**		**Average Control Vehicle Delay (Seconds)**	**Description**
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Table 4.3-6 Intersection Level of Service – Existing Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Delay (seconds)[2]	LOS
1.	Ashby Avenue/College Avenue	Berkeley	Signal	PM	**67.6**	**E**
				SAT	**90.0 (v/c = 1.22)**	**F**
2.	Ashby Avenue/Claremont Avenue	Berkeley	Signal	PM	35.9	D
				SAT	29.7	C
3.	The Uplands/Claremont Avenue	Berkeley	Signal	PM	10.0	B
				SAT	9.0	A
4.	Alcatraz Avenue/Telegraph Avenue	Oakland	Signal	PM	39.1	D
				SAT	27.8	C
5.	Alcatraz Avenue/College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**
				SAT	36.3	C
6.	Alcatraz Avenue/Claremont Avenue	Berkeley	SSSC	PM	18.9 **(82.1)**	C **(F)**
				SAT	2.6 (16.0)	A (C)
7.	63rd Street/College Avenue	Oakland	SSSC	PM	3.0 **(40.6)**	A **(E)**
				SAT	3.1 (30.2)	A (D)
8.	Mystic Street/Auburn Avenue/Claremont Avenue	Oakland	SSSC	PM	3.5 (26.5)	A (D)
				SAT	2.5 (15.0)	A (B)
9.	College Avenue/Claremont Avenue/62nd Street	Oakland	Signal	PM	**61.5**	**E**
				SAT	**66.6**	**E**
10.	Forest Street/Claremont Avenue	Oakland	Signal	PM	27.6	C
				SAT	19.5	B
11.	Hudson Street/State Route (SR) 24 Westbound On-Ramp/Claremont Avenue	Oakland	Signal	PM	17.0	B
				SAT	10.3	B
12.	Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue	Oakland	Signal	PM	16.7	B
				SAT	11.9	B
13.	Miles Avenue/College Avenue	Oakland	Signal	PM	14.4	B
				SAT	12.9	B
14.	Shafter Avenue/Keith Avenue/College Avenue	Oakland	Signal	PM	25.4	C
				SAT	19.0	B
15.	Hudson Street/Manila Avenue/College Avenue	Oakland	Signal	PM	31.0	C
				SAT	16.1	B

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.

Source: Fehr & Peers, 2010.

- The unsignalized Alcatraz Avenue/Claremont Avenue intersection (intersection #6), located in the City of Berkeley, currently operates at LOS F in the eastbound approach during the weekday PM peak hour. The intersection currently meets the peak hour volume signal warrant (see section below for a description of signal warrants).
- The unsignalized 63rd Street/College Avenue intersection (intersection #7), located in the City of Oakland, currently operates at LOS E in the eastbound approach during the weekday PM peak hour.
- The signalized College Avenue/Claremont Avenue/62nd Street intersection (intersection #9), located in the City of Oakland, currently operates at LOS E during the weekday PM and Saturday peak hours.

Detailed intersection LOS calculation worksheets are presented in Appendix B. Existing Signal Warrant Analysis

To assess consideration for signalization of stop-controlled intersections, the *California Manual of Uniform Traffic Control Devices* (MUTCD) (California Department of Transportation, 2010), presents eight signal warrants.

Generally, meeting one of the signal warrants could justify signalization of an intersection. However, meeting one or more of the signal warrants does not mean that the intersections must be signalized. Therefore, an evaluation of all applicable warrants should be conducted and additional factors (e.g., congestion, approach conditions, collision record) should be considered before the decision to install a signal is made. The peak hour vehicular volume warrant (Warrant 3) for urban conditions was evaluated using the existing traffic count data. Table 4.3-7 shows the results of the traffic signal warrant analysis. Detailed signal warrant assessments are provided in Appendix C.

Table 4.3-7 Existing Peak Hour Signal Warrant Analysis

Intersection		Control[1]	Peak Hour Warrant Met?
6.	Alcatraz Avenue/Claremont Avenue	SSSC	Yes
7.	63rd Street/College Avenue	SSSC	No
8.	Mystic Street/Auburn Avenue/Claremont Avenue	SSSC	No
16.	Claremont Avenue/South Safeway Driveway	SSSC	No
17.	College Avenue/South Safeway Driveway	SSSC	No

Note:

1. SSSC = side-street stop-controlled intersection

Source: Fehr & Peers, 2010.

As shown in Table 4.3-7, the urban peak hour volume traffic signal warrant is not currently satisfied at any of the stop-controlled study intersections, except at the Alcatraz Avenue/Claremont Avenue (#6) intersection, which meets the peak hour signal warrant during the weekday PM peak hour. This intersection also operates at LOS F in the eastbound approach during the weekday PM peak hour.

Alameda County Congestion Management Agency (ACCMA) Analysis of Existing Conditions

The ACCMA (changed to Alameda County Transportation Commission [ACTC] as of July 2010) conducts periodic monitoring of the freeways and major roadways in Alameda County. The most recent *Level of Service Monitoring on the Congestion Management Program Roadway Network* was released in September 2010. The ACCMA monitoring report assesses existing freeway operations through "floating car" travel time surveys, which are conducted on all freeway segments during the PM peak hours (4:00 PM to 6:00 PM), and on selected freeway segments during the AM peak hours (7:00 AM to 9:00 AM). Based on the results of these surveys, ACCMA assigns a LOS grade to each segment according to the method described in the 1985 HCM. Any segment with an average speed less than 30 miles per hour is assigned LOS F. Freeway interchanges with speeds below 50 percent of free flow speed are assigned LOS F. The travel time surveys concluded that 24 freeway segments, nine arterial segments and two freeway-to-freeway connectors within Alameda County operate at LOS F during the PM peak hours, including the following 16 freeway, arterial and freeway-to-freeway connector segments in the Cities of Oakland and Berkeley:

- I-80 eastbound: I-80/I-580 merge to Powell Street (grandfathered segment)
- I-80 eastbound: Powell Street to Ashby Avenue (grandfathered segment)
- I-80 westbound: I-580 to University Avenue
- I-80 westbound: University Avenue to Ashby Avenue (grandfathered segment)
- I-80 westbound: Ashby Avenue to Powell Street (grandfathered segment)
- I-580 eastbound: I-80 to I-980 (grandfathered segment)
- I-580 eastbound: Harrison Street to Lakeshore Drive
- I-980 eastbound: I-880 to I-580/SR 24 junction (grandfathered segment)
- SR 13 southbound: Hiller Drive to Moraga Avenue
- SR 13 southbound: Redwood Road to I-580 eastbound merge
- SR 13 (Ashby Avenue) eastbound: College Avenue to Domingo Avenue (grandfathered segment)
- SR 24 eastbound: I-580 to Broadway/SR 13 (grandfathered segment)
- SR 24 eastbound: Broadway/SR 13 to Caldecott Tunnel (grandfathered segment)
- SR 185 northbound: 46th Street to 42nd Street
- SR 13/SR 24 Interchange: SR 13 northbound to SR 24 eastbound (grandfathered segment)
- I-880/SR 260 Connection: SR 260 eastbound to I-880 northbound

Eight of these segments operated at LOS F during the initial ACCMA data collection effort in 1991, and are therefore "grandfathered," meaning that they are exempt from LOS standards.

Collision Characteristics

Five years (2005-2009) of collision data was collected from the California Highway Patrol (CHP) for College Avenue between Claremont and Alcatraz Avenues and Claremont Avenue between College and Alcatraz Avenues. The collision history is summarized in Table 4.3-8.

As shown in Table 4.3-8, 27 collisions were reported along College Avenue and 16 collisions were reported along Claremont Avenue. Out of the 27 reported collisions along College Avenue, three (about 11 percent) involved pedestrians and six (about 22 percent) involved bicyclists. In addition, based on 2000 to 2004 data presented in the City of Oakland's 2007 *Bicycle Master Plan Update*, College Avenue had the highest collision per mile rate in Oakland.

Table 4.3-8 Study Area Collision Data Summary[1]

Metric	College Avenue[2]		Claremont Avenue[3]	
	Number	Percent	Number	Percent
Total Collisions	27	--	16	--
Collisions Involving Only Vehicles	18	67%	13	81%
Collisions Involving Pedestrians and Vehicles	3	11%	1	6%
Collisions Involving Bicyclists and Vehicles	6	22%	2	13%
Collisions that Resulted in Injury	10	37%	5	31%
Vehicle Only Collisions Resulting in Injury[4]	3	17%	3	23%
Pedestrian/Vehicle Collisions Resulting in Injury[5]	3	100%	1	100%
Bicycle/Vehicle Collisions Resulting in Injury[6]	4	67%	1	50%
Collisions that Resulted in Fatality	0	0%	0	0%

Notes:

1. Collision history data summarized for the five year period between 2005 and 2009
2. College Avenue between Claremont Avenue and Alcatraz Avenue
3. Claremont Avenue between College Avenue and Alcatraz Avenue
4. Percentage reflects the number of vehicle/vehicle collisions resulting in injury divided by the total number of vehicle/vehicle collisions
5. Percentage reflects the number of pedestrian/vehicle collisions resulting in injury divided by the total number of pedestrian/vehicle collisions
6. Percentage reflects the number of bicycle/vehicle collisions resulting in injury divided by the total number of bicycle/vehicle collisions

Source: California Highway Patrol SWITRS data between 2005 and 2009.

About 37 percent of all collisions along College Avenue resulted in injury, including 100 percent of collisions involving pedestrians and 67 percent of collisions involving bicyclists. In contrast, about 17 percent of vehicle-vehicle collisions resulted in injury. No collision fatalities were reported along College Avenue for the five-year period.

Out of the 16 collisions that were reported along Claremont Avenue, one (about 6 percent) involved pedestrians and two (about 13 percent) involved bicyclists. About 31 percent of all collisions along Claremont Avenue resulted in injury, including one collision involving pedestrians and another collision involving bicyclists. In contrast, about 23 percent of vehicle-vehicle collisions resulted in injury. No collision fatalities were reported along Claremont Avenue for the five-year period.

Collision locations along College Avenue and Claremont Avenue for years 2005 through 2009 are summarized in Table 4.3-9. As shown in Table 4.3-9, the highest number of collisions was reported at the Claremont Avenue/College Avenue/62nd Street intersection, with a total of nine collisions over the five-year period, with two resulting in injuries. The Claremont Avenue/College Avenue/62nd Street intersection has a six-leg configuration which can create driver confusion, which may contribute to the high number of reported collisions.

Table 4.3-9 Study Area Collision Location Summary[1]

Location	Total Collisions	Collisions Involving Pedestrians	Collisions Involving Bicyclists	Collisions Resulting in Injury	Collisions Resulting in Fatality
College Avenue/Alcatraz Avenue Intersection	4	0	1	2	0
College Avenue between Alcatraz Avenue and 63rd Street	8	2	2	4	0
College Avenue/63rd Street intersection	1	1	0	1	0
College Avenue between 63rd Street and Claremont Avenue	5	0	1	1	0
College Avenue/Claremont Avenue/ 62nd Street/Florio Street intersection	9	0	1	2	0
Claremont Avenue between College Avenue and Mystic Place	4	1	0	1	0
Claremont Avenue/Mystic Street/ Auburn Avenue intersection	1	0	0	0	0
Claremont Avenue between Mystic Street and Alcatraz Avenue	1	0	1	1	0
Claremont Avenue/Alcatraz Avenue intersection	1	0	0	1	0

Notes:

1. Collision history data summarized for the five year period between 2005 and 2009.

Source: California Highway Patrol SWITRS data between 2005 and 2009.

Vehicle collisions with pedestrians and bicycles accounted for about 28 percent of reported collisions in the study area. Most of the collisions involving pedestrians or bicyclists occurred along College Avenue. College Avenue between Claremont Avenue and Alcatraz Avenue is a two lane arterial with parking lanes on both sides of the street. College Avenue does not provide bike lanes and generally experiences high peak period vehicle, pedestrian and bicycle demand, which may contribute to the high number of reported collisions.

Planned Transportation Network Changes

A review of the available information indicates that several changes are planned for all transportation modes in the study area, as described below. However, not all of these changes have finalized design plans and/or are not fully funded. Changes lacking final design and full funding are not available to mitigate any deficient conditions in the No Project conditions, and therefore are not assumed in the analysis.

Planned Roadway Changes

No roadways changes are currently planned in the study area. However, bicycle and pedestrian improvements that would change roadway configurations are discussed in the Planned Bicycle/Pedestrian Changes subsection below.

Planned Transit Changes

In May 2007, AC Transit published the *Draft Environmental Impact Statement / Environmental Impact Report* for the implementation of Bus Rapid Transit (BRT) on Telegraph Avenue and International Boulevard connecting Berkeley, Oakland, and San Leandro. The proposed system would dedicate one travel lane in each direction to bus operations only, allowing buses to provide a quicker and more reliable service than regular bus service today. About one-half mile west of the project site, the proposed BRT Project would generally eliminate one mixed-vehicle through lane in each direction on Telegraph Avenue.

Currently, there are no finalized design plans, no assurance of full funding for the BRT project, and no approvals from AC Transit, the City of Oakland, or other public agencies. Because the BRT project is not fully designed, approved, or funded, this EIR does not include these planned roadway changes in the analysis. However, an evaluation of the potential effects on project impacts caused by proposed modifications to the traffic circulation network by the proposed Telegraph Avenue BRT is provided in Appendix D.

Planned Bicycle/Pedestrian Changes

The City of Oakland 2007 *Bicycle Master Plan Update* and the City of Berkeley's 2005 *Bicycle Plan Update* propose several improvements to the bicycle network in the project study area (see Figure 4.3-4), including:

- Class 2 bike lanes along Claremont Avenue south of Alcatraz Avenue in Oakland
- Class 2 bike lanes along Alcatraz Avenue west of College Avenue in Oakland
- Class 3 bike route along The Uplands in Berkeley
- Class 3A arterial bike route along College Avenue south of Alcatraz Avenue in Oakland
- Class 3B bike boulevards along Chabot Road east of College Avenue in Oakland
- Class 3B bike boulevards along Colby Street in Oakland

None of these proposed improvements are currently planned for implementation. In addition, these changes do not have finalized design plans or are not fully funded. Thus, this EIR assumes that these changes will not be provided in the study area.

According to the City Oakland's *Pedestrian Master Plan*, there are no planned pedestrian improvements in the vicinity of the project site.

The City of Berkeley's *Pedestrian Master Plan* (January 2010) proposes the following improvements at the Ashby Avenue/College Avenue intersection:

- Install pedestrian scale lighting at the northwestern corner of the intersection
- Install advanced stop bars on all intersection approaches
- Install new perpendicular pedestrian ramps on all four corners of the intersection if sufficient right-of-way is available
- Consider modifying the signal operations to change protected southbound left-turn phase from a leading phase to a lagging phase (i.e., move the protected southbound left-turn phase from before to after the southbound through traffic phase)

The Caldecott Tunnel Improvement Project Settlement Agreement

The Caldecott Tunnel Improvement Project Settlement Agreement provides funds to the Fourth Bore Coalition, and Cities of Oakland and Berkeley to ameliorate the impacts of adding a fourth bore to the Caldecott Tunnel in the greater community surrounding the SR 24 corridor between I-580 and Caldecott Tunnel, and improve pedestrian, bicycle, transit, and local circulation. As of May 2011, the funding received by the Fourth Bore Coalition has not been allocated to any improvement projects.

City of Oakland finalized and approved a list of 37 improvement projects in March 2011 based on public input and preliminary conceptual designs and cost estimates. The cost of all improvements projects in the City of Oakland's final project list exceeds the funding provided by the Settlement Agreement. Thus, the project list has been prioritized with 21 improvement project expected to be funded. This EIR assumes that improvement projects expected to be funded that do not require approvals by other jurisdictions would be completed regardless of the proposed Safeway project and are included in the analysis of future conditions. In addition, these improvement projects are also discussed as part of potential project mitigation measures at locations where the proposed Safeway project causes a significant impact. The final improvement projects in the study area and their current status are described below:

- College Avenue/Claremont Avenue intersection (#9) – Install bulbouts and upgrade traffic signal control equipment. This improvement is not expected to be funded at this time. Therefore, it is not included in the analysis of future conditions.
- Hudson Street/SR 24 Westbound On-Ramp/Claremont Avenue intersection (#11) – Install bulbout on the on-ramp approach by narrowing on-ramp to one lane, provide pedestrian lead time, install countdown pedestrian signal heads, and provide accessible pedestrian push buttons. This improvement has funding; however, it requires additional approval from Caltrans in order to be implemented. Therefore, it is not included in the analysis of future conditions.
- Miles Avenue/College Avenue intersection (#13) – Install bulbouts and countdown pedestrian signal heads and remove the slip right-turn lane from southbound College Avenue to Miles

Avenue. This improvement has full approval, full funding, and preliminary design. Therefore, it is included in the analysis of future conditions.

- Shafter Avenue/Keith Avenue/College Avenue intersection (#14) – Install bulbout on the northeast corner of the intersection to reduce Keith Avenue to one travel lane, add on-street parking to north side of Keith Avenue, widen sidewalk on both sides of College Avenue by removing on-street parking upgrade traffic signal controller and install countdown pedestrian signal heads. This improvement has full approval, full funding, and preliminary design. Therefore, it is included in the analysis of future conditions.
- Manila Avenue/Hudson Street/College Avenue intersection (#15) – Extend bulbouts on the west side of the intersection, install new traffic signal control equipment to allow countdown pedestrian signal heads, and provide a new north-south crosswalk along the west side of College Avenue. This improvement is not expected to be funded at this time. Therefore, it is not included in the analysis of future conditions.
- Upgrade traffic signal equipment along College Avenue to provide transit priority. This improvement is not expected to be funded at this time. Therefore, it is not included in the analysis of future conditions.

As of May 2011, City of Berkeley is planning to study the following potential improvements as part of their Caldecott Tunnel Improvement Project Settlement Agreement:

- Ashby Avenue/College Avenue intersection (#1) – Provide a northbound left-turn lane on College Avenue, change the left-turn signal phasing, and/or provide a pedestrian scramble phase.
- Ashby Avenue/Claremont Avenue intersection (#2) – Convert one of the through lanes on eastbound and/or westbound Ashby Avenue to a dedicated left-turn lane.

Since City of Berkeley will be studying the feasibility and potential impacts of proposed improvements at these two intersections, the final improvements that would be implemented at these intersections are not known at this time. In addition, final improvements at both intersections require approval from City of Berkeley and Caltrans. Since the final improvements are not known at this time and they do not have full approval, these improvement projects are not included in the analysis of future conditions. However, they are discussed as part of potential project mitigation measures at these locations.

Local Plans and Policies

The Oakland *General Plan* is comprised of numerous elements, and those containing policies relevant to transportation resources primarily are contained in the *Land Use and Transportation Element* (LUTE). The goals and policies contained in the various *General Plan* elements are often competing. In reviewing a project for conformity with the *General Plan*, the City is required to 'balance' the competing goals and policies. This project is reviewed for compliance with the following local plans and policies:

- *General Plan LUTE*
- *City of Oakland Pedestrian Master Plan*
- *City of Oakland Bicycle Master Plan*
- *City of Oakland Bicycle Parking Ordinance*
- *City of Oakland Transit First Policy*

- *AC Transit Short-Range Transit Plan*
- *City of Oakland Standard Conditions of Approval*
- *City of Berkeley General Plan Circulation Element*

Although the proposed project is located in the City of Oakland, it is adjacent to the City of Berkeley city limit and some of the study intersections are located in the City of Berkeley. Relevant policies from the City of Berkeley's *General Plan Circulation Element* are also discussed in this section.

City of Oakland General Plan LUTE

The City of Oakland, through various policy documents, states a strong preference for encouraging use of alternative transportation modes. The following polices are included in the LUTE:

- *LUTE Policy Framework: Encouraging Alternative Means of Transportation*. "A key challenge for Oakland is to encourage commuters to carpool or use alternative modes of transportation, including bicycling or walking. The Policy Framework proposes that congestion be lessened by promoting alternative means of transportation, such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. The City will continue to work closely with local and regional transit providers to increase accessibility to transit and improve intermodal transportation connections and facilities. Additionally, policies support the introduction of light rail and trolley buses along appropriate arterials in heavily traveled corridors, and expanded use of ferries in the bay and estuary."
- *Policy T3.5, Including Bikeways and Pedestrian Walks*. The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- *Policy T3.6, Encouraging Transit*. The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated "transit streets" as shown on the Transportation Plan. (Policies T3.6 and T3.7 are based on the City Council's passage of "Transit First" policy in October 1996.)
- *Policy T3.7, Resolving Transportation Conflicts*. The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than vehicles, giving due consideration to the environmental, public safety, economic development, health and social equity impacts.
- *Policy T4.1, Incorporating Design Features for Alternative Travel*. The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

City of Oakland Pedestrian Master Plan

In November 2002, the *Pedestrian Master Plan* (PMP) was adopted by the City Council and incorporated into the adopted *General Plan*. The PMP identifies policies and implementation measures that promote a walkable City. In the study area, the PMP designates a Pedestrian Route Network throughout Oakland and identifies College, Claremont, and Alcatraz Avenues as District Routes and 63rd Street as a Neighborhood Route.

The *PMP* includes the following relevant policies and actions:

- *Policy 1.1. Crossing Safety*: Improve pedestrian crossings in area of high pedestrian activity where safety is an issue.
  - *Action 1.1.1*. Consider the full range of design elements – including bulbouts and refuge islands – to improve pedestrian safety.
- *Policy 1.2: Traffic Signals*: Use traffic signals and their associated features to improve pedestrian safety at dangerous intersections.
  - *Action 1.2.7*. Consider using crossing enhancement technologies like countdown pedestrian signals at the highest pedestrian volume locations.
- *Policy 1.3. Sidewalk Safety*: Strive to maintain a complete sidewalk network free of broken or missing sidewalks or curb ramps.
  - *Action 1.3.7*. Conduct a survey of all street intersections to identify corners with missing, damaged, or non-compliant curb ramps and create a plan for completing their installation.
- *Policy 2.1: Route Network*: Create and maintain a pedestrian route network that provides direct connections between activity centers.
  - *Action 2.1.8*. To the maximum extent possible, make walkway accessible to people with physical disabilities.
- *Policy 2.3: Safe Routes to Transit*: Implement pedestrian improvements along major AC Transit lines and at BART stations to strengthen connections to transit.
  - *Action 2.3.1*: Develop and implement street designs (like bus bulbouts) that improve pedestrian/bus connections.
  - *Action 2.3.3*: Prioritize the implementation of street furniture (including bus shelters) at the most heavily used transit stops.
  - *Action 2.3.4*: Improve pedestrian wayfinding by providing local area maps and directional signage at major AC Transit stops and BART stations.
- *Policy 3.2. Land Use*: Promote land uses and site designs that make walking convenient and enjoyable.
  - *Action 3.2.4*: Require contractors to provide safe, convenient, and accessible pedestrian rights-of-way along construction sites that require sidewalk closure.
  - *Action 3.2.8*: Discourage motor vehicle parking facilities that create blank walls, unscreened edges along sidewalks, and/or gaps between sidewalks and building entrances.

City of Oakland Bicycle Master Plan

The Oakland City Council adopted the Oakland *Bicycle Master Plan Update* in December 2007. The adopted plan includes the following policy-supporting actions that are applicable to the proposed project:

- *Policy 1A: Bikeway Network*: Develop and improve Oakland's bikeway network.
  - *Action 1A.1 – Bicycle Lanes (Class 2)*: Install bicycle lanes where feasible as the preferred bikeway type for all streets on the proposed bikeway network (except for the bicycle boulevards proposed for local streets with low traffic volumes and speeds).

- *Action 1A.3 – Bicycle Boulevards (Class 3B)*: Enhance bicycle routes on local streets by developing bicycle boulevards with signage, striping, and intersection modifications to prioritize bicycle travel.
- *Action 1A.6 – Dedicated Right Turn Lanes and "Slip Turns"*: Where feasible, avoid the use of dedicated right turn lanes on streets included in the bikeway network. Where infeasible, consider a bicycle through lane to the left of the turn lane or a combined bicycle lane/right turn lane.

- *Policy 1B: Routine Accommodation*: Address bicycle safety and access in the design and maintenance of all streets.
  - *Action 1B.2 – Traffic Signals*: Include bicycle-sensitive detectors, bicycle detector pavement markings, and adequate yellow time for cyclists with all new traffic signals and in the modernization of all existing signals.
- *Policy 1C – Safe Routes to Transit*: Improve bicycle access to transit, bicycle parking at transit facilities, and bicycle access on transit vehicles.
  - *Action 1C.1 – Bikeways to Transit Stations*: Prioritize bicycle access to major transit facilities from four directions, integrating bicycle access into the station design and connecting the station to the surrounding neighborhoods.
- *Policy 1D – Parking and Support Facilities*: Promote secure and conveniently located bicycle parking at destinations throughout Oakland.
  - *Action 1D.6 – Bicycle Parking Ordinance*: Adopt an ordinance as part of the City's Planning Code that would require new development to include short and long-term bicycle parking.
  - *Action 1D.7 – Development Incentives*: Consider reduced automobile parking requirements in exchange for bicycle facilities as part of transportation demand management strategies in new development.

City of Oakland Bicycle Parking Ordinance

The Oakland City Council adopted a Bicycle Parking Ordinance in 2008. The ordinance is contained in Municipal Code Chapter 17.117, and requires new development to provide both short-term (i.e., bicycle racks) and long-term bicycle parking (i.e., lockers or indoor storage) for bicycles.

City of Oakland Transit First Policy

The City adopted what is known as the "Transit First" Policy in October 2006. This resolution supports public transit and other alternatives to single occupant vehicles, and directs the LUTE to incorporate "various methods of expediting transit services on designated streets, and encouraging greater transit use."

AC Transit Short-Range Transit Plan

AC Transit, the provider of bus transit service in the project study area, has established goals related to transit service. These goals are documented in the *Short Range Transit Plan – Fiscal Year (FY) 2003 to FY 2012* (AC Transit, 2004). Some of the major goals of AC Transit include:

- Goal 1: Provide High Quality, Useful Transit Service for Customers in the East Bay.
- Goal 4: Plan and Advocate for the Funding and Implementation of Future Projects.
- Work with City and Local agencies to make transit usage as safe, secure, reliable, and quick as possible and to promote transit usage in the planning process.
- Promote "Transit First" development practices and increased funding for transit through transit mitigation funding for new developments.

AC Transit has also established a *Strategic Vision* to provide fast, frequent, reliable service on a wide variety of routes with attractive vehicles and an easy-to-use, affordable fare structure (AC Transit, 2002). Key elements of the AC Transit *Strategic Vision* include: increased frequency of buses to reduce wait time; greater frequency of service during midday, evening and owl travel times; an easy-to-use, integrated fare system; flexible routes; adequate around-the-clock service; a redesigned network that matches travel patterns and helps meet demand in the high-density urban core; gradual transition to "Bus Rapid Transit" in the highest ridership corridors; and bus stop improvements including real-time display of arrival times.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

If the proposed project is approved by the City, then all applicable Standard Conditions of Approval for construction traffic and parking would be adopted as conditions of approval and required of the project to help ensure less-than-significant impacts (for the applicable topic). The Standard Conditions of Approval are incorporated and required as part of the project, so they are not listed as mitigation measures.

TRANS-1 *Parking and Transportation Demand Management*

Prior to issuance of a final inspection of the building permit. The property owner shall pay for and submit for review and approval by the City a Transportation Demand Management (TDM) plan containing strategies to:

- Reduce the amount of traffic generated by new development and the expansion of existing development, pursuant to the City's police power and necessary in order to protect the public health, safety and welfare.
- Ensure that expected increases in traffic resulting from growth in employment and housing opportunities in the City of Oakland will be adequately mitigated.
- Reduce drive-alone commute trips during peak traffic periods by using a combination of services, incentives, and facilities.
- Promote more efficient use of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage.
- Establish an ongoing monitoring and enforcement program to ensure that the desired alternative mode use percentages are achieved.

The property owner shall implement the approved TDM plan. The TDM plan shall include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use. All four modes of travel shall be considered, and parking management and parking reduction strategies should be included. Actions to consider include the following:

a. Inclusion of additional long term and short term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan, and Bicycle Parking Ordinance, shower, and locker facilities in commercial developments that exceed the requirement.

b. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority Bikeway Projects, on-site signage and bike lane striping.

c. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials.

d. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.

e. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

f. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).

g. Employees or residents can be provided with a subsidy, determined by the property owner and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.

h. Provision of shuttle service between the development and nearest mass transit station, or ongoing contribution to existing shuttle or public transit services.

i. Guaranteed ride home program for employees, either through 511.org or through separate program.

j. Pre-tax commuter benefits (commuter checks) for employees.

k. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants

l. Onsite carpooling and/or vanpooling program that includes preferential (discounted or free) parking for carpools and vanpools.

m. Distribution of information concerning alternative transportation options

n. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.

o. Parking management strategies; including attendant/valet parking and shared parking spaces.

p. Requiring tenants to provide opportunities and the ability to work off-site.

q. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite.

r. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours

The property owner shall submit an annual compliance report for review and approval by the City. This report will be reviewed either by City staff (or a peer review consultant, chosen by the City and paid for by the property owner). If timely reports are not submitted, the reports indicate a failure to achieve the stated policy goals, or the required alternative mode split is still not achieved, staff will work with the property owner to find ways to meet their commitments and achieve trip reduction goals. If the issues cannot be resolved, the matter may be referred to the Planning Commission for resolution. Property owners shall be required, as a condition of approval, to reimburse the City for costs incurred in maintaining and enforcing the trip reduction program for the approved project.

TRANS-2 *Construction Traffic and Parking*

Prior to the issuance of a demolition, grading or building permit. The project applicant and construction contractor shall meet with appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project applicant shall develop a construction management plan for review and approval by the Planning and Zoning Division, the Building Services Division, and the Transportation Services Division. The plan shall include at least the following items and requirements:

a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.
b. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
c. Location of construction staging areas for materials, equipment, and vehicles at an approved location.
d. A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.
e. Provision for accommodation of pedestrian flow.

Major Project Cases:

a. Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces.
b. Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the applicant's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final

inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo documentation, at the applicant's expense, before the issuance of a Certificate of Occupancy.

c. Any heavy equipment brought to the construction site shall be transported by truck, where feasible.

d. No materials or equipment shall be stored on the traveled roadway at any time.

e. Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.

f. All equipment shall be equipped with mufflers.

g. Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

City of Berkeley General Plan Circulation Element

The proposed project is located in the City of Oakland. However, the project site is adjacent to the City of Berkeley city limit and the proposed project may potentially impact transportation facilities in Berkeley. Relevant policies from the City of Berkeley's *General Plan Circulation Element* are listed below:

- Policy T-22: Traffic Circles and Roundabouts – Encourage the use of landscaped traffic circles to calm traffic in residential areas.
  - Action A: – Consider roundabouts as a viable traffic-calming device, especially at the Shattuck and Adeline intersection, the Gilman Street Freeway on and off ramps, and at other appropriate intersections in the city.
- Policy T- 26: City Streets - Do not widen local, collector, or major streets unless necessary to allow passage of emergency vehicles, or remove parking from residential streets for the purpose of expanding automobile traffic lanes.
- Policy T-29: Infrastructure Improvements - Facilitate mobility and the flow of traffic on major and collector streets, reduce the air quality impacts of congestion, improve pedestrian and bicycle access, and speed public transportation throughout the city by making improvements to the existing physical infrastructure.
  - Action B: Designate or add transit-priority lanes or transit-only lanes.
  - Action C: Add or eliminate left turn lanes.
  - Action D: Establish commute period parking restrictions.
  - Action H: Time traffic signals on major transit corridors to give priority to and speed movement of transit vehicles.
- Policy T-30: Traffic Signals - Continue to pursue better signal devices and systems to facilitate movement on Berkeley's limited road network. Consider:
  - Signals that provide separate phases for through (straight) traffic, pedestrians and cyclists, and turning traffic.
  - Bus-activated signals.

- All-way stop signals that allow the free flow of pedestrians through the intersection.
- "Smart" signals to calm traffic and improve intersection safety.
- Timed traffic signals to give priority to and speed movement of transit and emergency vehicles.
- Pedestrian /bicycle-activated signals that allow bikes and pedestrians to cross busy streets.

- Policy T-42: Bicycle Planning - Integrate the consideration of bicycle travel into City planning activities and capital improvement projects, and coordinate with other agencies to improve bicycle facilities and access within and connecting to Berkeley.
- Policy T-43: Bicycle Network - Develop a safe, convenient, and continuous network of bikeways that serves the needs of all types of bicyclists, and provide bicycle-parking facilities to promote cycling.
- Policy T-51: Pedestrian Priority - When addressing competing demands for sidewalk space, the needs of the pedestrian shall be the highest priority.
- Policy T-52: Pedestrian Safety and Accessibility - Provide safe and convenient pedestrian crossings throughout the city.
  - Action A: Seek to ensure that the distance between signal-controlled intersections, "smart crosswalks," or stop signs is never more than one-quarter mile on major and collector streets. At intersections with severe or high pedestrian/automobile collision rates and at heavily used pedestrian crossings, consider all-way stop signals that allow the free flow of pedestrians through the intersection, "smart" signals to calm traffic and improve intersection safety, and pedestrian/bicycle-activated signals that allow bikes and pedestrians to cross busy streets without inviting traffic onto cross streets.
  - Action D: Encourage the creation of accessible pedestrian medians or islands in wide streets where people have to cross more than two lanes.

Project Transportation Characteristics

Project Description

The project site is located at 6320 College Avenue in Oakland. The project is at the northeast corner of College Avenue/Claremont Avenue intersection and is currently occupied by a 24,260-square-foot Safeway Store and surface parking lot with 105 parking spaces. Automobile access to the existing Safeway Store is currently provided through two full-access driveways on College Avenue and two full-access driveways on Claremont Avenue. The south part of the site was previously occupied by a Union 76 Gas Station, which closed in November 2009, and is currently vacant. Automobile access to the gas station was provided by two driveways on College Avenue and three driveways on Claremont Avenue.

The proposed project would demolish the existing store and the currently vacant gas station and replace them with a 51,510-square-foot Safeway store and 10,657 square-feet of additional ground-level commercial space along College Avenue. It is estimated that the proposed project would increase the number of employees at the site by 77 full-time employees.

The proposed project would also provide 171 parking spaces in the following two off-street parking facilities:

- A partially underground parking garage with 144 customer parking spaces open to the general public. Automobile access to the garage would be provided by the following:
  - A full-access driveway on College Avenue opposite 63rd Street.
  - A full access driveway on Claremont Avenue opposite Mystic Street and Auburn Avenue. The project applicant proposes to signalize this intersection as part of the proposed project.
  - A right-in/right-out only driveway on Claremont Avenue between Mystic Street/Auburn Avenue and College Avenue.
- An upper-level parking facility with automobile access to and from Claremont Avenue. This parking level would provide 27 parking spaces which would be assigned to employees only. Two loading docks for the Safeway supermarket are also located on this parking level.

In comparison to conditions prior to closing of the Union 76 gas station, the proposed project would reduce the number of driveways on College Avenue from four to one and on Claremont Avenue from five to three.

Pedestrians would directly access the commercial tenants from the sidewalk on College Avenue. Since the Safeway Supermarket is located on the upper level of the building, access is provided via elevators and stairs from two lobbies with direct access to College Avenue and the underground garage.

Although exclusive bicycle facilities are not provided on College or Claremont Avenues or 63rd Street, most bicyclists would approach the project site from these three streets. Project customers would use the short-term bicycle parking (i.e., bicycle racks) along project frontage and project employees would use the long-term bicycle parking provided in the underground parking garage.

The proposed project would also make the following modifications to the transportation system surrounding the project site:

- Signalize the Claremont Avenue/Mystic Street/Safeway Driveway intersection.
- Provide left-turn lanes on northbound and southbound College Avenue into 63rd Street and the Safeway driveway. The new left-turn lanes are accommodated by widening College Avenue on the east side.
- Provide pedestrian bulb-outs on the east side of the 63rd Street/Safeway Driveway/College Avenue intersection on both the north and south crosswalks across College Avenue.
- Provide a pedestrian bulb-out on the project corner of the College Avenue/Claremont Avenue intersection.
- Provide a bus bulb-out on northbound College Avenue just north of Claremont Avenue and move the existing bus stop from south of Claremont Avenue to north of Claremont Avenue.
- Provide a short pedestrian only street between College Avenue and Claremont Avenue near the south end of the project site with fronting commercial uses.

Trip Generation

Table 4.3-10 presents the automobile trip generation for the proposed project. Trip generation for the expansion of the Safeway Store and the new additional commercial space are described below.

Table 4.3-10 Project Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Safeway Store	850[2]	51.510 ksf	293	282	575	285	274	559
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*108*	*104*	*212*	*151*	*145*	*296*
Pass-By Vehicles (36%)[3]			-38	-38	-76	-54	-54	-108
Net New Safeway Trips			***70***	***66***	***136***	***97***	***91***	***188***
Specialty Retail	814[4]	7.913 ksf	18	22	40	18	22	40
Restaurant	931[5]	2.744 ksf	14	7	21	18	12	30
Total Net New Automobile Trips			***102***	***95***	***197***	***133***	***125***	***258***

Notes:

1. KSF = 1,000-square feet
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%
   Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE *Trip Generation Handbook* (2nd Edition) average pass-by rate for supermarket
4. *ITE* Trip generation Equation Used:
   PM: T = 2.4(x) + 21.48; Enter = 44%, Exit = 56%
   Saturday: Used the PM equation since Saturday peak hour data was not available
5. *ITE* Trip generation Equation Used:
   PM: T = 7.49 (x); Enter = 67%, Exit = 33%
   Saturday: T = 10.82 (x); Enter = 59%, Exit = 41%

Source: *Trip Generation Manual* (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Safeway Store

The vehicle trip generation expected from the proposed store expansion was estimated by applying the trip generation equations and rates presented in Institute of Transportation Engineers' (ITE) *Trip Generation, 8th Edition* to the square footages of the existing and the proposed stores. The difference between the existing and the future trips derived from the ITE methodology represents the net new trips estimated to be generated by the proposed expansion.

The total net new additional Safeway trips include pass-by trips. Pass-by trips are trips attracted to the site from adjacent roadways as an interim stop on the way to their ultimate destination. Pass-by trips consist of vehicles that would be on the roadway network regardless of the project; therefore, these trips result in changed travel patterns but do not add *new* vehicle traffic to the roadway network.

According to the ITE *Trip Generation Handbook*, *2nd Edition*, the average reduction for supermarket pass-by trips is 36 percent during the weekday PM peak hour. The ITE *Trip Generation Handbook* does not provide pass-by rates for a Saturday peak hour; therefore the weekday PM peak hour pass-by rate is used for the Saturday peak hour. This pass-by assumption is reasonable because existing traffic volumes on College and Claremont Avenues are similar on a Friday and Saturday, and because the Rockridge area is a major destination for shopping and other commercial opportunities. The proposed Safeway expansion is estimated to generate 136 new weekday PM peak hour and 188 new Saturday peak hour vehicle trips.

Retail and Restaurant

The proposed project would also include an additional 10,657 square feet of neighborhood serving commercial distributed along College Avenue. Although specific commercial tenants have not yet been identified, the site is expected to be occupied by several smaller retailers serving the local neighborhood and may potentially provide a quality restaurant. In order to present a conservative analysis, this analysis assumes that the project would provide 7,913 square feet of neighborhood serving commercial and a 2,744-square-foot restaurant.

The ITE Specialty Retail land use category was used for the neighborhood serving commercial because it best fits this description. As described in ITE *Trip Generation*, Specialty Retail (land use 814) represents "small strip shopping centers that contain a variety of retail shops…" By comparison, the Shopping Center land use (820) represents "an integrated group of commercial establishments" that includes "neighborhood centers, community centers, regional centers, and super regional centers." The data for the Shopping Center land use represents much larger, self-contained retail centers than the proposed project; therefore, it is not appropriate for use in this instance.

The ITE Quality Restaurant land use category was used for the restaurant component of the project. The proposed restaurant is expected to be similar to the existing restaurants in the neighborhood and would fit the description for Quality Restaurant (land use 931) in ITE *Trip Generation,* which consists of "high quality full service eating establishments with typical turnover rates of at least one hour or longer … and generally not part of a chain."

Table 4.3-10 presents the ITE trip generation estimates and the new trips generated by the proposed retail and restaurant uses. This study assumes that all trips generated by the these uses would be new trips and no pass-by discounts are taken to present a more conservative analysis; the proposed uses would most likely complement the existing retail and restaurant uses along the pedestrian oriented commercial district along College Avenue. The proposed retail and restaurant uses are estimated to generate 61 new weekday PM peak hour and 70 new Saturday peak hour vehicle trips.

Total Project Trip Generation

This study assumes no internalization between the proposed Safeway expansion and the other uses to present a more conservative analysis. As shown in Table 4.3-10, the proposed project would generate 197 net new weekday PM peak hour trips and 258 net new Saturday peak hour trips.

Mode Split Characteristics

The preceding trip generation estimates only quantify vehicle trips. To estimate the net new non-automobile trips, a mode choice survey of customers and employees was conducted at the existing Safeway store.

Customers

A mode choice survey of Safeway customers was conducted in February 2008. Appendix E provides a sample questionnaire used in the customer mode choice survey. Based on the survey, about 70 percent of Safeway trips are by vehicles, while about 30 percent are by transit, walking, or biking.

The results of the mode choice survey were applied to the net new vehicle trips shown in Table 4.3-10. Table 4.3-11 presents the mode split and the estimated net new non-automobile trips generated by the proposed project. As shown, an additional 58 pedestrian, 20 transit, and 14 bicycle trips are expected during the weekday PM peak hour; an additional 81 pedestrian, four transit, and 12 bicycle trips are expected during the Saturday PM peak hour.

Table 4.3-11 Project Trip Generation Estimates by Various Modes

Travel Mode	Mode Split Characteristics		Trip Generation	
	Friday Evening[1]	Saturday Evening[2]	Weekday PM Peak Hour	Saturday Peak Hour
Vehicle	68%	73%	197	258
Walk	20%	23%	58	81
Transit	7%	1%	20	4
Bike	5%	3%	14	12
Total	**100%**	**100%**	**289**	**355**

1. Mode split percentage derived from a survey of 369 Safeway customers between 4:00 PM and 7:00 PM on Friday, February 8, 2008.
2. Mode split percentage derived from a survey of 378 Safeway customers between 4:00 PM and 7:00 PM on Saturday, February 9, 2008.

Source: Fehr & Peers, 2010.

As shown in Table 4.3-11, the ITE *Trip Generation* data and methodology were used to estimate the new vehicle trips generated by the proposed project. The ITE data is generally based on data collected at similar sites. The supermarket, specialty retail and quality restaurant sites represented in the ITE data tend to be in suburban areas with little or no access by other modes. In order to present a conservative analysis of the proposed project, we did not assume any reductions in vehicle trips associated with pedestrian, bicycle, or transit access.

Table 4.3-12 summarizes the current mode split for day-time Safeway employees based on the survey results. Similar to Safeway customers, about 70 percent of day-time employee trips are by automobile (drive alone, dropped off, or carpool). The remainder of employee trips is: 26 percent by transit (BART or AC Transit) and 4 percent by bike. Many employees stated their non-standard working start and end times and availability of transit as the primary reasons for driving to and from the site. The drive alone mode share for non day-time employees is higher because of limited transit service and safety concerns.

Table 4.3-12 Day-Time Employee Mode Split

Travel Mode[1]	Mode Share
Drive Alone	64%
Dropped off	4%
Carpool	2%
Walk	0%
BART	22%
AC Transit	4%
Bike	4%
Total	***100%***

Notes:

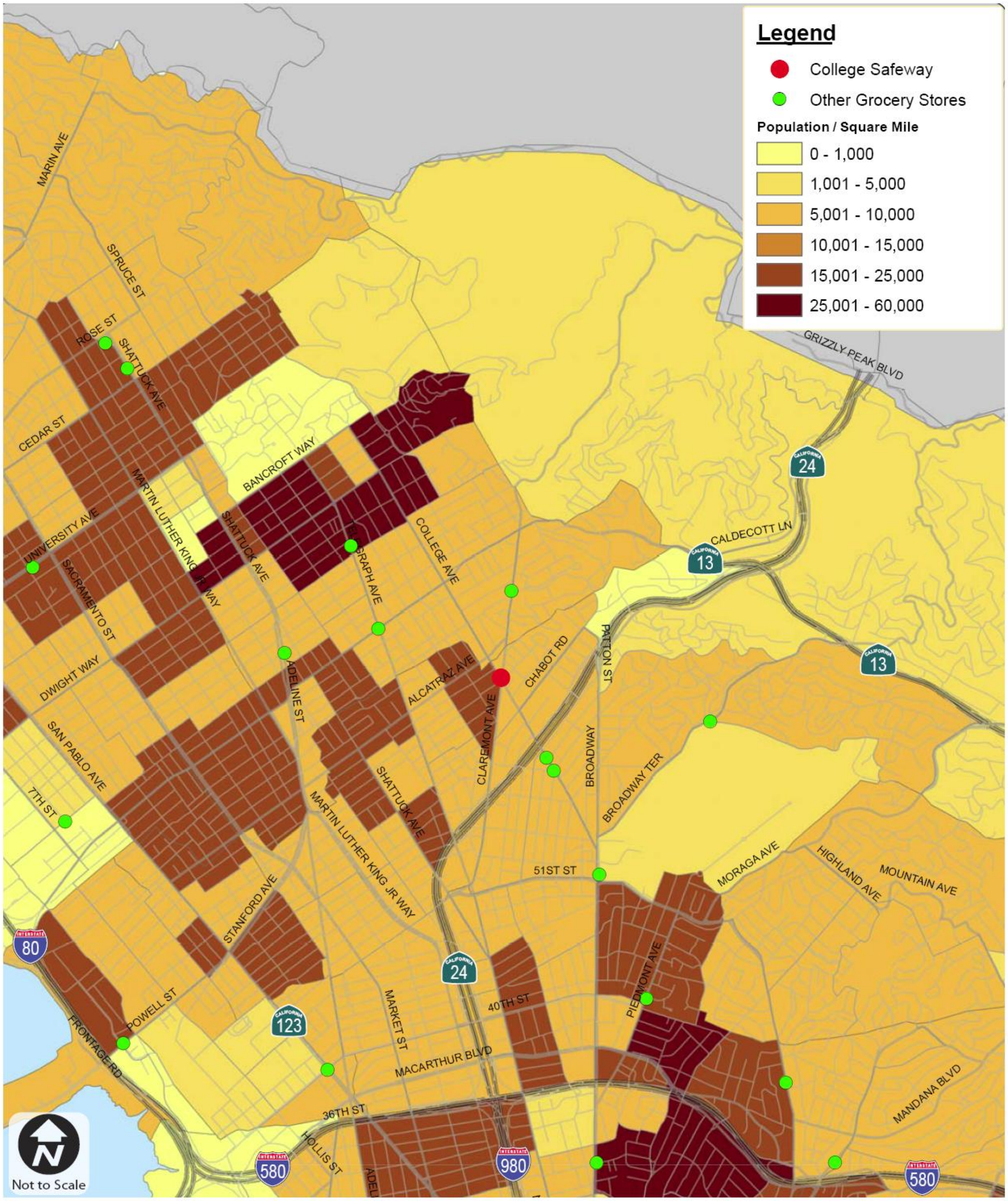
- Based on survey of Safeway employees conducted in March 2010. Of the 92 employees at the site, 40 responded to the survey.

Source: Fehr & Peers, 2010.

Based on data provided by Safeway, the number of employees at this store ranges between five and ten employees during the least busy periods (overnight) to between 25 and 35 employees during peak periods (afternoons). Based on the mode share data, the employee parking demand during the peak periods is estimated at about 23 automobiles.

Trip Distribution and Assignment

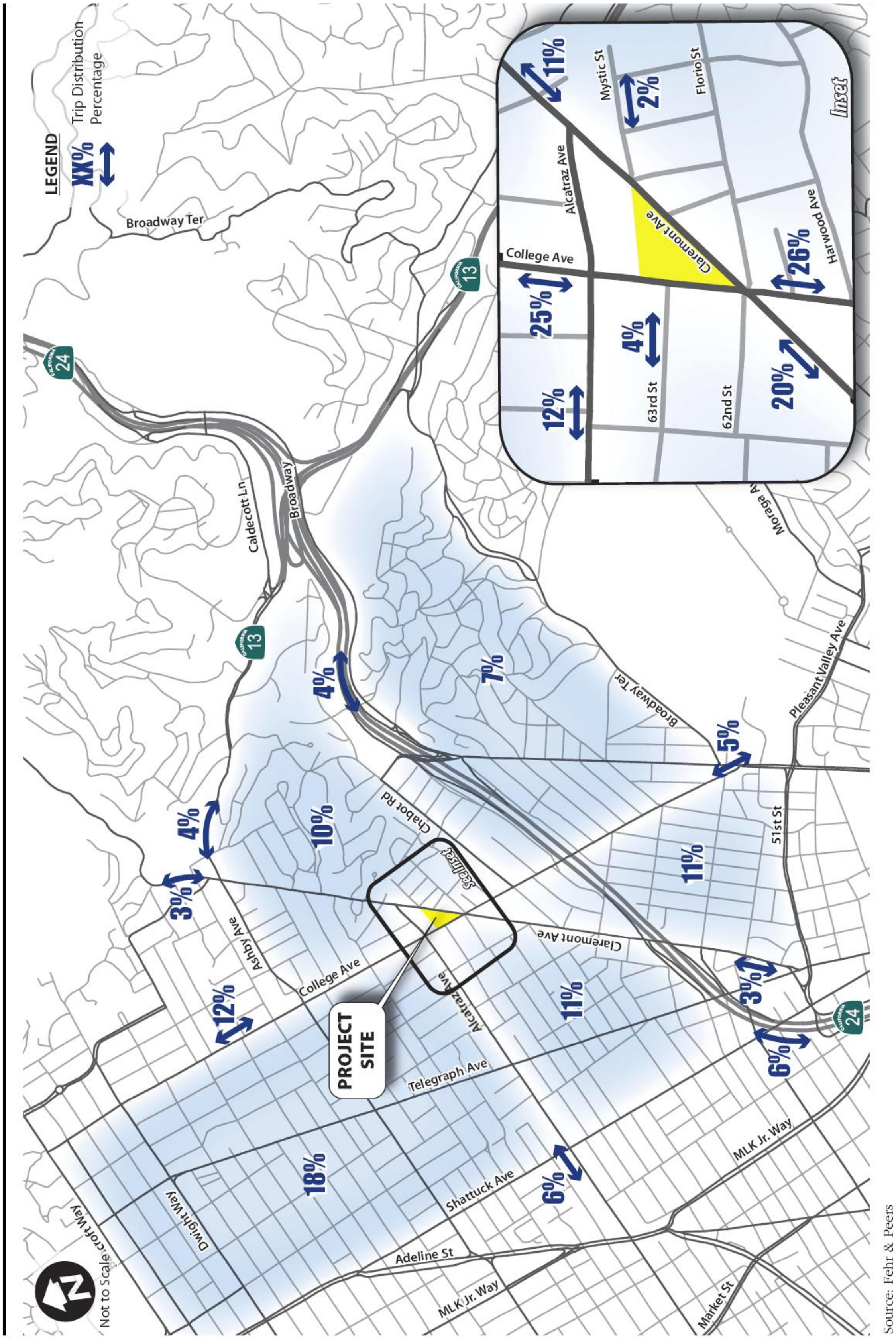
Trip distribution is defined as the directions of approach and departure that vehicles would use to arrive at and depart from the site. Fehr & Peers developed an estimated distribution of project trips based on existing travel patterns, study area population density and relative locations of other supermarkets in the area. Figure 4.3-11 shows the population density and location of other supermarkets in the surrounding areas. The resulting distribution is presented on Figure 4.3-12. New trips generated from the Safeway store were assigned to the roadway system based on these general directions of approach and departure.



Source: Fehr & Peers

11-17-10

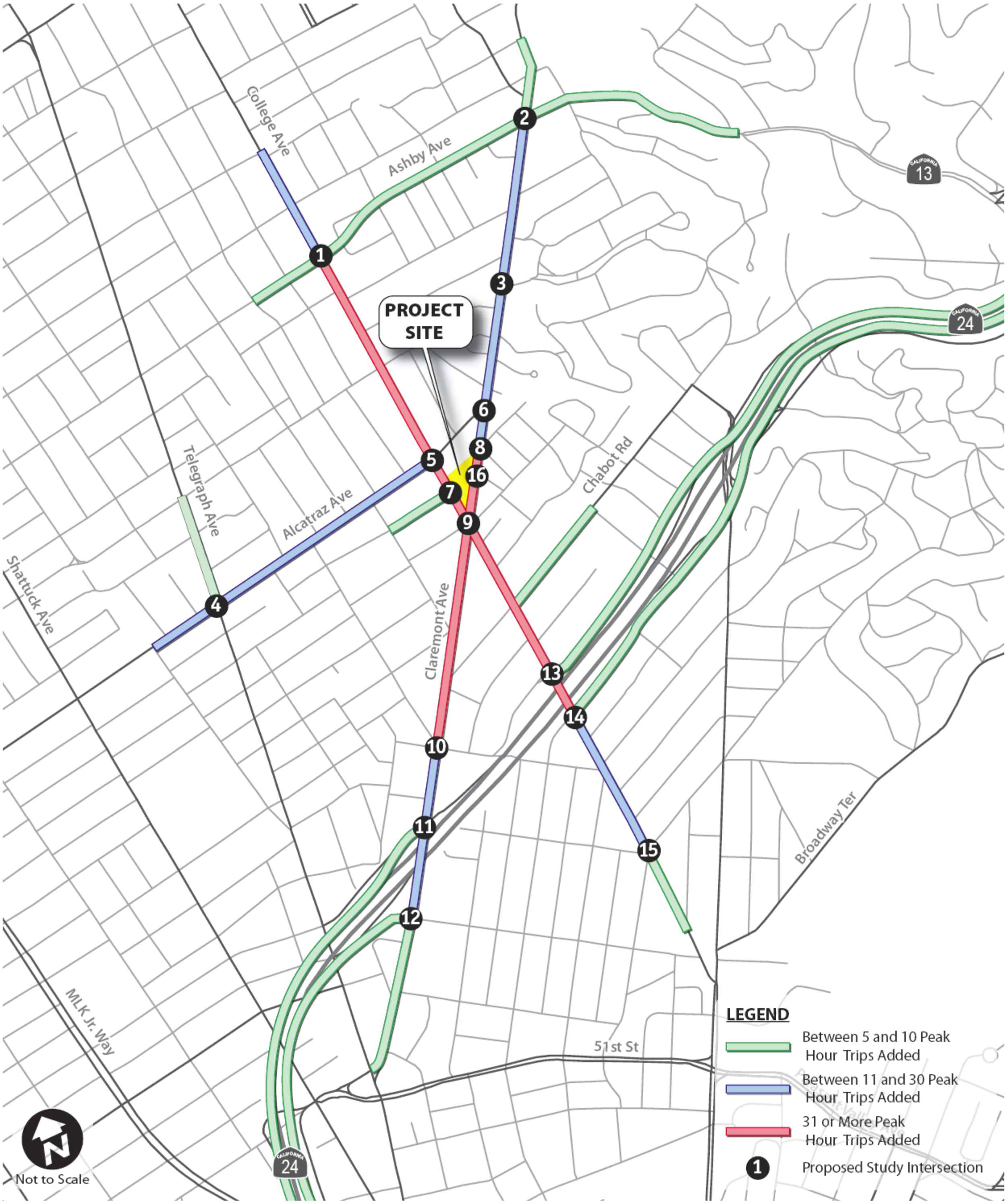
Population Density and Other Grocery Stores in the Area Figure 4.3-11



Project Trip Distribution Percentages Figure 4.3-12

The trips generated by the proposed project, as shown in Table 4.3-10, were assigned to the roadway network according to the trip distribution shown on Figure 4.3-12. The resulting trip assignment by roadway segment is presented on Figure 4.3-13A for the weekday PM peak hour and Figure 4.3-13B for the Saturday peak hour. Figure 4.3-14 presents the project-generated turning movements at the study intersection. Figure 4.3-15 shows pass-by trips and reassigned trips due to driveways closures.

Text continues on page 4.3-54



Source: Fehr & Peers

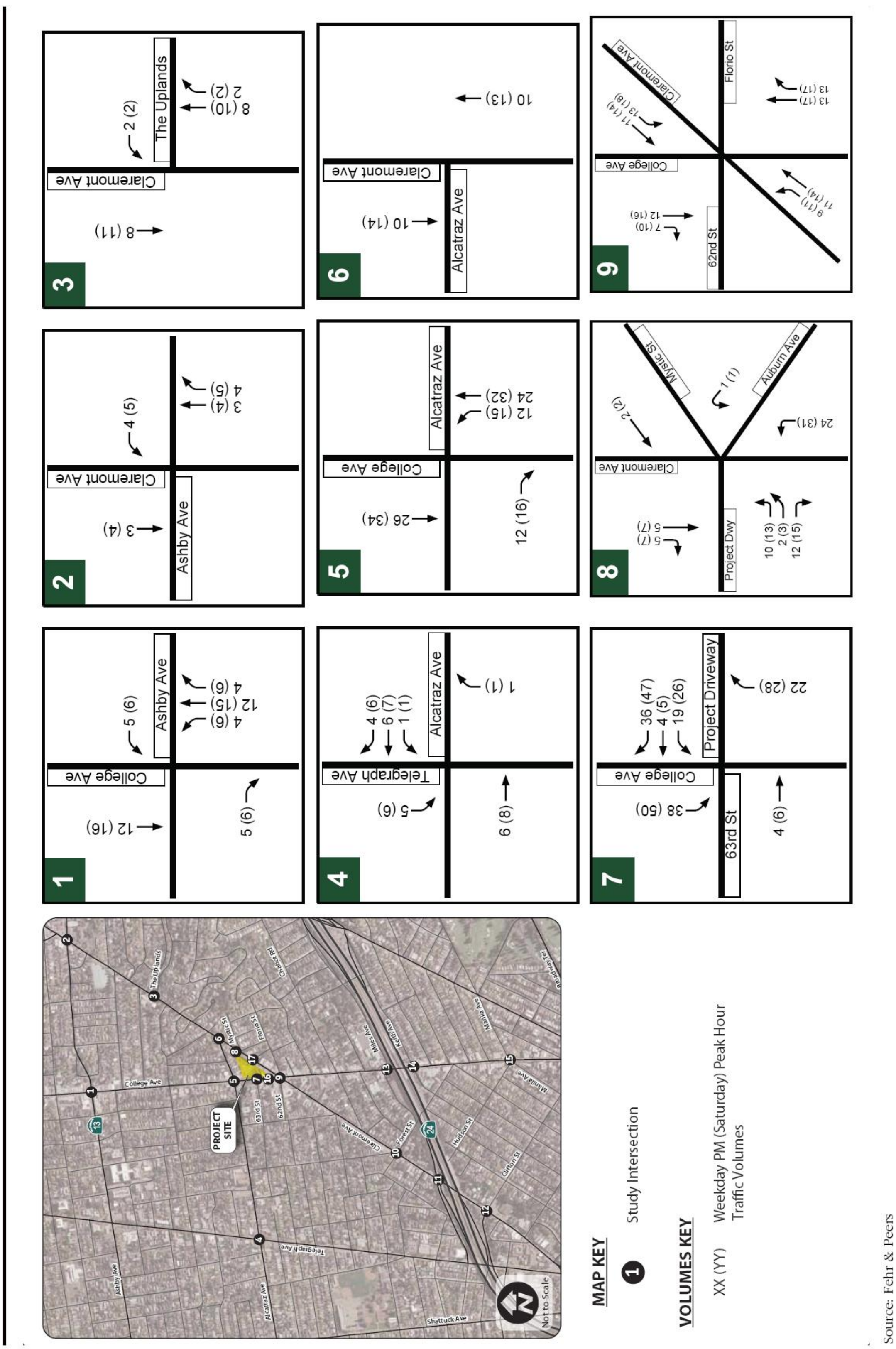
11-17-10

Weekday PM Peak Hour Project Trip Assignment and Proposed Study Locations Figure 4.3-13A

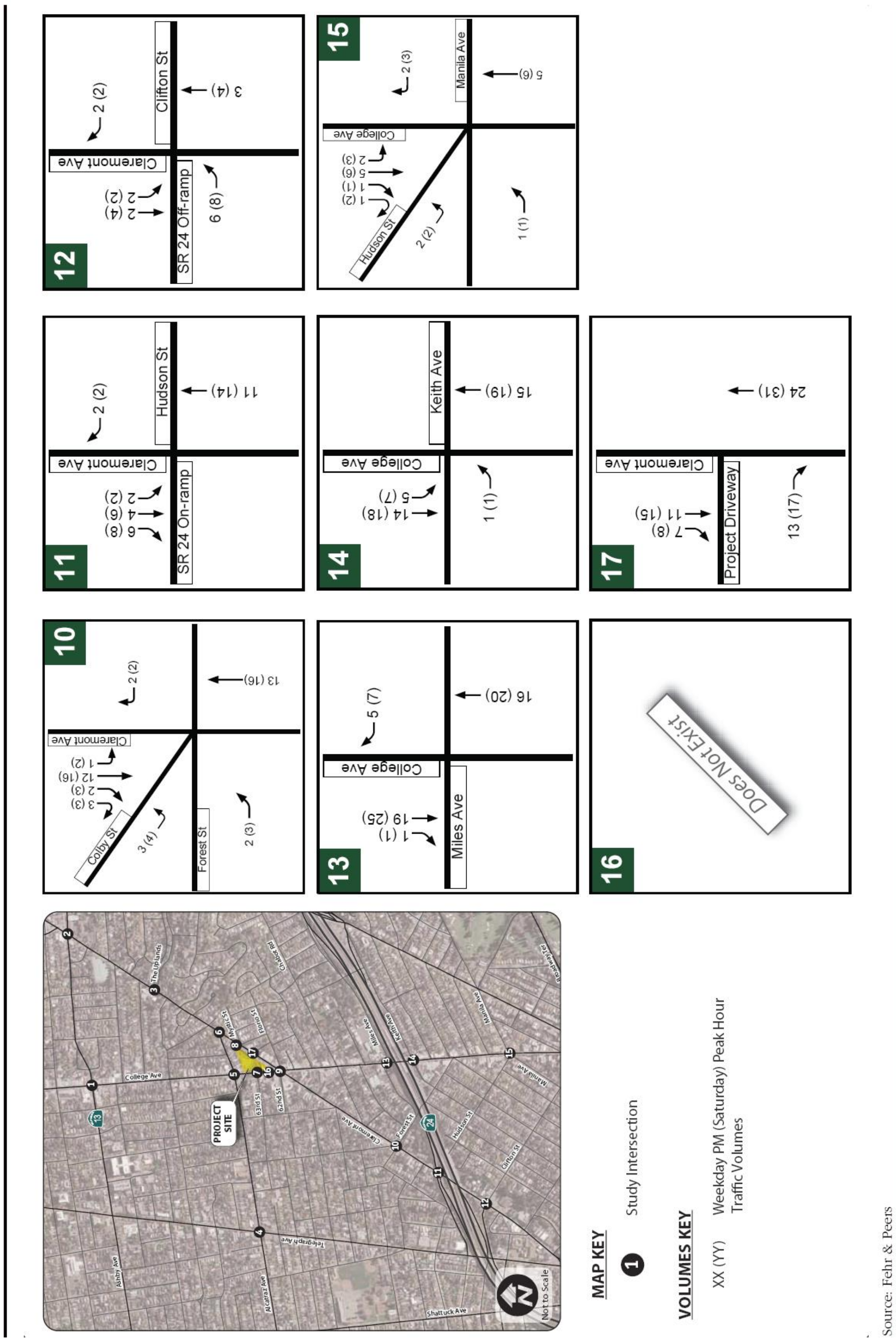
Source: Fehr & Peers

11-17-10

Saturday PM Peak Hour Project Trip Assignment and Proposed Study Locations Figure 4.3-13B



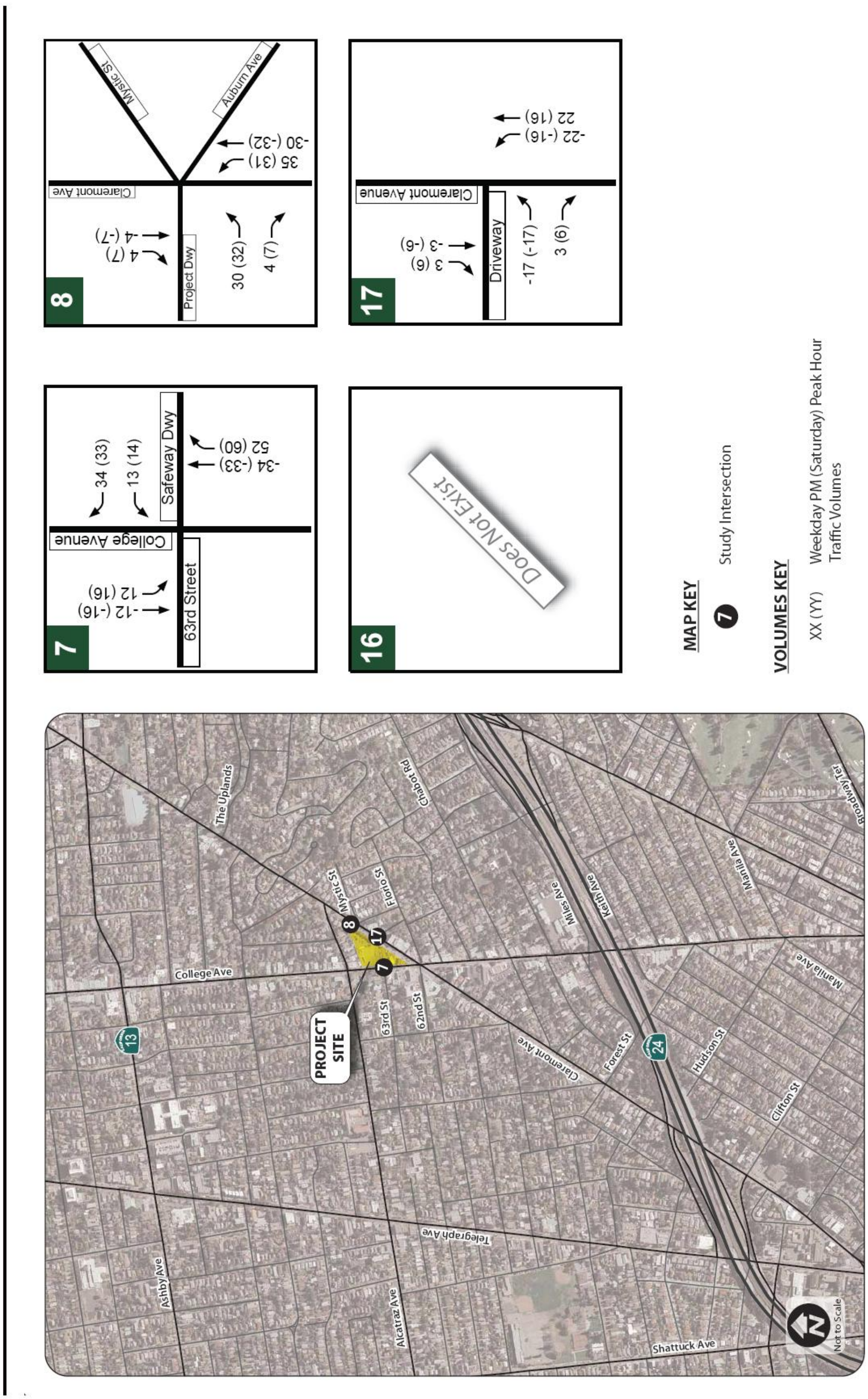
Net New Project Trips Figure 4.3-14A



Source: Fehr & Peers

11-15-10

Net New Project Trips Figure 4.3-14B



Source: Fehr & Peers

11-15-10

Pass-By and Re-Assigned Project Trips Figure 4.3-15

Impacts and Mitigation Measures

This section evaluates the project's potential adverse effects related to transportation, circulation and parking, and it considers vehicles, bicycles and pedestrians. Traffic impacts are assessed at the study intersections in the study area for the following scenarios:

- Existing Plus Project
- 2015 No Project
- 2015 Plus Project
- 2035 No Project
- 2035 Plus Project

Following the intersection analysis, the project's potential effects on: construction; vehicle, pedestrian and bicycle safety; emergency access; and consistency with local plans is presented. An assessment of non-CEQA issues such as parking, transit, and neighbor traffic intrusion are also provided.

Significance Criteria

Significance criteria established by City of Oakland were used to determine if the project would cause a significant impact at study intersections in Oakland. City of Berkeley's criteria were used to determine if the project would result in significant impacts at study intersections located in the City of Berkeley.

City of Oakland

The proposed project would have a significant impact on the environment if it would:

Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit, specifically:

Traffic Load and Capacity Thresholds

1. at a study, signalized intersection which is located outside the Downtown[18] area, the project would cause the LOS to degrade to worse than LOS D (i.e., LOS E);
2. at a study, signalized intersection which is located within the Downtown area, the project would cause the LOS to degrade to worse than LOS E (i.e., LOS F);
3. at a study, signalized intersection outside the Downtown area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four or more seconds, or degrade to worse than LOS E (i.e., LOS F);

[18] Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west. None of the project study intersections are in Downtown Oakland.

4. at a study, signalized intersection for all areas where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six seconds or more, or degrade to worse than LOS E (i.e., LOS F);
5. at a study, signalized intersection for all areas where the level of service is LOS F, the project would cause
   - The total intersection average vehicle delay to increase by two or more seconds, or
   - An increase in average delay for any of the critical movements of four seconds or more; or
   - The v/c ratio to increase by 3 percent (but only if the delay values cannot be measured accurately);
6. at a study, unsignalized intersection for all areas, the project would add ten or more vehicles and after project completion satisfy the Caltrans peak-hour volume warrant;
7. For a Congestion Management Program (CMP) required analysis, (i.e., projects that generate 100 or more PM peak hour trips), cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the v/c ratio by more than 3 percent for a roadway segment that would operate at LOS F without the project;
8. Result in substantially increased travel times for AC Transit buses;

Other Thresholds

9. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
10. Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
11. Result in fewer than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;
12. Fundamentally conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities;

Cumulative Impacts

13. A project’s contribution to cumulative impacts is considered “considerable” (i.e., significant) when the project exceeds at least one of thresholds listed above under a future year scenario.

Intersections in the City of Berkeley[19]

The following criteria, established by City of Berkeley, were used to determine if the project would result in significant impacts at study intersections in the City of Berkeley:

- at a study, signalized intersection operations degrade from LOS D to LOS E or worse and more than a 2-second increase in delay; or
- at a study, signalized intersection, more than a 3-second increase in delay at intersections operating at LOS E without and with the project; or
- at a study, signalized intersection, operations degrade from LOS E to LOS F *and* more than a 3-second increase in delay; or
- at a study, signalized intersection operating at LOS F without the project, a change in the volume-to-capacity (v/c) ratio of more than 0.01.
- at a study, unsignalized intersection:
  - a movement is at LOS F; and
  - the peak hour signal warrant is met; and
  - the project adds a minimum of 10 vehicles to the critical movement.[20]
- A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of thresholds listed above under a future year scenario.

Planning-Related Non-CEQA Issues

The following transportation-related topics are not considerations under CEQA, but should be evaluated in order to inform decision-makers and the public about these issues.

Parking-Related Impacts

This transportation analysis assesses the issue of parking as a non-CEQA impact. Parking impacts are assessed according to the following language, which was developed by the City of Oakland:

The Court of Appeal has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.[21] Similarly, the December 2009 amendments to the State CEQA Guidelines

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[19] This EIR uses the significance criteria established by each City for intersections under its jurisdiction to identify impacts and appropriate mitigations at study intersection within that jurisdiction (e.g., City of Oakland's criteria are used for intersections in Oakland and City of Berkeley's criteria are used in Berkeley). If the City of Oakland's significance criteria were applied to the study intersections located in Berkeley, the same significant impacts and mitigations to reduce those impacts to a less than significant level would be identified. The application of Oakland's significance criteria would not result in additional significant impacts or mitigations; nor would it eliminate any of the significant impacts or mitigations identified using City of Berkeley's criteria.

[20] City of Berkeley, Guidelines for Development of Traffic Impact Reports, p.7. The Guidelines further advise that "as delays increase dramatically once LOS F is reached, consideration should be given to the number of new trips added by a project and other factors, such as the feasibility of alternative routes and the proximity of adjacent traffic signals." *Id*.

[21] San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656

(which were effective March 18, 2010) removed parking from the State's Environmental Checklist (Appendix G of the State CEQA Guidelines) as an environmental factor to be considered under CEQA. Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, the City of Oakland, in its review of the proposed project, wants to ensure that the project's provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document.

Parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects, caused by congestion resulting from drivers circling as they look for a parking space. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, shuttles, taxis, bicycles or travel by foot), may induce drivers to shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy.

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts that might result from a shortfall in parking in the vicinity of the proposed project are considered less than significant.

This EIR evaluates if the project's estimated parking demand (both project-generated and project-displaced) would be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the project site. Project-displaced parking results from the project's removal of standard on-street parking, City or Redevelopment Agency owned/controlled parking and/or legally required off-street parking (non-open-to-the-public parking which is legally required). Therefore, the analysis must compare the proposed parking supply with both the estimated demand and the Oakland Planning Code requirements.

Transit Ridership

This transportation analysis assesses the issue of transit as a non-CEQA impact. The following aspects of transit operations are evaluated, to see if the proposed project would:

- increase the average ridership on AC Transit lines by 3 percent at bus stops where the average load factor with the project in place would exceed 125 percent over a peak 30-minute period;
- increase the peak-hour average ridership on BART by 3 percent where the passenger volume would exceed the standing capacity of BART trains; or
- increase the peak-hour average ridership at a BART station by 3 percent where average waiting time at fare gates would exceed one minute.

Queuing-Related Impacts

This transportation analysis evaluates the project's potential effect on 95th percentile queuing, to see if the proposed project would cause an increase in 95th percentile queue length of 25 feet or more at a signalized study intersection.

Traffic Control Devices

This transportation analysis evaluates the need for additional traffic control devices (e.g., stop signs, street lighting, crosswalks, traffic calming devices) using the California Manual on Uniform Traffic Control Devices (MUTCD) and applicable City standards.

Collision History

This transportation analysis evaluates five years of vehicle, pedestrian, and bicycle collision data for intersections and roadway segments adjacent to the project site to determine if the proposed project would contribute to an existing problem or if any improvements are recommended in order to alleviate potential effects of the project. As described previously, the immediate area adjacent to the project site had few collisions in general, and there are no existing physical problems to which the project would contribute.

Existing Plus Project Intersection Analysis

This section analyzes the transportation system with trips associated with the proposed project added to the existing traffic counts. Because it would take a number of years to secure approvals and complete the project, this analysis is presented for information only. This analysis presents the extent of project impacts relative to existing conditions.

Traffic Volumes

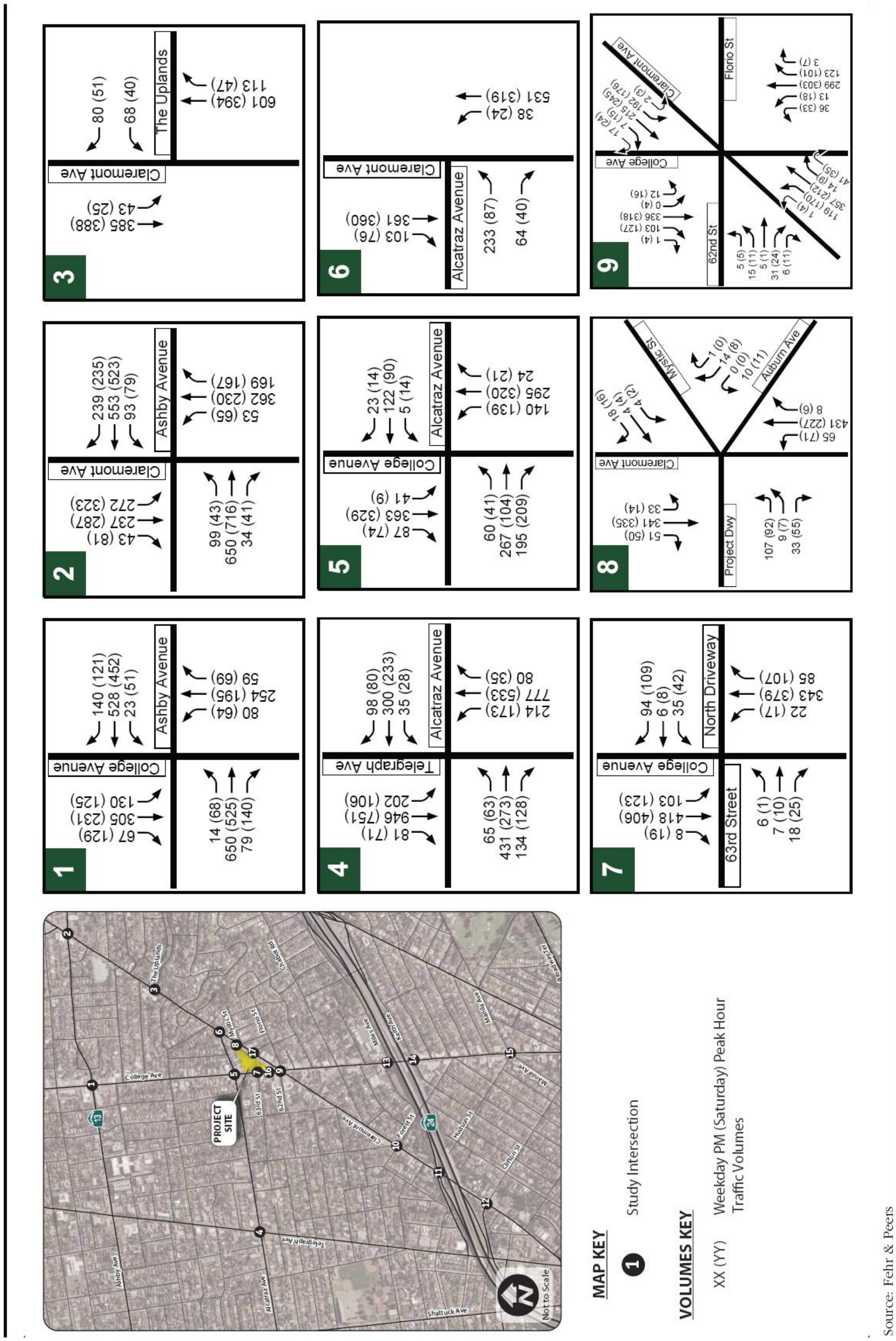
The traffic volumes for the Existing Plus Project conditions are shown on Figure 4.3-16. They include existing traffic volumes plus net added traffic volumes generated by the project.

Roadway Network

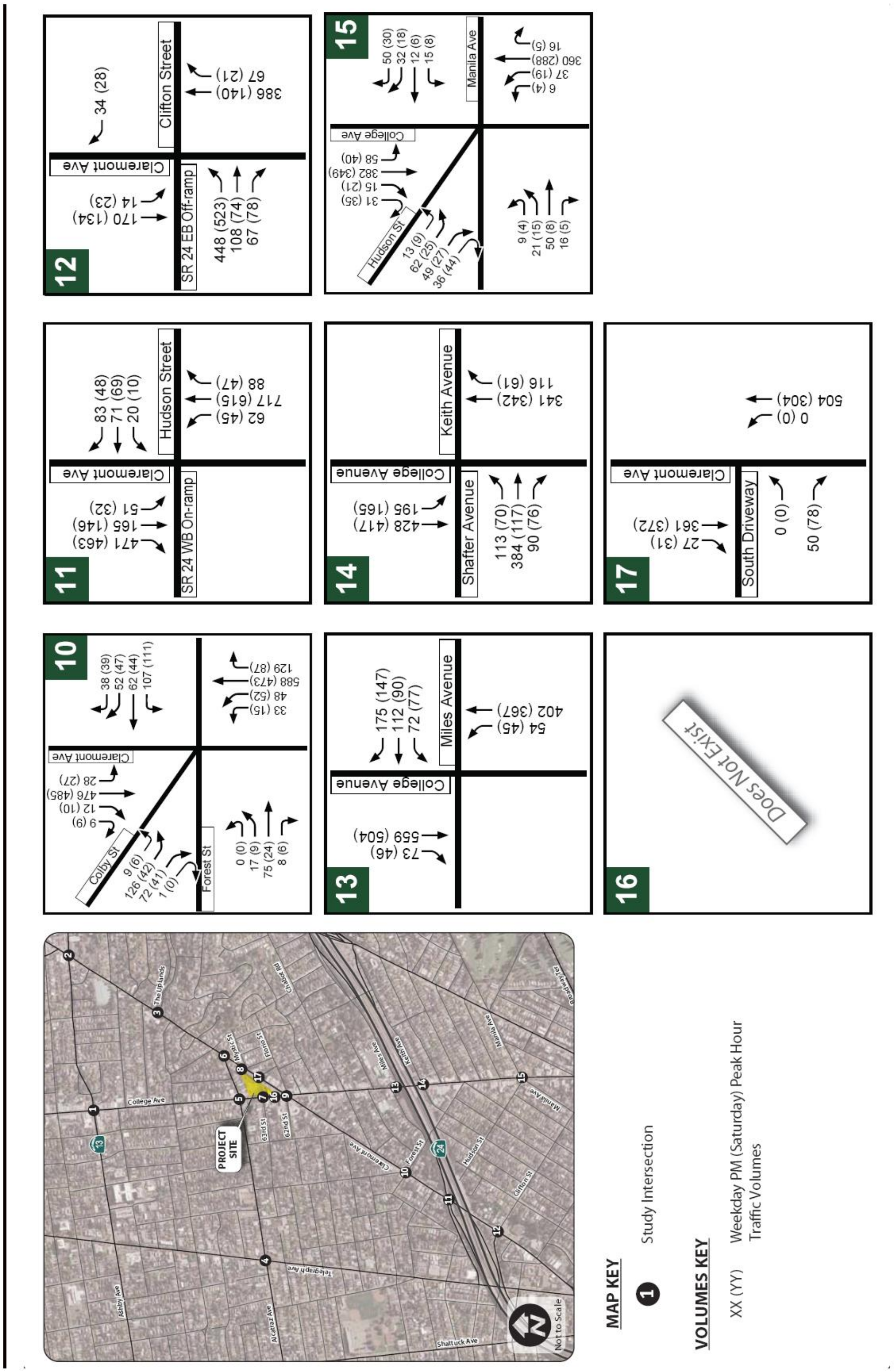
As previously described, the proposed project would add left-turn lanes on northbound and southbound College Avenue at the 63rd Street/College Avenue intersection (#7) and signalize the Mystic Street/Auburn Avenue/Claremont Avenue intersection (#8). No other modifications to the roadway network are assumed for this analysis. No adjustments were assumed to optimize the traffic signal timings at the study intersections.

Existing Plus Project Intersection Operations

Intersection LOS calculations were completed with the traffic volumes and the existing lane configurations. Table 4.3-13 summarizes traffic operations at the study intersections under Existing Plus Project conditions. Detailed intersection LOS calculation worksheets are presented in Appendix F.



Existing Plus Project Conditions—Peak Hour Traffic Volumes Figure 4.3-16A



Source: Fehr & Peers

11-15-10

Existing Plus Project Conditions—Peak Hour Traffic Volumes **Figure 4.3-16B**

Table 4.3-13 Intersection Level of Service – Existing Plus Project Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Avenue/College Avenue	Berkeley	Signal	PM	**67.6**	**E**	**74.5**	**E**	**Yes[3]**
				SAT	**90.0 (v/c = 1.22)**	**F**	**100.6 (v/c = 1.25)**	**F**	**Yes[4]**
2.	Ashby Avenue/Claremont Avenue	Berkeley	Signal	PM	35.9	D	36.7	D	No
				SAT	29.7	C	30.1	C	No
3.	The Uplands/Claremont Avenue	Berkeley	Signal	PM	10.0	B	10.1	B	No
				SAT	9.0	A	9.1	A	No
4.	Alcatraz Avenue/Telegraph Avenue	Oakland	Signal	PM	39.1	D	39.6	D	No
				SAT	27.8	C	28.3	C	No
5.	Alcatraz Avenue/College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**112.2 (v/c = 1.16)**	**F**	**Yes[4]**
				SAT	36.3	D	52.5	D	No
6.	Alcatraz Avenue/Claremont Avenue	Berkeley	SSSC	PM	18.9 **(82.1)**	C **(F)**	15.3 **(67.2)**	C **(F)**	**Yes[5]**
				SAT	2.6 (16.0)	A (C)	2.6 (16.4)	A (C)	No
7.	63rd Street/College Avenue	Oakland	SSSC	PM	3.0 **(40.6)**	A **(E)**	9.7 **(60.3)**	A **(F)**	No[6]
				SAT	3.1 (30.2)	A (D)	**35.8 (>120)**	**E (F)**	No[6]
8.	Mystic Street/Auburn Avenue/ Claremont Avenue	Oakland	SSSC/ Signal[7]	PM	3.5 (26.5)	A (D)	10.7	B	No
				SAT	2.5 (15.0)	A (B)	10.4	B	No
9.	College Avenue/Claremont Avenue/62nd Street	Oakland	Signal	PM	**61.5**	**E**	**70.2**	**E**	**Yes[8]**
				SAT	**66.6**	**E**	**87.8**	**F**	**Yes[9]**
10.	Forest Street/Claremont Avenue	Oakland	Signal	PM	27.6	C	28.2	C	No
				SAT	19.5	B	19.9	B	No

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
11.	Hudson Street/ SR 24 WB On-Ramp/Claremont Ave	Oakland	Signal	PM	17.0	B	17.5	B	No
				SAT	10.3	B	11.1	B	No
12.	Clifton Street/SR 24 EB Off-Ramp/ Claremont Avenue	Oakland	Signal	PM	16.7	B	16.7	B	No
				SAT	11.9	B	12.0	B	No
13.	Miles Avenue/College Avenue	Oakland	Signal	PM	14.4	B	14.7	B	No
				SAT	12.9	B	13.2	B	No
14.	Shafter Avenue/Keith Avenue/College Avenue	Oakland	Signal	PM	25.4	C	25.8	C	No
				SAT	19.0	B	19.8	B	No
15.	Hudson Street/Manila Avenue/College Avenue	Oakland	Signal	PM	31.0	C	32.6	C	No
				SAT	16.1	B	16.5	B	No

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than three seconds at an intersection in Berkeley already operating at LOS E.
4. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. The proposed project would not cause an impact at this intersection because the unsignalized intersection would not meet the peak hour signal warrant, despite operating at LOS F during the peak hour.
7. Intersection is side-street stop-controlled under Existing No Project conditions and signalized under Existing Plus Project conditions.
8. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than four seconds and increase delay for a critical movement by more than six seconds at an intersection in Oakland already operating at LOS E.
9. The proposed project would cause an impact at this intersection in Oakland because it would degrade intersection operations from LOS E to LOS F.

Source: Fehr & Peers, 2010

With the addition of the project generated traffic, the following intersections would operate at an unacceptable LOS during one or both peak hours.

- The signalized Ashby Avenue/College Avenue intersection (#1), located in the City of Berkeley, would operate at LOS E during the weekday PM peak hour and LOS F during the Saturday peak hour.
- The signalized Alcatraz Avenue/College Avenue intersection (#5), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour.
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour. This intersection currently meets the peak-hour volume signal warrant. Although the intersection would continue to operate at LOS F, the proposed project would slightly improve operations at this intersection because the upstream signal at Mystic Street/Auburn Avenue/ Claremont Avenue (#8) constructed as part of the proposed project would result in additional gaps in traffic flow on Claremont Avenue which would allow the eastbound Alcatraz Avenue movement to more easily turn into Claremont Avenue.
- The side-street stop-controlled westbound approach at the 63rd Street/Safeway Driveway/College Avenue intersection (#7), located in the City of Oakland, would operate at LOS F during both weekday PM and Saturday peak hours under Existing Plus Project conditions. This intersection would not meet the peak-hour volume signal warrant.
- The signalized College Avenue/Claremont Avenue intersection (#9), located in the City of Oakland, would operate at LOS E during the weekday PM peak hour and LOS F during the Saturday peak hour.

The proposed project would cause a significant impact at the following four of these intersections:

- Ashby Avenue/College Avenue intersection (#1)
- Alcatraz Avenue/College Avenue intersection (#5)
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6)
- College Avenue/Claremont Avenue intersection (#9)

The proposed project would not cause an impact at the 63rd Street/Safeway Driveway/College Avenue intersection (#7). Although it would operate at an unacceptable LOS F during both peak hours, the proposed project would not cause a significant impact because the intersection would not meet the peak hour vehicle signal warrant without or with the traffic generated by the proposed project.

Existing Plus Project Conditions Impacts and Mitigations

Impact TRANS-1: The proposed project would contribute to LOS E operations and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under Existing Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-1: The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following:

- Convert signal control equipment from pre-timed to actuated-uncoordinated operations. The signal control equipment shall be designed to applicable standards in effect at the time of construction.
- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)

To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Berkeley and Caltrans requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans.

After implementation of this measure, the intersection would continue to operate at LOS E during the weekday PM peak hour and improve from LOS F to LOS E during the Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under Existing Conditions. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-1 were implemented, the impact would be less than significant.

Impact TRANS-2: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under Existing Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-2: The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by implementing the following:

- Provide left-turn lanes on northbound and southbound College Avenue by converting the existing angled parking spaces along College Avenue to parallel spaces.
- Convert signal control equipment from pre-timed to actuated operations and provide protected left-turn phasing for the north/south approaches. The signal control equipment shall be designed to applicable standards in effect at the time of construction.
- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)
- Consider moving the AC Transit bus stops on both northbound and southbound College Avenue from near-side to far-side of the intersection (i.e., from before the signal to after the signal).

To implement this measure, the project sponsor shall submit the following to City of Berkeley for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Berkeley requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans.

After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour.

Converting the existing angled parking spaces on College Avenue to parallel spaces would result in elimination of six metered on-street parking spaces. Parking demand on this segment of College Avenue is currently at or above capacity. Thus, the loss of these parking spaces would contribute to the expected parking shortage in the area (see page 4.3-12). The mitigation measure would also improve pedestrian safety by providing protected left-turn phasing on College Avenue and reducing potential conflicts between left-turning automobiles and pedestrians crossing along College Avenue. No other secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.

Impact TRANS-3: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection, which would meet the peak hour signal warrant under Existing Conditions. This would be a significant impact based on a conservative reading of the City of Berkeley's significance criteria, and it would be a significant impact based on the City of Oakland significance criteria. (Significant)[22]

Mitigation Measure TRANS-3: Implement the following measures at the Alcatraz Avenue/ Claremont Avenue intersection:

- Signalize the intersection, providing actuated operation, with permitted left turns and communication conduit/cabling connecting the traffic signal to the proposed traffic signal on Claremont Avenue at Safeway Driveway/Mystic Street/Auburn Avenue.

To implement this measure, the project sponsor shall submit the following to City of Berkeley for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the proposed signal supporting vehicle travel and alternative modes travel consistent with City of Berkeley requirements.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans.

Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets the California Manual on Uniform Traffic Control Devices (MUTCD) signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS B during the weekday PM peak hour and LOS A during the Saturday PM peak hour. Pedestrians crossing at this intersection would experience more delay because they would need to wait for the appropriate signal phase; however this mitigation measure would improve their safety by providing a protected pedestrian crossing. No other secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: Assuming that the City decision-makers find the impact to be significant, this project impact is significant and unavoidable because it is not certain that the

[22] The proposed project would improve the delay for the critical side-street stop-controlled Alcatraz Avenue approach at this intersection. Since the approach would continue to operate at LOS F, this is identified as a significant impact based on a conservative interpretation of the City of Berkeley significance criteria. This would be a significant impact under the City of Oakland's criteria.

measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.

Impact TRANS-4: The proposed project would contribute to LOS E operations, increase the average intersection vehicle delay by more than four seconds, and increase delay for the critical movements of northbound College Avenue and northeastbound Claremont Avenue by more than six seconds, during the weekday PM peak hour; and degrade intersection operations from LOS E to LOS F during the Saturday PM peak hour at the College Avenue/ Claremont Avenue (#9) intersection under Existing Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)

Mitigation Measure TRANS-4: Implement the following measures at the College Avenue/ Claremont Avenue intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below:
    - 2070L Type Controller
    - GPS communication (clock)
    - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
    - City Standard ADA wheelchair ramps
    - Full actuation (video detection, pedestrian push buttons, bicycle detection)
    - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines
    - Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan
    - Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would continue to operate at LOS E during the weekday PM peak hour and improve from LOS F to LOS E during the Saturday PM peak hour.

Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay during both peak hours would be less than under Existing Conditions and the increase in delay for all critical movements would be less than four seconds higher than under 2015 No Project conditions. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These improvements are not currently expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.

Significance after Mitigation: Less than Significant.

Existing Plus Project Mitigated Conditions

Table 4.3-14 summarizes intersection operations after implementation of the mitigation measures at the affected intersections.

Mitigation measures described above include signal timing optimization to minimize the delay to vehicle traffic. Signal timing optimization is adjusting the amount of green time (i.e., when the green signal light is on) assigned to each intersection approach. When signal timings are changed along a corridor, the average amount of delay experienced by drivers traveling through the corridor can be reduced by 10 to 30 percent. However, there can be unintended consequences, such as:

- Increased pedestrian delay: Reducing delay to drivers by increasing the amount of green time assigned to each lane of traffic can increase the amount of time that a pedestrian must wait to cross the street.
- Increased vehicle queues: While increasing the amount of green time assigned to each lane of traffic increases the number of cars that can pass through the intersection, it also increases the amount of time that drivers need to wait at the intersection because the other traffic must wait longer for a green light, the line of cars waiting gets longer.

Signal timing optimization may also include changing the way left turn movements are provided the green light. One method uses a solid green ball which means that a driver can make a left turn if there is a gap in the oncoming traffic and a pedestrian is not in the crosswalk. Traffic engineers refer to this as permitted left-turn movements. The second method uses a green arrow which means that a driver can make a left turn without stopping because the oncoming traffic and pedestrians have a red light. The latter method is called protected left-turn movements and can improve safety by separating opposing movements, but it also tends to increase the vehicle delay at the intersection.

Because of the competing needs described above, signal timing optimization and the benefit to drivers traveling through the area needs to be balanced against the impacts to pedestrians crossing at intersections, transit riders on buses, drivers waiting in vehicle queues, and bicyclists waiting for a green light at a traffic signal.

Table 4.3-14 Intersection Level of Service – Existing Plus Project Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Existing Plus Project Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Avenue/ College Avenue	Berkeley	Signal	PM	**67.6**	**E**	**74.5**	**E**	**56.9**	**E**	Significant and Unavoidable[3]
				SAT	**90.0 (v/c = 1.22)**	**F**	**100.6 (v/c = 1.25)**	**F**	**77.5**	**E**	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**112.2 (v/c = 1.16)**	**F**	**57.7**	**E**	Significant and Unavoidable[3]
				SAT	36.3	D	52.5	D	30.5	C	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	18.9 **(82.1)**	C **(F)**	15.3 **(67.2)**	C **(F)**	10.1	B	Significant and Unavoidable[3]
				SAT	2.6 (16.0)	A (C)	2.6 (16.4)	A (C)	5.7	A	
9.	College Avenue/ Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**61.5**	**E**	**70.2**	**E**	**56.**0	**E**	Less than Significant
				SAT	**66.6**	**E**	**87.8**	**F**	**57.7**	**E**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure is implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under Existing No Project and Existing Plus Project conditions and signalized under Existing Plus Project Mitigated conditions.

Source: Fehr & Peers, 2010.

Based on general industry practice in urban areas, changes to signal operations including timing and signal phasing are considered to mitigate impacts to less than significant levels only if the changes can be accomplished within the current cycle length or if the signal cycle length is no greater than 90 seconds. In general, longer cycle lengths are considered to adversely affect pedestrians and bicyclists because they would experience additional delay at the intersection, but these are not considered significant CEQA impacts. Additional upgrades may also be needed for the signal equipment to comply with the latest local, state, and federal requirements. These may include: providing count-down pedestrian signal heads, providing audible pedestrian signals, and providing bicycle detection at actuated signals.

2015 Intersection Impacts

This section addresses the intersection impacts that would occur in 2015 with the completion of the proposed project. Items discussed in this section include the development of traffic volume forecasts for the 2015 No Project and 2015 Plus Project scenarios, intersection operations results, and project intersection impacts.

2015 Intersection Traffic Forecasts

Traffic volume forecasts for the 2015 No Project scenario were developed using the ACCMA Model and existing traffic counts, which reflects past, present, and future developments expected by year 2015. The main inputs to the 2015 forecasting process are the model outputs from a modified version of the ACCMA Model (with updated land use) and the existing traffic counts. The base land use data in the ACCMA Model was modified to reflect more accurate land use projections in the City of Oakland. The modifications to the model land use database are described in Appendix G. These modifications assure that the ACCMA Model correctly accounts for traffic growth from past, present, and reasonably foreseeable development (i.e., pending, planned, proposed, and recently completed residential and non-residential developments) in the project vicinity.

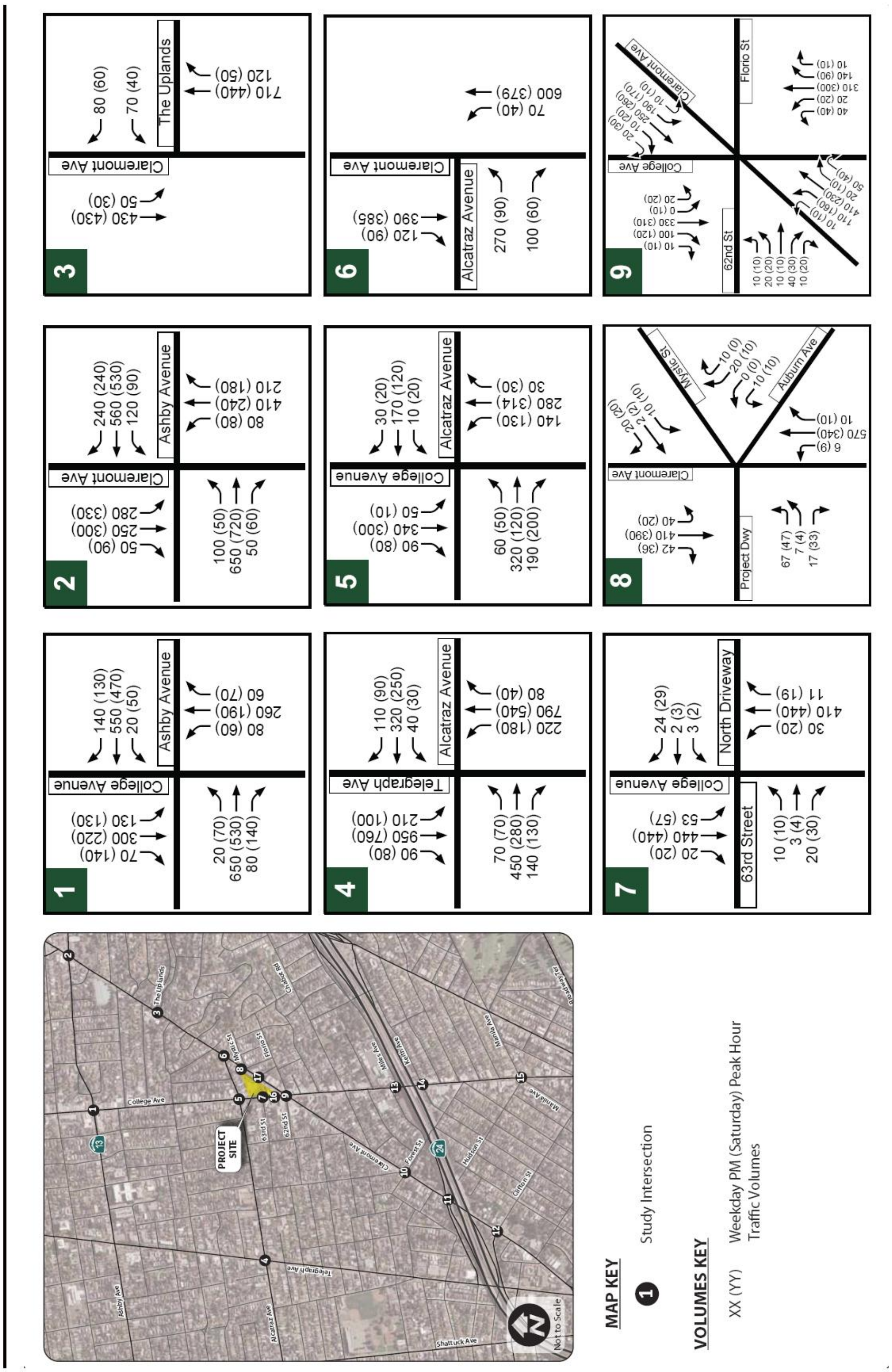
The ACCMA Model produces weekday peak hour roadway segment volumes. The difference method, which increases existing turning movement volumes to reflect model-predicted increases in roadway segment volumes, was applied to these forecasted segment volumes to estimate weekday PM peak hour intersection turning movements under 2015 No Project conditions.

Since the ACCMA model does not include non-weekday time periods, the ratio between the weekday PM peak hour existing volumes and the forecasted 2015 No Project volumes were applied to the existing Saturday peak hour volumes to estimate Saturday peak hour volumes under the 2015 No project conditions. The traffic volumes for the 2015 No Project scenario are shown on Figure 4.3-17.

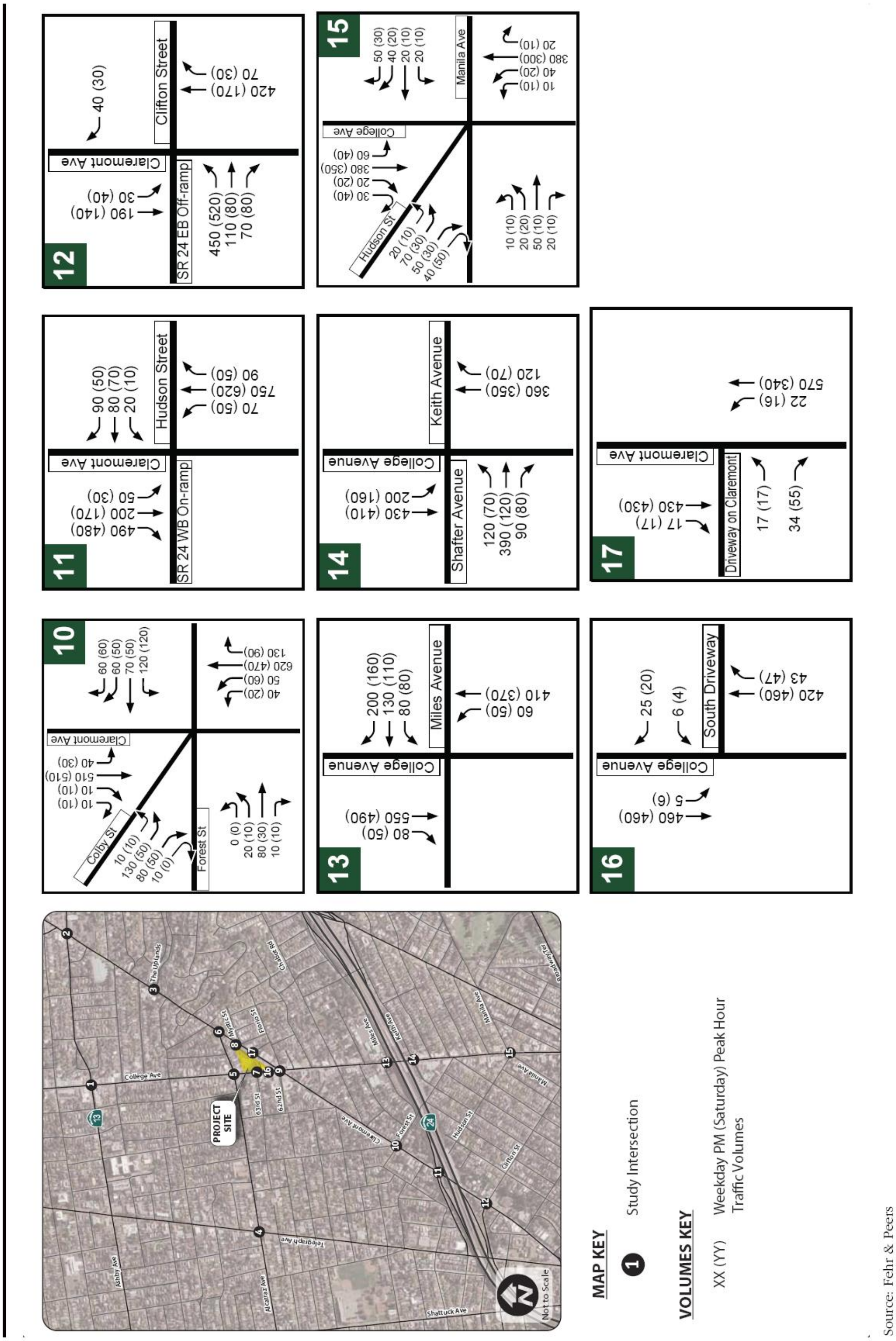
In addition, this analysis assumes that pedestrian and bicycle volumes at the study intersections would increase proportional to the projected growth in land uses in the study area.

The traffic volumes under the 2015 Plus Project scenario are shown on Figure 4.3-18. They include 2015 No Project traffic volumes plus traffic volumes generated by the proposed project.

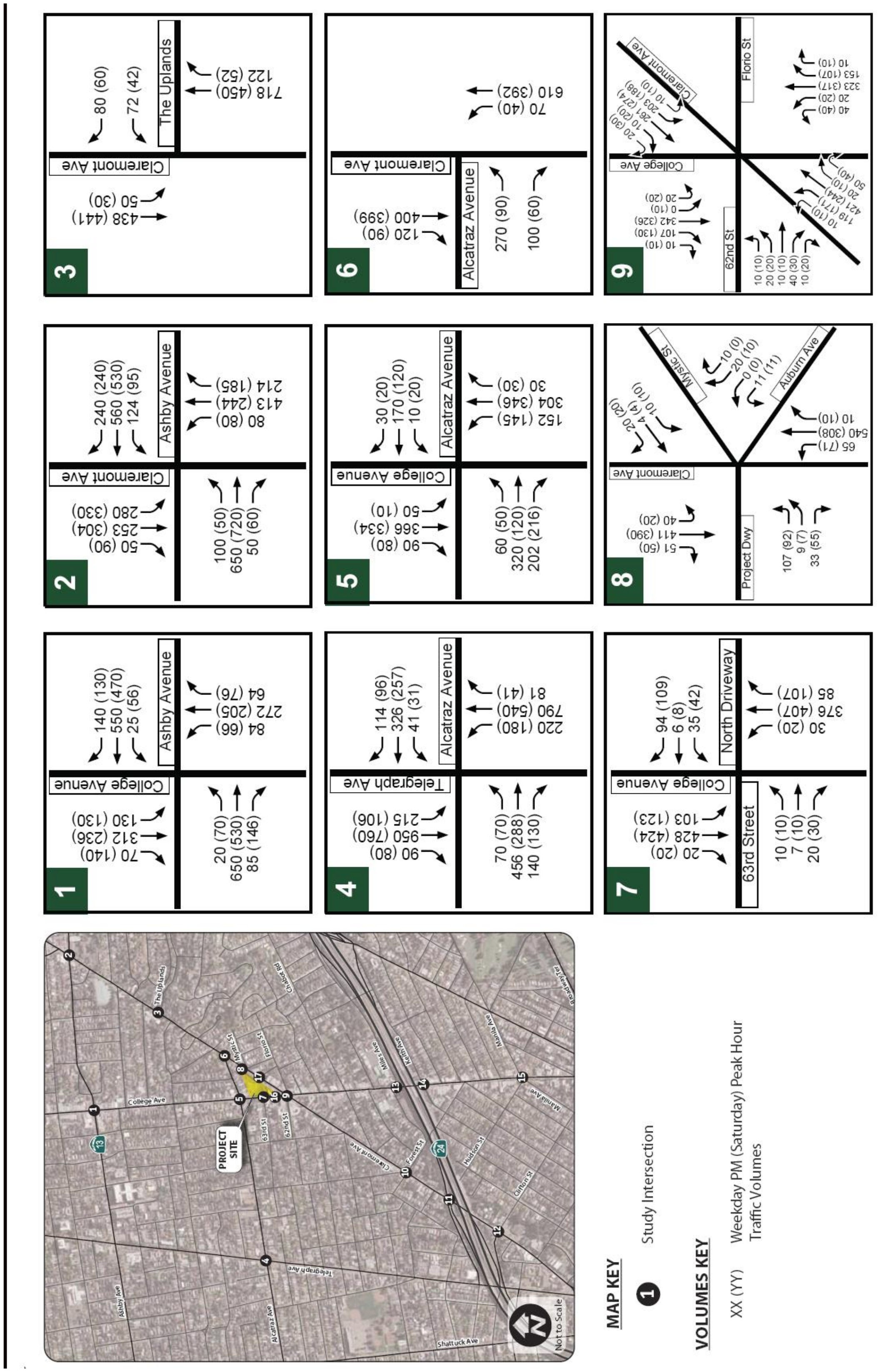
Text continues onpage 4.3-77



2015 No Project Conditions—Peak Hour Traffic Volumes Figure 4.3-17A



2015 No Project Conditions—Peak Hour Traffic Volumes Figure 4.3-17B



Source: Fehr & Peers

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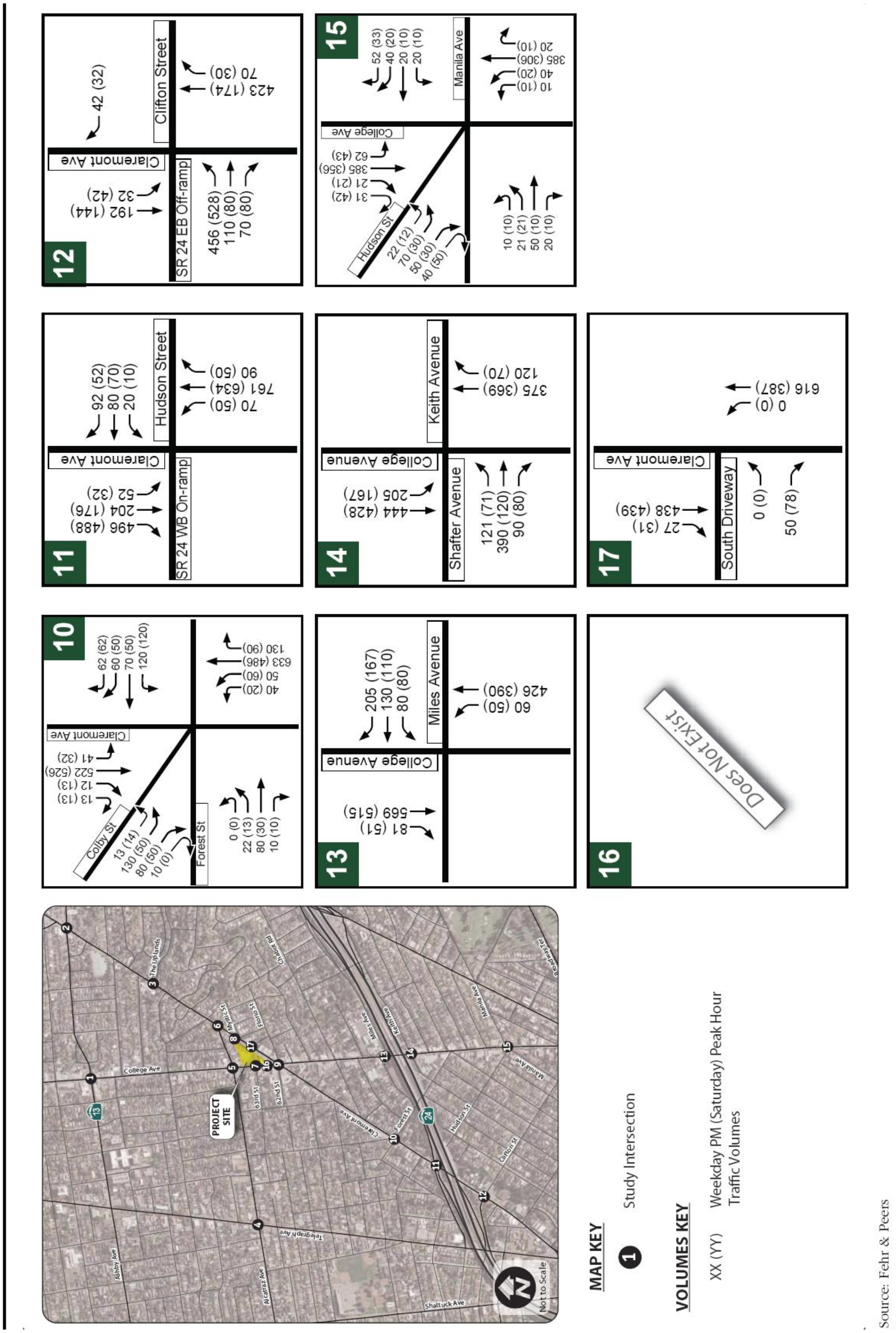
2015 Plus Project Conditions—Peak Hour Traffic Volumes

Figure 4.3-18A



2015 Plus Project Conditions—Peak Hour Traffic Volumes Figure 4.3-18B

Table 4.3-15 Intersection Level of Service – 2015 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Avenue/College Avenue	Berkeley	Signal	PM	**78.2**	**E**	**86.2**	**F**	**Yes[3]**
				SAT	**106.4 (v/c = 1.28)**	**F**	**119.3 (v/c = 1.32)**	**F**	**Yes[4]**
2.	Ashby Avenue/Claremont Avenue	Berkeley	Signal	PM	**63.1**	**E**	**64.7**	**E**	No
				SAT	34.8	C	35.5	D	No
3.	The Uplands/Claremont Avenue	Berkeley	Signal	PM	10.4	B	10.4	B	No
				SAT	9.2	A	9.3	A	No
4.	Alcatraz Avenue/Telegraph Avenue	Oakland	Signal	PM	45.1	D	46.0	D	No
				SAT	30.2	C	31.0	C	No
5.	Alcatraz Avenue/College Avenue	Oakland	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.26)**	**F**	**Yes[4]**
				SAT	44.1	D	**63.9**	**E**	**Yes[5]**
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC	PM	**66.4 (>120)**	**F (F)**	**50.5 (>120)**	**F (F)**	**Yes[6]**
				SAT	3.1 (19.1)	A (C)	3.1 (19.8)	A (C)	No
7.	63rd Street/College Avenue	Oakland	SSSC	PM	4.1 **(66.5)**	A **(F)**	15.8 **(>120)**	C **(F)**	No[7]
				SAT	6.7 **(108.1)**	A **(F)**	**54.3 (>120)**	**F (F)**	No[7]
8.	Mystic Street/Auburn Avenue/Claremont Avenue	Oakland	SSSC/ Signal[8]	PM	3.5 (29.1)	A (D)	11.7	B	No
				SAT	2.7 (17.6)	A (C)	10.3	B	No
9.	College Avenue/Claremont Avenue/62nd Street	Oakland	Signal	PM	**102.5**	**F**	**124.6**	**F**	**Yes[9]**
				SAT	**101.6**	**F**	**133.9**	**F**	**Yes[9]**
10.	Forest Street/Claremont Avenue	Oakland	Signal	PM	40.9	D	41.9	D	No
				SAT	25.9	C	26.3	C	No

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
11.	Hudson Street/SR 24 WB On-Ramp/Claremont Avenue	Oakland	Signal	PM	19.0	B	19.4	B	No
				SAT	12.6	B	13.3	B	No
12.	Clifton Street/SR 24 EB Off-Ramp/Claremont Avenue	Oakland	Signal	PM	17.3	B	17.3	B	No
				SAT	12.8	B	13.0	B	No
13.	Miles Avenue/College Avenue	Oakland	Signal	PM	15.7	B	16.0	B	No
				SAT	13.3	B	13.6	B	No
14.	Shafter Avenue/Keith Avenue/College Avenue	Oakland	Signal	PM	**66.9**	**E**	**66.9**	**E**	No
				SAT	19.6	B	20.5	C	No
15.	Hudson Street/Manila Avenue/College Avenue	Oakland	Signal	PM	38.0	D	40.5	D	No
				SAT	17.3	B	17.7	B	No

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds at an intersection in Berkeley.
4. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
5. The proposed project would cause an impact at this intersection because it would degrade intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds at an intersection in Berkeley.
6. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
7. The proposed project would not cause an impact at this intersection because the unsignalized intersection would not meet the peak hour signal warrant, despite operating at LOS F during the peak hour.
8. Intersection is side-street stop-controlled under 2015 No Project conditions and signalized under 2015 Plus Project conditions.
9. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than two seconds and increase delay for a critical movement by more than four seconds at an intersection in Oakland already operating at LOS F.

Source: Fehr & Peers, 2010

Roadway Network

The 2015 No Project and Plus Project scenarios assume the completion of improvements at the Miles Avenue/College Avenue (#13) and Shafter Avenue/Keith Avenue/College Avenue (#14) intersections that are part of the Caldecott Tunnel Improvement Project Settlement Agreement.

As previously described, the proposed project would add left-turn lanes on northbound and southbound College Avenue at the 63rd Street/College Avenue intersection (#7) and signalize the Mystic Street/ Auburn Avenue/Claremont Avenue intersection (#8). These modifications were assumed for the 2015 Plus Project scenario. No other modifications to the roadway network are assumed for the 2015 No Project or Plus Project scenarios. No adjustments were made to optimize the traffic signal timings at the study intersections.

2015 Intersection Operations

The forecasted 2015 intersection turning movement volumes in conjunction with the existing intersection lane configurations and traffic signal timings were used to evaluate intersection operations for the 2015 No Project scenario. The 2015 Plus Project scenario was analyzed after adding trips generated by the project. The results are summarized in Table 4.3-15. Detailed intersection LOS calculation worksheets are presented in Appendix H.

The following seven intersections are projected to operate at a deficient level in 2015 without or with the proposed project:

- The signalized Ashby Avenue/College Avenue intersection (#1), located in the City of Berkeley, would degrade from LOS E under 2015 No Project conditions to LOS F under 2015 Plus Project conditions during the weekday PM peak hour. The intersection would operate at LOS F during the Saturday PM peak hour regardless of the proposed project.
- The signalized Ashby Avenue/Claremont Avenue intersection (#2), located in the City of Berkeley, would operate at LOS E during the weekday PM peak hour regardless of the proposed project.
- The signalized Alcatraz Avenue/College Avenue intersection (#5), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour regardless of the proposed project. The intersection would degrade from LOS D under 2015 No Project conditions to LOS E under 2015 Plus Project conditions during the Saturday PM peak hour.
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour regardless of the proposed project. This intersection would meet the peak-hour volume signal warrant. Although the intersection would continue to operate at LOS F, the proposed project would slightly improve operations at this intersection because the upstream signal at Mystic Street/Auburn Avenue/ Claremont Avenue (#8) constructed as part of the proposed project would result in additional gaps in traffic flow on Claremont Avenue which would allow the eastbound Alcatraz Avenue movement to more easily turn into Claremont Avenue.
- The side-street stop-controlled eastbound and westbound approaches at the 63rd Street/Safeway Driveway/College Avenue intersection (#7), located in the City of Oakland, would operate at

LOS F during both weekday PM and Saturday peak hours regardless of the proposed project. This intersection would not meet the peak-hour volume signal warrant regardless of the proposed project.

- The signalized College Avenue/Claremont Avenue intersection (#9), located in the City of Oakland, would operate at LOS F during both weekday and Saturday PM peak hours regardless of the proposed project.
- The signalized Shafter Avenue/Keith Avenue/College Avenue intersection (#14), located in the City of Oakland, would operate at LOS E during the weekday PM peak hour regardless of the proposed project.

The proposed project would cause a significant impact at the following four of these intersections:

- Ashby Avenue/College Avenue intersection (#1)
- Alcatraz Avenue/College Avenue intersection (#5)
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6)
- College Avenue/Claremont Avenue intersection (#9)

The proposed project would have a less-than-significant impact at the following intersections:

- The Ashby Avenue/Claremont Avenue intersection (#2) would operate at LOS E during the weekday PM peak hour, but the addition of project traffic would not increase average intersection delay by more than three seconds.
- The side-street stop-controlled approach at 63rd Street/Safeway Driveway/College Avenue intersection (#7) would operate at unacceptable LOS F during both weekday and Saturday PM peak hours. The proposed project would not cause a significant impact because the intersection would not meet peak hour signal warrants without or with the traffic generated by the proposed project.
- The Shafter Avenue/Keith Avenue/College Avenue intersection (#14) would operate at LOS E during the weekday PM peak hour, but the addition of project traffic would not increase average intersection delay by more than four seconds or critical movement delay by more than six seconds.

2015 Plus Project Conditions Impacts and Mitigations

Impact TRANS-5: The proposed project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under 2015 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-5: The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following:

- Implement Mitigation Measure TRANS-1

After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour and continue to operate at LOS F during the Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2015 No Project Conditions. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-1 were implemented, the impact would be less than significant.

Impact TRANS-6: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2015 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-6: The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by implementing the following:

- Implement Mitigation Measure TRANS-2

After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay would be less than under 2015 No Project Conditions. The intersection would improve from LOS E to LOS C during the Saturday peak hour. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.

Impact TRANS-7: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2015 Conditions. This is a significant impact based on a conservative reading of the City of Berkeley's significance criteria. (Significant)[23]

Mitigation Measure TRANS-7: Implement the following measures at the Alcatraz Avenue/ Claremont Avenue intersection:

- Implement Mitigation Measure TRANS-3

Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS B during the weekday PM peak hour and LOS A during the Saturday PM peak hour. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.

Impact TRANS-8: The proposed project would contribute to LOS F operations, increase the average intersection vehicle delay by more than two seconds, and increase delay for all critical movements by more than four seconds, during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2015 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)

Mitigation Measure TRANS-8: Implement the following measures at the College Avenue/ Claremont Avenue intersection:

- Implement Mitigation Measure TRANS-4

After implementation of this measure, the intersection would continue to operate at LOS F during both weekday PM and Saturday PM peak hours. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay during both peak hours would be less than under 2015 No Project Conditions and the increase in delay for all critical movements would be less than four seconds higher than under 2015 No Project conditions. No secondary significant impacts

[23] Ibid.

would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.

Significance after Mitigation: Less than Significant.

2015 Plus Project Mitigated Conditions

Table 4.3-16 summarizes intersection operations after implementation of the mitigation measures at the affected intersections.

2035 Intersection Impacts

This section addresses the intersection impacts that would occur in 2035 with the completion of the proposed project. Items discussed in this section include the development of traffic volume forecasts for the 2035 No Project and 2035 Plus Project scenarios, intersection operations results, and project intersection impacts.

2035 Intersection Traffic Forecasts

The 2035 No Project intersection turning movement forecasts were developed using the same procedure as the 2015 No Project forecasts. The only difference is that instead of the ACCMA model output for 2015, the ACCMA model output for 2035, which reflects past, present, and future developments expected by year 2035, was used. The traffic volumes for the 2035 No Project scenario are shown on Figure 4.3-19.

The traffic volumes under the 2035 Plus Project scenario are shown on Figure 4.3-20. They include 2035 No Project traffic volumes plus traffic volumes generated by the proposed project.

Roadway Network

The 2035 No Project and Plus Project scenarios assume the completion of improvements at the Miles Avenue/College Avenue (#13) and Shafter Avenue/Keith Avenue/College Avenue (#14) intersections that are part of the Caldecott Tunnel Improvement Project Settlement Agreement.

As previously described, the proposed project would add left-turn lanes on northbound and southbound College Avenue at the 63rd Street/College Avenue intersection (#7) and signalize the Mystic Street/ Auburn Avenue/Claremont Avenue intersection (#8). These modifications were assumed for the 2035 Plus Project scenario. No other modifications to the roadway network are assumed for the 2035 No Project or Plus Project scenarios. No adjustments were made to optimize the traffic signal timings at the study intersections.

2035 Intersection Operations

The forecasted 2035 intersection turning movement volumes in conjunction with the existing intersection lane configurations and traffic signal timings were used to evaluate intersection operations for the 2035 No Project scenario. The 2035 Plus Project scenario was analyzed after adding trips generated by the project. The results are summarized in Table 4.3-17. Detailed intersection LOS calculation worksheets are presented in Appendix I.

Text continues on page 4.3-90.

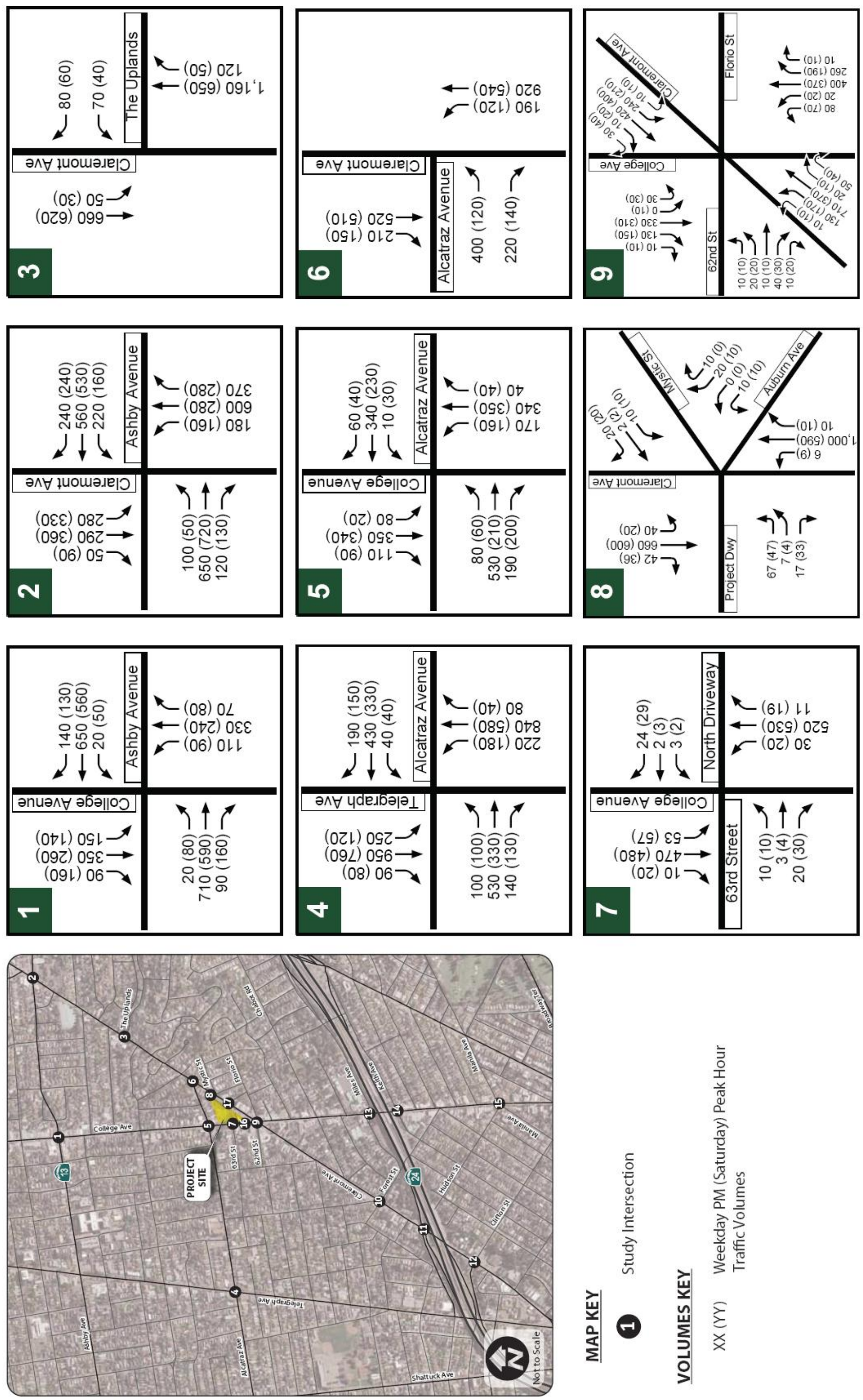
Table 4.3-16 Intersection Level of Service – 2015 Plus Project Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Project		2015 Plus Project Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Avenue/ College Avenue	Berkeley	Signal	PM	**78.2**	**E**	**86.2**	**F**	**64.2**	**E**	Significant and Unavoidable[3]
				SAT	**106.4 (v/c = 1.28)**	**F**	**119.3 (v/c = 1.32)**	**F**	**90.5 (v/c = 1.25)**	**F**	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.26)**	**F**	**71.5 (v/c = 1.06)**	**E**	Significant and Unavoidable[3]
				SAT	44.1	D	**63.9**	**E**	34.4	C	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	**66.4 (>120)**	**F (F)**	**50.5 (>120)**	**F (F)**	11.9	B	Significant and Unavoidable[3]
				SAT	3.1 (19.1)	A (C)	3.1 (19.8)	A (C)	6.0	A	
9.	College Avenue/Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**102.5**	**F**	**124.6**	**F**	**85.6**	**F**	Less than Significant
				SAT	**101.6**	**F**	**133.9**	**F**	**89.0**	**F**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

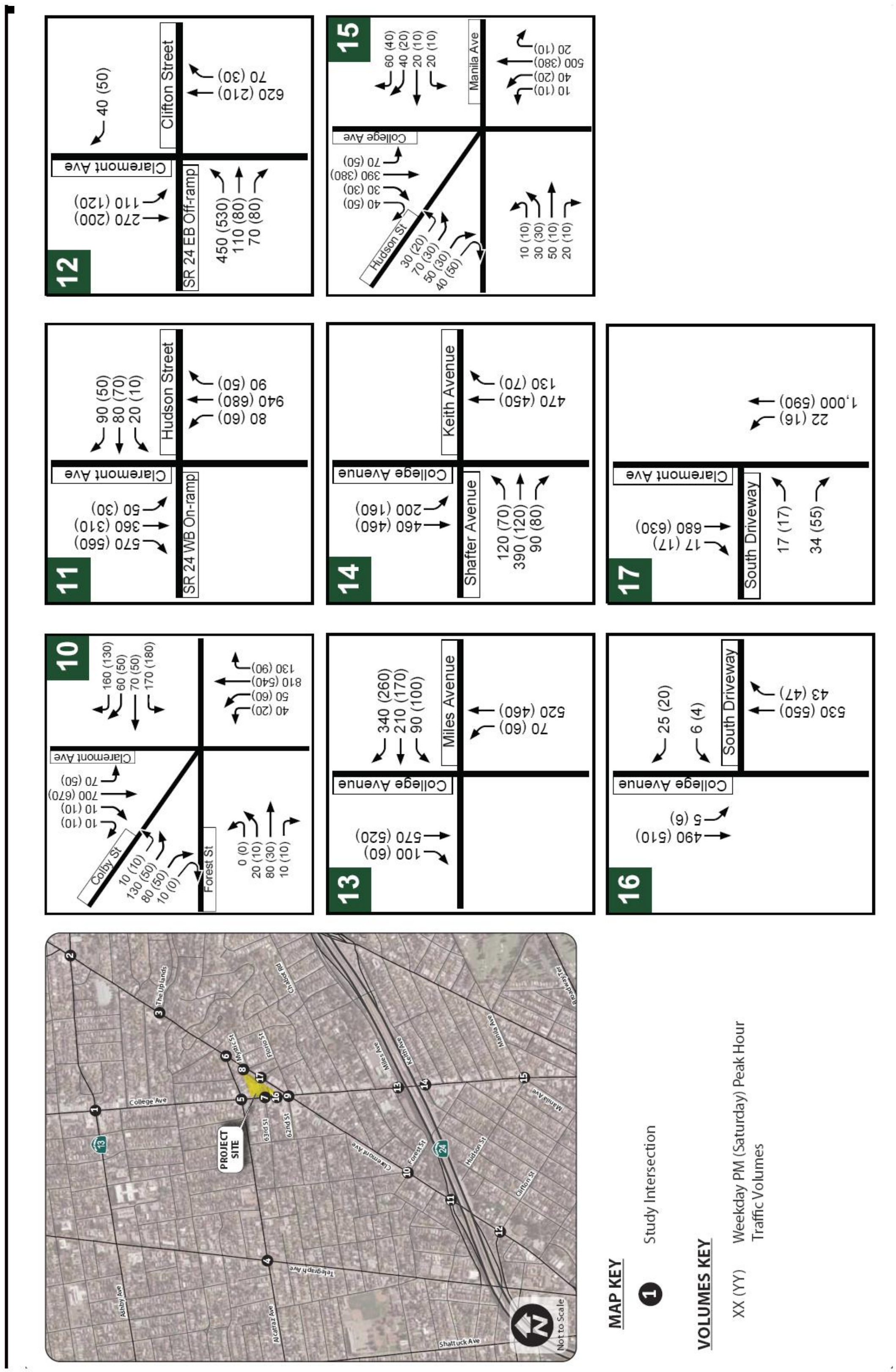
1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under 2015 No Project and 2015 Plus Project conditions and signalized under 2015 Plus Project Mitigated conditions.

Source: Fehr & Peers, 2010.



Source: Fehr & Peers
11-15-10

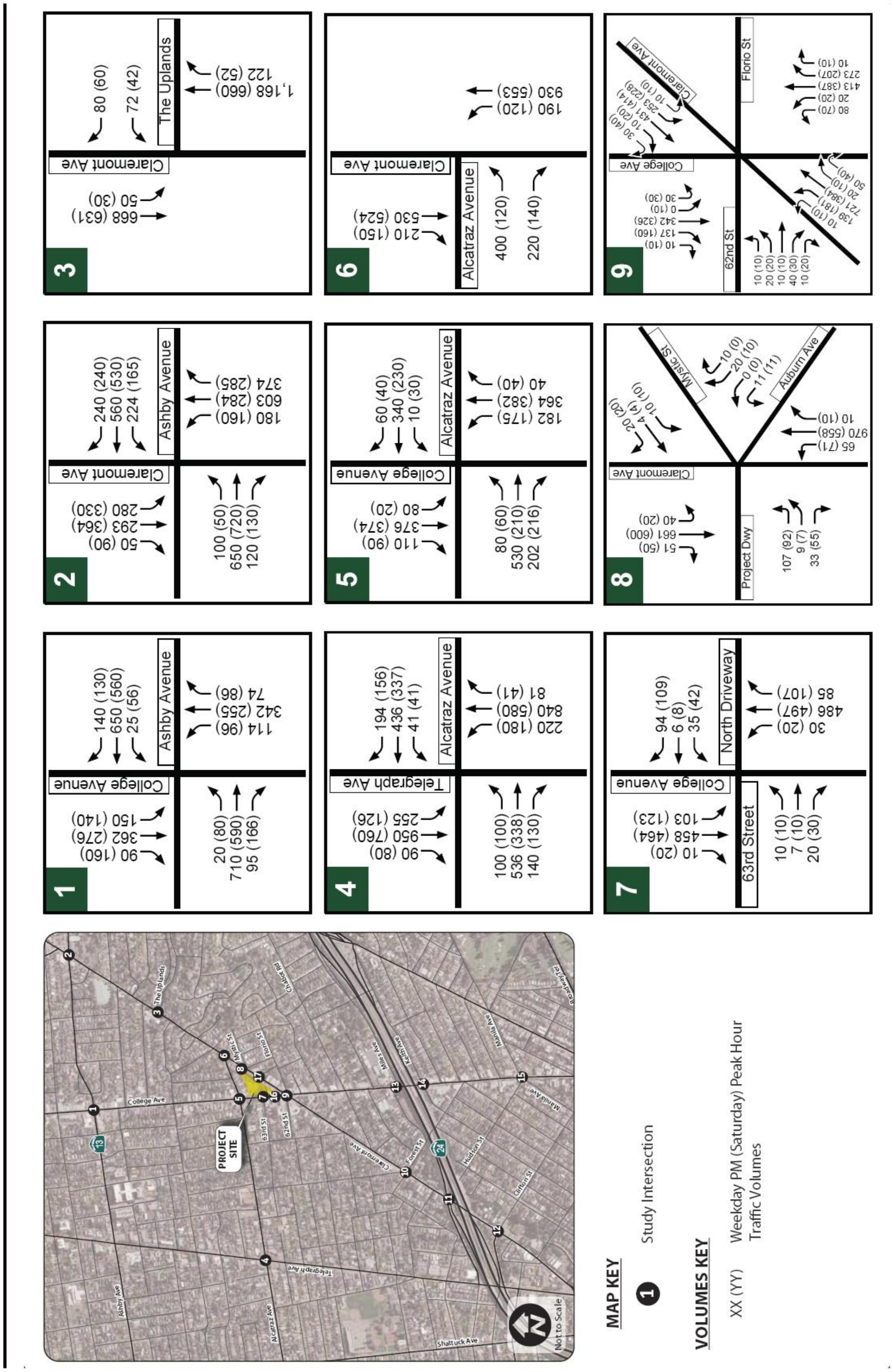
2035 No Project Conditions—Peak Hour Traffic Volumes Figure 4.3-19A



Source: Fehr & Peers

11-15-10

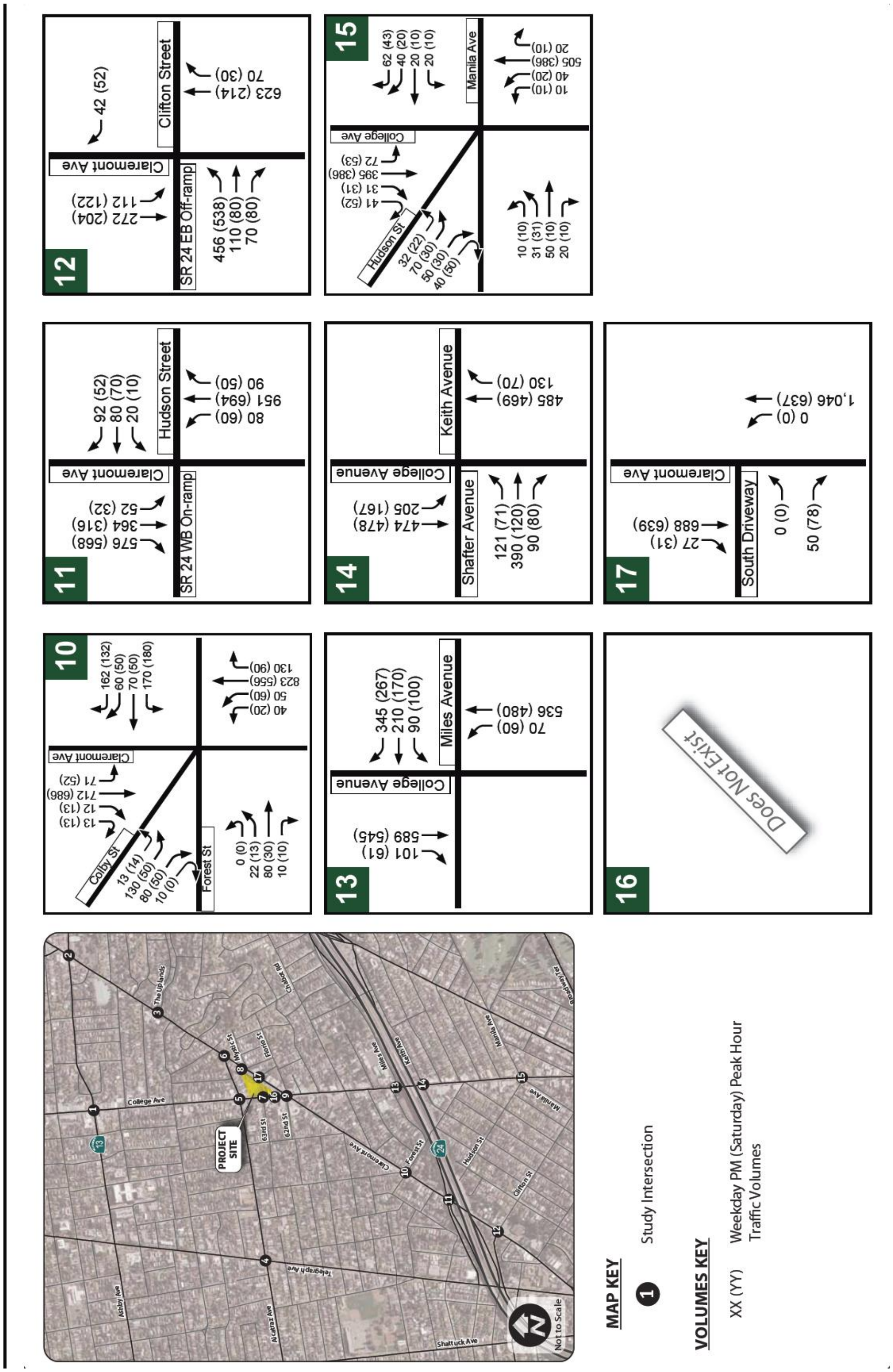
Figure 4.3-19B 2035 No Project Conditions—Peak Hour Traffic Volumes



Source: Fehr & Peers

11-15-10

2035 Plus Project Conditions—Peak Hour Traffic Volumes Figure 4.3-20A



Source: Fehr & Peers

11-15-10

2035 Plus Project Conditions—Peak Hour Traffic Volumes **Figure 4.3-20B**

Table 4.3-17 Intersection Level of Service – 2035 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Avenue/College Avenue	Berkeley	Signal	PM	**>120 (v/c = 1.24)**	**F**	**>120 (v/c = 1.26)**	**F**	**Yes[3]**
				SAT	**>120 (v/c = 1.40)**	**F**	**>120 (v/c = 1.43)**	**F**	**Yes[3]**
2.	Ashby Avenue/Claremont Avenue	Berkeley	Signal	PM	**>120 (v/c = 1.12)**	**F**	**>120 (v/c = 1.13)**	**F**	**Yes[3]**
				SAT	**65.5**	**E**	**68.0**	**E**	No
3.	The Uplands/Claremont Avenue	Berkeley	Signal	PM	12.6	B	12.7	B	No
				SAT	9.8	A	9.9	A	No
4.	Alcatraz Avenue/Telegraph Avenue	Oakland	Signal	PM	**76.3**	**E**	**78.5**	**E**	No
				SAT	38.2	D	39.7	D	No
5.	Alcatraz Avenue/College Avenue	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**>120 (v/c = 1.57)**	**F**	**Yes[3]**
				SAT	**64.2**	**E**	**89.1**	**F**	**Yes[4]**
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	**Yes[5]**
				SAT	21.1 **(>120)**	C **(F)**	17.2 **(100.5)**	C **(F)**	**Yes[5]**
7.	63rd Street/College Avenue	Oakland	SSSC	PM	6.0 **(>120)**	A **(F)**	10.8 **(103.8)**	B **(F)**	No
				SAT	12.5 **(>120)**	B **(F)**	**>120 (>120)**	**F (F)**	**Yes[6]**
8.	Mystic Street/Auburn Avenue/Claremont Avenue	Oakland	SSSC/ Signal[7]	PM	6.8 **(106.7)**	A **(F)**	12.4	B	No
				SAT	2.9 (30.7)	A (D)	9.6	A	No
9.	College Avenue/Claremont Avenue/62nd Street	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.87)**	**F**	**Yes[8]**
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.56)**	**F**	**Yes[8]**
10.	Forest Street/Claremont Avenue	Oakland	Signal	PM	**86.2**	**F**	**88.6**	**F**	**Yes[9]**
				SAT	**65.6**	**E**	**65.2**	**E**	No
11.	Hudson Street/ SR 24 WB On-Ramp/ Claremont Ave	Oakland	Signal	PM	21.5	C	21.8	C	No
				SAT	14.0	B	14.6	B	No

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Project		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
12.	Clifton Street/SR 24 EB Off-Ramp/ Claremont Avenue	Oakland	Signal	PM	25.4	C	25.5	C	No
				SAT	15.1	B	15.3	B	No
13.	Miles Avenue/College Avenue	Oakland	Signal	PM	22.2	C	22.6	C	No
				SAT	15.4	B	15.7	B	No
14.	Shafter Avenue/Keith Avenue/College Avenue	Oakland	Signal	PM	**69.3**	**E**	**69.8**	**E**	No
				SAT	19.8	B	20.7	C	No
15.	Hudson Street/Manila Avenue/College Avenue	Oakland	Signal	PM	**67.0**	**E**	**72.1**	**E**	**Yes[10]**
				SAT	20.5	C	21.2	C	No

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds at an intersection in Berkeley.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. The proposed project would cause an impact at this unsignalized intersection in Oakland because it would increase intersection traffic volume by more than ten vehicles and the intersection would meet the peak hour signal warrant.
7. Intersection is side-street stop-controlled under 2035 No Project conditions and signalized under 2035 Plus Project conditions.
8. The proposed project would cause an impact at this intersection because it would increase v/c ratio by more 0.03 at an intersection in Oakland already operating at LOS F.
9. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than two seconds and increase delay for a critical movement by more than four seconds at an intersection in Oakland already operating at LOS F.
10. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than four seconds at an intersection in Oakland already operating at LOS E.

Source: Fehr & Peers, 2010

The following eleven intersections are projected to operate at a deficient level in 2035 without or with the proposed project:

- The signalized Ashby Avenue/College Avenue intersection (#1), located in the City of Berkeley, would operate at LOS F during both weekday and Saturday PM peak hour and at LOS E during the Saturday PM peak hour regardless of the proposed project.
- The signalized Ashby Avenue/Claremont Avenue intersection (#2), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour regardless of the proposed project.
- The signalized Alcatraz Avenue/Telegraph Avenue intersection (#4), located in the City of Oakland, would operate at LOS E during the weekday PM peak hour regardless of the proposed project.
- The signalized Alcatraz Avenue/College Avenue intersection (#5), located in the City of Berkeley, would operate at LOS F during the weekday PM peak hour regardless of the proposed project. The intersection would degrade from LOS E under 2035 No Project conditions to LOS F under 2035 Plus Project conditions during the Saturday PM peak hour.
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6), located in the City of Berkeley, would operate at LOS F during both weekday and Saturday PM peak hours regardless of the proposed project. This intersection would meet the peak-hour volume signal warrant regardless of the proposed project. Although the intersection would continue to operate at LOS F, the proposed project would slightly improve operations at this intersection because the upstream signal at Mystic Street/Auburn Avenue/Claremont Avenue (#8) constructed as part of the proposed project would result in additional gaps in traffic flow on Claremont Avenue which would allow the eastbound Alcatraz Avenue movement to more easily turn into Claremont Avenue.
- The side-street stop-controlled eastbound and westbound approaches at the 63rd Street/Safeway Driveway/College Avenue intersection (#7), located in the City of Oakland, would operate at LOS F during both weekday PM and Saturday peak hours regardless of the proposed project. This intersection would meet the peak-hour volume signal warrant under 2035 Plus Project conditions.
- The side-street stop-controlled eastbound approach at the Mystic Street/Auburn Avenue/Claremont Avenue intersection (#8), located in the City of Oakland, would operate at LOS F during the weekday PM peak hour under 2035 No Projects conditions.
- The signalized College Avenue/Claremont Avenue intersection (#9), located in the City of Oakland, would operate at LOS F during both weekday and Saturday PM peak hours regardless of the proposed project.
- The signalized Forest Street/Claremont Avenue intersection (#10), located in the City of Oakland, would operate at LOS F during the weekday PM peak hour and LOS E during the Saturday PM peak hour regardless of the proposed project.
- The signalized Shafter Avenue/Keith Avenue/College Avenue intersection (#14), located in the City of Oakland, would operate at LOS E during the weekday PM peak hour regardless of the proposed project.
- The signalized Hudson Street/Manila Avenue/College Avenue intersection (# 15), located in the City of Oakland, would operate at LOS E during the weekday PM peak hour regardless of the proposed project.

The proposed project would cause a significant impact at the following eight of these intersections:

- Ashby Avenue/College (#1)
- Ashby Avenue/Claremont Avenue (#2)
- Alcatraz Avenue/College Avenue (#5)
- The side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection (#6)
- The side-street stop-controlled eastbound and westbound approaches at the 63rd Street/Safeway Driveway/College Avenue intersection (#7)
- College Avenue/Claremont Avenue (#9)
- Forest Street/Claremont Avenue (#10)
- Hudson Street/Manila Avenue/College Avenue (#15)

The proposed project would have a less-than-significant impact at the following intersections:

- The signalized Alcatraz Avenue/Telegraph Avenue intersection (#4) would operate at LOS E during the weekday PM peak hour, but the addition of project traffic would not increase average intersection delay by more than four seconds or increase delay for any critical movements by more than six seconds.
- The side-street stop-controlled eastbound approach at the Mystic Street/Auburn Avenue/ Claremont Avenue intersection (#8) would operate at LOS F during the weekday PM peak hour under 2035 No Projects conditions. However, the proposed project would signalize the intersection and improve intersection operations to LOS B under 2035 Plus Project conditions.
- The Shafter Avenue/Keith Avenue/College Avenue intersection (#14) would operate at LOS E during the weekday PM peak hour, but the addition of project traffic would not increase average intersection delay by more than four seconds or critical movement delay by more than six seconds.

2035 Plus Project Impacts and Mitigations

Impact TRANS-9: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours at the Ashby Avenue/College Avenue (#1) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-9: The impact at the Ashby Avenue/College Avenue intersection can be mitigated by implementing the following:

- Implement Mitigation Measure TRANS-1
- Provide a left-turn lane on southbound College Avenue

After implementation of this measure, the intersection would continue to operate at LOS F during both weekday and Saturday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2035 No Project Conditions.

Providing a left-turn lane on southbound College Avenue may result in secondary impacts. This segment of College Avenue currently provides adequate width to accommodate a southbound left-turn lane in addition to the existing southbound and northbound through lanes. However, provision of a southbound left-turn lane would narrow the northbound through lane. As a result, trucks may have difficulty turning right from westbound Ashby Avenue to northbound College Avenue. In addition, buses stopped at the existing bus stop on northbound College Avenue just north of Ashby Avenue may block northbound through traffic on the narrower travel lane.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase, do not have final design, and do not have approvals. The improvements may include providing a northbound left-turn lane on College Avenue, changing the left-turn signal phasing, and/or providing a pedestrian scramble phase. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measures would not conflict with these potential improvements. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.

Significance after Mitigation: This project is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-9 were implemented, the impact would be less than significant.

Impact TRANS-10: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the weekday PM peak hour at the Ashby Avenue/Claremont Avenue (#2) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-10: The impact at the Ashby Avenue/Claremont Avenue intersection can be mitigated by implementing the following:

- Reconfigure the westbound approach on Ashby Avenue to provide a dedicated left-turn lane and a shared through/right-turn lane
- Convert signal control equipment from pre-timed to actuated-uncoordinated operations
- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach)

To implement this measure, the project sponsor shall submit the following to City of Berkeley and Caltrans for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal timing changes supporting vehicle travel and alternative modes travel consistent with City of Berkeley and Caltrans requirements.

- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay during both peak hours would be less than under 2035 No Project Conditions. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Berkeley is planning improvements at this intersection. These improvements are currently in the preliminary feasibility study phase and do not have approvals. The improvements may include converting one of the through lanes on eastbound and/or westbound Ashby Avenue to a dedicated left-turn lane. The proposed mitigation measure is one of the improvements under study by City of Berkeley. The proposed mitigation measures would not conflict with other improvements under study at this intersection. The implementation of the improvements under study at this intersection may increase delay experienced by automobiles. However, the potential increase in delay cannot be reasonably quantified because the details of the improvement that may be implemented at this intersection are not known at this time.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley and Caltrans, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-10 were implemented, the impact would be less than significant.

Impact TRANS-11: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)

Mitigation Measure TRANS-11: The impact at the Alcatraz Avenue/College Avenue intersection can be mitigated by implementing the following:

- Implement Mitigation Measure TRANS-2

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the average intersection vehicle delay would be less than under 2035 No Project Conditions. The intersection would improve from LOS F to LOS D during the Saturday peak hour. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of

Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-2 were implemented, the impact would be less than significant.

Impact TRANS-12:

The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2035 Conditions. This is a significant impact based on a conservatiove reading of the City of Berkeley's significance criteria. (Significant)[24]

Mitigation Measure TRANS-12: Implement the following measures at the Alcatraz Avenue/ Claremont Avenue intersection:

- Implement Mitigation Measure TRANS-3

Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City of Berkeley. After implementation of this measure, the intersection would operate at LOS C during the weekday PM peak hour and LOS A during the Saturday PM peak hour. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: This project impact is significant and unavoidable because it is not certain that the measure could be implemented. Because it is located in Berkeley, the City of Oakland, as lead agency, does not have jurisdiction at this intersection. Since the mitigation measure would need to be approved and implemented by City of Berkeley, the impact is considered significant and unavoidable. However, in the event that Mitigation Measure TRANS-3 were implemented, the impact would be less than significant.

Impact TRANS-13: The proposed project would add more than 10 trips to the 63rd Street/College Avenue (#7) intersection which would meet the peak hour signal warrant under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)**Mitigation Measure TRANS-13:** Implement the following measures at the 63rd Street/College Avenue intersection:

- Signalize the intersection, providing actuated operation, with permitted left turns, a pedestrian scramble phase (i.e., an all-pedestrian signal phases), and communication conduit/cabling connecting the traffic signal to the existing traffic signals on College Avenue at Alcatraz Avenue and Claremont Avenue.
- Coordinate the signal timings at this intersection with the adjacent intersections that would be in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's

24 Ibid.

Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection to accommodate the signal installation. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below:
  - GPS communication (clock)
  - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
  - City Standard ADA wheelchair ramps
  - Full actuation (video detection, pedestrian push buttons, bicycle detection)
  - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan
  - Signal timing plans for the signals in the coordination group

The project sponsor shall fund, prepare, and install the approved plans and improvements.

Prior to the installation of the traffic signals, a complete traffic signal warrant analysis shall be conducted at this location to verify that this location meets MUTCD signal warrants and be subject to review and approval of the City. After implementation of this measure, the intersection would operate at LOS A during both weekday PM and Saturday peak hours. Pedestrians crossing at this intersection would experience more delay because they would need to wait for the appropriate signal phase; however this mitigation measure would improve their safety by providing a protected pedestrian crossing. In addition, considering the proximity of this intersection to existing signals along College Avenue at Alcatraz and Claremont Avenues, a signal at this intersection may result in queues from upstream intersections backing and blocking this intersection. Queues on northbound College Avenue at Alcatraz Avenue and on southbound College Avenue at Claremont Avenue are expected to spill back past 63rd Street under 2035 Plus Project conditions after implementation of mitigation measures. Signal coordination along College Avenue would reduce the likelihood of queue spillbacks.

Without a signal at this intersection, vehicles exiting the Safeway Driveway would form long queues inside the project garage as they wait for adequate gaps in the flow of vehicles and pedestrians to exit the garage. The proposed mitigation measure would reduce the delay and queues experienced by vehicles exiting the project driveway.

As part of this mitigation measure, the westbound Safeway driveway shall be designed similar to a typical intersection approach with raised curb returns, the driveway surface lower than the sidewalk, and ADA compliant ramps. If the driveway approach is designed as a typical driveway at the same level as the sidewalk and the driveway is signalized, pedestrians along College Avenue may fail to note that the driveway is signalized. No other secondary significant impacts would result from implementation of this measure.

Potential secondary significant impacts would result from implementation of this measure. However, they can be mitigated by implementing Mitigation Measures TRANS-17A and -17B as identified in the pedestrian and bicycle safety discussion of this section.

Significance after Mitigation: Significant and Unavoidable. While mitigation measures have been identified that, if implemented, would mitigate any significant impacts at this intersection, this impact is being conservatively assumed to be significant and unavoidable. Because the mitigation would create a signalized intersection on a residential side street and would provide direct access to the College Avenue entrance for the site, it could create negative increases in traffic in the residential neighborhood along 63rd Street. This could result in undesirable quality of life and other negative effects that, while not significant impacts under CEQA, may result in a determination that the mitigation is infeasible.

Impact TRANS-14: The proposed project would contribute to LOS F operations and increase the intersection v/c ratio by more than 0.03 during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)

Mitigation Measure TRANS-14: Implement the following measures at the College Avenue/ Claremont Avenue intersection:

- Implement Mitigation Measure TRANS-4

After implementation of this measure, the intersection would continue to operate at LOS F during both weekday PM and Saturday PM peak hours. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay and v/c ratio during both peak hours would be less than under 2035 No Project Conditions. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of installing bulbouts and upgrading traffic signal control equipment. These improvements are not currently expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.

Significance after Mitigation: Less than Significant.

Impact TRANS-15: The proposed project would contribute to LOS F operations, increase the average intersection delay by more than two seconds, and increase delay for the critical westbound movements by more than four seconds, during the weekday PM peak hours at the Forest Street/Claremont Avenue (#10) intersection under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)

Mitigation Measure TRANS-15: Implement the following measures at the Forest Street/ Claremont Avenue intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below:
  - 2070L Type Controller
  - GPS communication (clock)
  - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
  - City Standard ADA wheelchair ramps
  - Full actuation (video detection, pedestrian push buttons, bicycle detection)
  - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan
  - Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would improve from LOS F to LOS E during the weekday PM peak hour. Although the intersection would continue to operate at unacceptable conditions, the project impact would be reduced to less than significant because the average intersection vehicle delay and delay for the critical westbound movements would be less than under 2035 No Project Conditions. No secondary significant impacts would result from implementation of this measure.

Significance after Mitigation: Less than Significant.

Impact TRANS-16: The proposed project would contribute to LOS E operations, increase the average intersection delay by more than four seconds during the weekday PM peak hours at the Hudson Street/Manila Avenue/College Avenue (#15) intersection under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)

Mitigation Measure TRANS-16: Implement the following measures at the Hudson Street/Manila Avenue/College Avenue intersection:

- Optimize signal timing parameters (i.e., adjust the allocation of green time for each intersection approach).

- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- Plans, Specifications, and Estimates (PS&E) to modify the intersection. All elements shall be designed to City standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for among other items the elements listed below:
  - 2070L Type Controller
  - GPS communication (clock)
  - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines
  - City Standard ADA wheelchair ramps
  - Full actuation (video detection, pedestrian push buttons, bicycle detection)
  - Accessible Pedestrian Signals, audible and tactile according to Federal Access Board guidelines Signal interconnect and communication to City Traffic Management Center for corridors identified in the City's ITS Master Plan
  - Signal timing plans for the signals in the coordination group.

The project sponsor shall fund, prepare, and install the approved plans and improvements.

After implementation of this measure, the intersection would improve from LOS E to LOS D during the weekday PM peak hour. No secondary significant impacts would result from implementation of this measure.

As part of the Caldecott Tunnel Improvement Project Settlement Agreement, City of Oakland is planning improvements at this intersection, consisting of extending bulbouts at the west side of the intersection, installing new traffic signal control equipment to allow countdown pedestrian signal heads, and providing a new north-south crosswalk along the west side of College Avenue. These improvements are not currently expected to be funded. These planned improvements would not mitigate the project impacts; however, the proposed mitigation measure would not conflict with the planned improvements. These improvements are not expected to affect traffic operations at this intersection or cause significant secondary impacts.

Significance after Mitigation: Less than Significant.

2035 Plus Project Mitigated Conditions

Table 4.3-18 summarizes intersection operations after implementation of the mitigation measures at the affected intersections.

Table 4.3-18 Intersection Level of Service – 2035 Plus Project Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Project		2035 Plus Project Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
1.	Ashby Ave./ College Ave	Berkeley	Signal	PM	**>120 (v/c = 1.24)**	**F**	**>120 (v/c = 1.26)**	**F**	**83.4 (v/c = 1.24)**	**F**	Significant and Unavoidable[3]
				SAT	**>120 (v/c = 1.40)**	**F**	**>120 (v/c = 1.43)**	**F**	**96.7 (v/c = 1.30)**	**F**	
2.	Ashby Ave/Claremont Ave	Berkeley	Signal	PM	**>120 (v/c = 1.12)**	**F**	**>120 (v/c = 1.13)**	**F**	**101.1 (v/c = 1.11)**	**F**	Significant and Unavoidable
				SAT	**65.5**	**E**	**68.8**	**E**	**58.9**	**E**	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**120 (v/c = 1.57)**	**F**	**119.2 (v/c=1.27)**	**F**	Significant and Unavoidable[3]
				SAT	**64.2**	**E**	**89.0**	**F**	44.0	D	
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC/ Signal[3]	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	29.1	C	Significant and Unavoidable[3]
				SAT	21.1 **(>120)**	C **(F)**	17.2 **(100.5)**	C **(F)**	8.7	A	
7.	63rd Street/College Avenue	Oakland	SSSC/ Signal[4]	PM	6.0 **(>120)**	A **(F)**	10.8 **(103.8)**	B **(F)**	6.8	A	Significant and Unavoidable[3]
				SAT	12.5 **(>120)**	A **(F)**	**>120 (>120)**	**F (F)**	8.1	A	
9.	College Ave/Claremont Ave/ 62nd Street	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.87)**	**F**	**>120 (v/c = 1.53)**	**F**	Less than Significant
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.56)**	**F**	**>120 (v/c = 1.33)**	**F**	
10.	Forest St/ Claremont Ave	Oakland	Signal	PM	**86.2**	**F**	**88.6**	**F**	**84.4**	**F**	Less than Significant
				SAT	**65.6**	**E**	**65.2**	**E**	49.5	D	
15.	Hudson St/ Manila Ave/ College Ave	Oakland	Signal	PM	**67.0**	**E**	**72.1**	**E**	47.6	D	Less than Significant
				SAT	20.6	C	21.3	C	21.3	C	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under 2035 No Project and 2035 Plus Project conditions and signalized under 2035 Plus Project Mitigated conditions.

Source: Fehr & Peers, 2010

Construction Impacts

During the construction period, temporary and intermittent transportation impacts may result from truck movements as well as construction worker vehicles to and from the project site. The construction-related traffic may temporary reduce capacities of project area roadways because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles. Considering the proximity of SR-24 freeway ramps, use of local roadways by construction trucks would be limited. Truck traffic that occurs during the peak commute hours (7:00 to 9:00 AM and 4:00 to 6:00 PM) may result in worse levels of service and higher delays at study intersections during the construction period. Also, if parking of construction workers' vehicles cannot be accommodated within the project site, it would temporarily increase parking occupancy levels in the area. Project construction could also impact the operations of AC Transit buses.

The City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval TRANS-2, as discussed on page 4.3-38, requires that a Construction Traffic Management Plan be developed as part of a larger Construction Management Plan to address potential issues during the project's construction.

Vehicle, Pedestrian and Bicycle Safety

The proposed project would result in increased vehicular traffic and pedestrian and bicycle activity in and around the project area. The streets surrounding the project site provide sidewalks on both sides and the proposed project would provide a new pedestrian passageway between College Avenue and Claremont Avenue.

The proposed project would include the following improvements to vehicle and pedestrian access and circulation in and around the project area to improve safety and encourage more pedestrian activity:

- Signalize the Claremont Avenue/Mystic Street/Safeway Driveway intersection. This proposed signal would also provide a protected pedestrian crossing across Claremont Avenue.
- In comparison to conditions prior to closing of the Union 76 gas station, decrease the number of driveways on College Avenue from four to one and on Claremont Avenue from five to three; reducing potential conflict points between automobiles and pedestrians/bicycles.
- Provide left-turn lanes on northbound and southbound College Avenue into 63rd Street and the Safeway driveway.
- Provide pedestrian bulbouts on the east side of the College Avenue/63rd Street/Safeway Driveway intersection on both the north and south crosswalks across College Avenue.
- Provide ladder striping at the uncontrolled crossings on College Avenue and 63rd Street.
- Provide a pedestrian walkway between College Avenue and Claremont Avenue near the south end of the project site with fronting commercial uses.
- Provide a bus bulb-out on northbound College Avenue just north of Claremont Avenue and move the existing bus stop from south of Claremont Avenue to north of Claremont Avenue.
- Widen segments of sidewalks along project frontage on College Avenue and Claremont Avenue.

The proposed project would also reconstruct and improve the sidewalks adjacent to the project. The following specific improvements are expected:

- Upgrading curb ramps to meet ADA design requirements
- Providing tree grates for trees within sidewalks
- Repairing cracked and uneven sidewalks

As previously described, changes to traffic signal operations including timing and signal phasing are considered to mitigate impacts on vehicular traffic flow to less than significant levels only if the changes can be accomplished within the current cycle length or if the signal cycle length is no greater than 90 seconds. In general, longer cycle lengths are considered to adversely affect pedestrians and bicyclists because they would experience additional delay at the intersection but these are not significant CEQA impacts.

Mitigation measures that require additional upgrades to the traffic signal equipment would also include improvements to pedestrians and bicycles in order to comply with the local, state, and federal requirements. These may include: providing count-down pedestrian signal heads, providing audible pedestrian signals, and providing bicycle detection at actuated signals.

Vehicle, Pedestrian, and Bicycle Safety Impacts and Mitigations

The project site plan has not been finalized; the final project design would be reviewed to ensure consistency with design standards. Considering the above listed improvements, the final project design would minimize potential conflicts between various modes and provide safe and efficient pedestrian, bicycle, and vehicle connections between the project and the surrounding circulation systems. The proposed project would not cause a significant impact by substantially increasing traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature, except for the pedestrian crossing on College Avenue at 63rd Street and Safeway Driveway.

Impact TRANS-17A: Pedestrian crossings on College Avenue at 63rd Street and Safeway Driveway. (Significant)

Currently, a ladder striped crossing is provided on the north approach of the 63rd Street/College Avenue intersection. The proposed project would result in an increase in automobile traffic and pedestrian crossings at this location. The proposed project would also lengthen the crossing across College Avenue by providing left-turn lanes on both northbound and southbound approaches of the intersection. The project would provide ladder striped crossings on both north and south approaches of the intersection and provide bulbouts on the east side of the intersection.

Mitigation Measure TRANS-17A: Implement the following at the 63rd Street/College Avenue intersection:

- Provide bulbouts on the west side of College Avenue at the 63rd Street/College Avenue intersection to shorten the pedestrian crossing distance across College Avenue. Since both sides of 63rd Street just west of College Avenue are designated for loading and are used for truck deliveries for businesses along College Avenue, the bulbouts should continue to accommodate truck movements between College Avenue and 63rd Street. Each bulbouts may result in loss of one parking space.

Significance after Mitigation: Less than Significant.

Impact TRANS-17B: Pedestrian crossings on the Safeway Driveway along College Avenue. (Significant)

Upon implementation of Mitigation Measure TRANS-13, in which the 63rd Street/ College Avenue/ Safeway Driveway intersection would be signalized, pedestrians walking along the east side of the College Avenue sidewalk may fail to recognize that the Safeway driveway is signalized which may create a hazard as autos exit from the garage at a green light.

Mitigation Measure TRANS-17B: Implement the following at the 63rd Street/College Avenue intersection:

If and when the 63rd Street/College Avenue intersection is signalized per Mitigation Measure TRANS-13, minimize the potential for conflicts between the high volume of pedestrians on the sidewalk adjacent to Safeway and automobiles entering and exiting the project driveway by considering the following items in the final design for the driveway that shall be reviewed and approved by City of Oakland's Transportation Services Division:

-
  - Design the driveway approach similar to a typical intersection approach with raised curb returns, the driveway surface lower than the sidewalk, and ADA compliant ramps. If the driveway approach is designed as a typical driveway at the same level as the sidewalk and the driveway is signalized, pedestrians along College Avenue may fail to note that the driveway is signalized.
  - Provide different paving material for the segment of sidewalk crossing the driveway.
  - Ensure adequate sight distance between automobiles entering and exiting the driveway and pedestrians on the sidewalk.
  - Provide directional curb ramps at each crosswalk crossing College Avenue, 63rd Street, and the project driveway.

Significance after Mitigation: Less than Significant.

Emergency Vehicle Access

The parking structure and buildings included in the proposed project would be accessible from multiple points on both College and Claremont Avenues. If one street were blocked, the other street could be used by emergency vehicles to reach the project site. Thus, the project would not result in fewer than two emergency vehicle access routes, and therefore, would not result in a significant impact on emergency access.

Consistency with Adopted Policies, Plans or Programs Supporting Alternative Transportation

A discussion of applicable polices and plans is provided below. In general, the proposed project is consistent with these policies, plans and programs, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting alternative transportation.

The City of Oakland *General Plan* LUTE and “Transit First” Policy state a strong preference for encouraging the use of alternative transportation modes, such as transit, bicycling, and walking. As previously documented, about 30 percent of Safeway customers and employees currently use alternative travel modes. The high usage of alternative modes is due to the site’s location in the pedestrian oriented Rockridge commercial district, location adjacent to AC Transit Route 51B on College Avenue, one of the busiest AC Transit bus routes, and vicinity to BART. The proposed project is expected to have similar travel mode characteristic as the existing Safeway Supermarket.

The proposed project, as part of the City’s Standard Conditions of Approval, would implement a transportation demand management (TDM) program at the project site to encourage more employees and customers to shift from driving alone to other modes of travel. Potential TDM measures may include, but are not limited to, awareness programs, direct transit sales to employees, parking management strategies, and physical improvements that encourage walking, bicycling, and transit. The components of the proposed TDM program have not been finalized. A TDM program may not be as effective for commercial developments as other types of developments. Typically, TDM programs are most effective for developments, such as office buildings, where most trips are daily peak period commute trips. Most employees at Safeway do not work every day and have irregular work hours. Most employees start and end their work shift outside the peak commute periods and as a result may not have access to convenient transit. Most customers would not travel to the site daily and may make large purchase which may not be convenient to transport by walking, bicycling, or transit.

The proposed project is consistent with the City’s *Pedestrian Master Plan* by including features and improvements such as providing a signalized crossing at the project driveway on Claremont Avenue, bulbouts at the College Avenue/63rd Street intersection, widening segments of sidewalks along project frontage, and a pedestrian passageway. The proposed project would replace the existing parking frontage along College Avenue with pedestrian oriented ground level commercial uses. The Safeway store would be on the upper level and accessible from the ground level by elevators and stairs.

The proposed project is consistent with the City’s *Bicycle Master Plan* in that the proposed project does not preclude the master plan from being implemented. The project does include short-term and long-term bicycle parking that encourage bicycle activity (addressed in more detail in a subsequent section). The proposed project would not alter Claremont Avenue which is proposed to be a future Class 2 bicycle facility south of Alcatraz Avenue.

The proposed project would also move the existing bus stop on northbound College Avenue from south of Claremont Avenue to north of Claremont Avenue. The new bus stop would encourage additional transit trips because it would be closer to the project site and would provide a shelter. In addition, moving the bus stop from the near-side to the far-side of the intersection would improve bus travel times by reducing potential delays experienced by buses at the signal.

Required CMP Evaluation

The Alameda County Congestion Management Program (CMP) requires the assessment of development-driven impacts to regional roadways. Because the project would generate more than 100 "net new" PM peak-hour trips, the CMP requires the use of the Countywide Travel Demand Forecasting Model to assess the impacts on regional roadways near the project site. The CMP and Metropolitan Transportation System (MTS) roadways in the project vicinity identified in the NOP comments by ACCMA (December 1, 2009 letter) include the following:

- I-880
- I-580
- I-80
- I-980
- SR 24
- SR 13
- Broadway
- San Pablo Avenue
- Adeline Street
- Telegraph Avenue
- Shattuck Avenue
- College Avenue
- Claremont Avenue

The ACCMA Model used in this study is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes and transit ridership using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. This process takes into account changes in travel patterns due to future growth and balances trip productions and attractions. This version of the Countywide Model is based on Association of Bay Area Governments (ABAG) *Projections 2007* land uses for 2015 and 2035.

For the purposes of this CMP and MTS Analysis, the project is assumed to not be included in the Countywide Model in order to present a more conservative analysis. The traffic forecasts for the 2015 and 2035 with project scenario were extracted for the CMP and MTS highway segments from that model and used as the "no project" forecasts. Vehicle trips generated by the project were added to the "no project" forecasts to estimate the "plus project" forecasts.

The CMP and MTS segments were assessed using a v/c ratio methodology. For freeway segments, a per-lane capacity of 2,000 vehicles per hour (vph) was used, consistent with the latest CMP documents. For surface streets, a per-lane capacity of 800 vph was used. Roadway segments with a v/c ratio greater than 1.00 signify LOS F.

The "plus project" results were compared to the baseline results for the 2015 and 2035 horizon years. The 2015 and 2035 peak hour volumes, v/c ratios and the corresponding levels of service for without and with project conditions are provided in Appendix J.

Due to differences in the land use assumptions and differences in analysis methodologies, the forecasted traffic volumes on the roadway links can be different from the intersection volumes, particularly at the local level. The first area of difference is the land use data sets employed for the intersection forecasts and the MTS forecasts. The intersection forecasts, which are used to assess project traffic impacts on City of Oakland intersections, are based on land use data adjusted to reflect all past, present, existing, approved, pending and reasonably foreseeable projects in the City of Oakland, which differs from the data in the ACCMA Model. The second area of difference is the use of the Furness process. The intersection forecasts use the output of the ACCMA Model as an input to develop intersection volumes in conjunction with existing traffic counts. The CMP and MTS roadway analysis is based on the outputs of the ACCMA Model directly on a roadway segment level. It is not unusual to have discrepancies given that the two analyses measure impacts at a different scale. For local streets, intersections are typically a more accurate measure of operating conditions because the capacity of an urban street, defined as the number of vehicles that can pass through its intersections, is controlled by the capacity at its intersections.

The project would contribute to 2015 and 2035 increases in traffic congestion on MTS roadways. However, the project would not cause a roadway segment on the MTS to degrade from LOS E or better to LOS F. The project also would not increase the v/c ratio by more than 3 percent for roadway segments that would operate at LOS F without the project. This is a less-than-significant impact, and as a result no mitigation measures are required.

Transit Travel Time

Table 4.3-19 shows peak-hour travel times along the major corridors served by AC Transit in the project vicinity: College Avenue and Claremont Avenue. Existing average travel speeds range from 9 miles per hour traveling on southbound College Avenue during the weekday PM peak hour to about 19 miles per hour traveling on northbound Claremont Avenue during the Saturday PM peak hour.

Table 4.3-19 Travel Times Along AC Transit Corridors

Corridor	Direction	Distance (miles)	Peak Hour	Existing		Existing Plus Project		Existing Plus Project Mitigated	
				Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)
College Avenue	Northbound (Manila Avenue to Ashby Avenue)	1.18	PM	6:06	12	6:48	10	5:01	14
			SAT	5:11	14	6:01	12	4:35	15
	Southbound (Ashby Avenue to Manila Avenue)	1.18	PM	7:44	9	8:24	8	5:33	13
			SAT	5:48	12	7:18	10	4:48	15
Claremont Avenue	Northbound (College Avenue to Ashby Avenue)	0.70	PM	2:45	15	2:57	14	3:06	14
			SAT	2:10	19	2:19	18	2:23	18
	Southbound (Ashby Avenue to College Avenue)	0.70	PM	2:32	17	2:45	15	2:48	15
			SAT	2:40	16	2:58	14	2:54	15

Note: Corridor travel times were calculated using intersection delay and free-flow segment speeds from Synchro 7.0.
Source: Fehr and Peers, 2010.

Implementation of the proposed project is estimated to decrease travel speeds along both these corridors by about one to two miles per hour. The largest increase in travel time is expected along southbound College Avenue where the travel time from Ashby Avenue to Manila Avenue would increase by about 1.5 minutes. The mitigation measures proposed for Existing Plus Project conditions (TRANS-1 through TRANS-4) would reduce travel times along College Avenue by allocating more signal green time to the College Avenue movements. In addition, the project and its mitigations would create left-turn lanes on College Avenue at Alcatraz Avenue and 63rd Street which would reduce queuing for through travel. As a result, travel times on College Avenue under Existing Plus Project Mitigated conditions are expected to be less than existing travel times. In addition, the project proposes to move the existing bus stop on northbound College Avenue from south of Claremont Avenue to north of Claremont Avenue; and Mitigation Measure TRANS-2 includes moving bus stops on both northbound and southbound College Avenue from the near-side to the far-side of the Alcatraz Avenue/College Avenue intersection. Although not reflected in the travel time analysis presented in this section, moving the bus stop from the near-side to the far-side of the intersection is expected to reduce delay experienced by buses caused by the signals on College Avenue at Claremont and Alcatraz Avenues. Moving the bus stops from the near-side to the far-side of the intersection is also consistent with AC Transit's recommendations as published in *Route 51 Service and Reliability Report* (December 2008).

The proposed mitigation measures would further decrease average speeds along Claremont Avenue primarily due to the proposed signal at Alcatraz Avenue/Claremont Avenue intersection (Mitigation Measure TRANS-3). The proposed mitigation measures are estimated to increase travel times along Claremont Avenue by less than 0.5 minute in comparison to existing travel times. Claremont Avenue is currently served by Route 49 which operates with 30 minute headways on weekdays and one-hour headways on weekends. Thus, the estimated increase in travel times is not expected to affect bus operations along this corridor.

While the proposed project would increase travel times, the resulting increase would have a minor effect on transit service within the area. The estimated increase is within the variability in travel time experienced by each bus on these corridors. This impact is less than significant.

Planning-Related Non-CEQA Issues Discussion

The items discussed in this section include:

- Parking Considerations
- Transit Considerations
- Truck Access and Circulation
- Intersection Queuing Analysis
- Neighborhood Traffic Intrusion

While these subjects do not relate to environmental impacts that are required to be evaluated under CEQA, they are discussed for informational purposes to aid the public and decision makers in evaluating and considering the merits of the project.

Parking for Bicycles and Automobiles

Bicycle Parking

City of Oakland Bicycle Parking Ordinance, found in Municipal Code Chapter 17.117, provides bicycle parking requirements for new facilities and additions to existing facilities. Two types of bicycle parking are required: long-term bicycle parking, which includes lockers or locked enclosures, and short-term bicycle parking, which includes bicycle racks. Municipal Code Chapter 17.117.110 indicates the bicycle parking requirements as follows:

- Long-Term (minimum two spaces per activity type):
  - General Food Sales: One space for each 12,000 square feet of floor area
  - Retail Sales Use: One space for each 12,000 square feet of floor area
  - Full Service Restaurant: One space for each 12,000 square feet of floor area
- Short-Term (minimum two spaces per activity type):
  - General Food Sales: One space for each 2,000 square feet of floor area
  - Retail Sales Use: One space for each 5,000 square feet of floor area
  - Full Service Restaurant: One space for each 2,000 square feet of floor area

Table 4.3-20 summarizes bicycle parking supply as required by the Bicycle Parking Ordinance. The proposed project would require seven long-term and 29 short-term spaces. The Oakland Bicycle Parking Ordinance addresses not only the quantity of parking, but the design and layout of that parking. Generally, long-term and short-term bicycle parking spaces are required to be located within 500 feet and 50 feet of the building entrance, respectively.

Table 4.3-20 Bicycle Parking Required Per Bicycle Parking Ordinance

<table>
<tr><th rowspan="2">Use</th><th rowspan="2">Net
Floor Area</th><th colspan="3">Parking Required</th></tr>
<tr><th>Long-Term</th><th>Short-Term</th><th>Total</th></tr>
<tr><td>Grocery Store</td><td>51.510 KSF</td><td rowspan="2">5 spaces</td><td>25 spaces</td><td rowspan="2">32 spaces</td></tr>
<tr><td>Restaurant</td><td>2.744 KSF</td><td>2 spaces</td></tr>
<tr><td>Retail</td><td>7.913 KSF</td><td>2 spaces</td><td>2 spaces</td><td>4 spaces</td></tr>
<tr><td colspan="2">Total Bicycle Parking Required</td><td>7 spaces</td><td>29 spaces</td><td>36 spaces</td></tr>
<tr><td colspan="2">Total Bicycle Parking Provided</td><td>15 spaces</td><td>68 spaces</td><td>83 spaces</td></tr>
<tr><td colspan="2">Bicycle Parking Surplus</td><td>8 spaces</td><td>39 spaces</td><td>47 spaces</td></tr>
</table>

Source: Fehr & Peers, 2010.

Current project plans indicate that the proposed project would provide 15 long-term bicycle parking spaces in various locations in the underground parking garage. It would provide 68 short-term bicycle parking spaces as bicycle racks on sidewalks along College Avenue and Claremont Avenue adjacent to the project site.

Since the proposed project would provide less than 150,000 square feet of floor area, it is not required to provide shower or locker facilities.

Improvement Measure TRANS-1: Although not required to address an adverse environmental impact, the City should consider the following improvements to bicycle parking:

- Consider relocating the long-term bicycle parking from proposed locations distributed throughout the underground parking garage to the edges of the garage or the upper level parking lot. Some of the currently proposed spaces would require bicyclists to dismount from bicycles in the drive aisle.
- Ensure the long-term bicycle parking in the underground parking garage do not block drivers sight distance.
- Ensure the short-term bicycle parking on sidewalks do not block pedestrian circulation.
- Ensure that some short-term bicycle parking spaces can accommodate bicycles with trailers.
- Monitor the usage of long-term and short-term bicycle parking spaces and if necessary provide additional parking spaces.

Automobile Parking

The evaluation includes the following:

- Comparison of the proposed parking supply to the City’s parking requirements
- Comparison of the proposed parking supply to the estimated project demand, including an evaluation of the potential for shared parking
- Summary of strategies to reduce parking demand and/or increase supply

Project Parking Supply

The proposed project would provide 171 off-street parking spaces in two locations:

- An underground parking garage with 144 parking spaces primarily for customers
- An upper-level parking facility with 27 parking spaces restricted to employees only

In addition, the project would result in the following changes to the on-street parking supply:

- College Avenue: on-street parking spaces along project frontage would reduce from 11 to 9 spaces.
- Claremont Avenue: on-street parking spaces along project frontage would increase from 16 to 19 spaces.

The project would increase the overall on-street parking supply by one parking space.

City Off-Street Project Parking Requirements

A consideration when evaluating the project's proposed parking supply is how it compares to the City's Municipal Code requirements for off-street parking (Municipal Code Chapter 17.116). The project site is zoned C-31 Neighborhood Center mixed use, and Municipal Code Chapter 17.116.80 indicates the parking requirements as follows:

- General Food Sales: one space per 300 square feet of net floor area
- General Retail Sales: one space per 600 square feet of net floor area
- Full Service Restaurant: one space per 300 square feet of net floor area

Table 4.3-21 summarizes parking supply as required by the Municipal Code. The proposed project would require 186 off-street parking spaces. The proposed off-street parking supply of 171 spaces would not be adequate to satisfy the City's zoning code requirements.

The City of Oakland Bicycle Parking Ordinance allows up to a 5 percent reduction in the number of required automobile parking spaces if the bicycle parking supply exceeds the minimum requirements. The Bicycle Parking Ordinance allows for the automobile parking to be reduced by one space for six long-term or short-term bicycle parking space in excess of the minimum requirements. Since the project would provide 47 additional bicycle parking spaces, the automobile parking can be reduced by eight spaces. The proposed project would have an automobile parking deficit of 15 spaces with the bicycle parking credit.

Table 4.3-21 Required Automobile Parking Supply Per City of Oakland Zoning Ordinance

Use	Net Floor Area	Parking Required
Grocery Store	51.150 KSF	171.7 spaces
Retail	7.913 KSF	13.2 spaces
Restaurant	2.744 KSF	9.2 spaces
Total Parking Required		**194 spaces**
Reduction due to exceeding bicycle parking		**-8**
Total Parking Required		**186**
Parking Supply		**171 spaces**
Parking Deficit		**15 spaces**

Source: Fehr & Peers, 2010.

Parking Demand Analysis

The parking supply provided for the proposed project was also measured against the expected parking demand for the proposed project uses, using parking demand rates based on ITE *Parking Generation, 3rd Edition* (ITE, 2004). Table 4.3-22 summarizes the estimated weekday and Saturday peak parking demand. Parking demand for the project components are described below.

Table 4.3-22 Automobile Parking Demand Estimate

Land Use	ITE Code	Units[1]	Weekday	Saturday
Supermarket	850[2]	51.510 KSF	146	149
Retail	820[3]	7.913 KSF	21	24
Restaurant	931[4]	2.744 KSF	42	47
Time of day Reduction (-28%)			-12	-13
Restaurant Subtotal			30	34
Total Demand			**197**	**207**
Parking Supply			171	171
Parking Deficit			**26**	**36**

Notes:
1. KSF = 1,000-square feet
2. ITE parking generation rates:
   - 85th percentile rate for urban supermarkets on weekdays = 2.83 spaces per KSF.
   - ITE does not provide 85th percentile rates for urban supermarkets on Saturdays. The weekday 85th percentile to average ratio was applied to the Saturday average rate = 2.89 spaces per KSF.
3. ITE parking generation rates:
   - Average rate for shopping center on non-December weekdays = 2.65 spaces per KSF.
   - Average rate for shopping center on non-December Saturdays = 2.97 spaces per KSF.
4. ITE parking generation rates:
   - Average rate for quality restaurant on weekdays = 15.4 spaces per KSF.
   - Average rate for quality restaurant on Saturdays = 17.2 spaces per KSF.

Source: *Parking Generation* (3rd Edition), ITE, 2004 and Fehr & Peers, 2010.

The parking demand for the Safeway component of the project was estimated using the 85th percentile demand rates for urban supermarkets. The proposed Safeway store is estimated to generate about 146 parked automobiles during the weekday PM peak hour and 149 parked automobiles during the Saturday peak hour.

The parking demand for the retail component of the project was estimated using the average rates for shopping center uses, because it best fits the proposed uses. The retail component of the project is estimated to generate 21 parked automobiles during the weekday PM peak hour and 24 parked automobiles during the Saturday peak hour.

The parking demand for the restaurant component of the project was estimated using the average rates for quality restaurant. Peak parking demand for restaurants typically occurs at night, while grocery store and retail uses peak in the evening. Based on data published in ITE *Parking Generation*, the peak demand for restaurant was adjusted to present the overall peak parking demand for the proposed project. The restaurant component of the project is estimated to generate 30 parked automobiles during the weekday PM peak hour and 34 parked automobiles during the Saturday peak hour.

Overall, the proposed project is estimated to have a typical parking demand of 197 parking spaces on weekdays and 207 spaces on Saturdays. Since the site would provide 171 off-street parking spaces, the project would have a parking deficit of 26 spaces on weekdays and 36 spaces on Saturdays.

Employee Parking

Based on data provided by Safeway, the project would increase the total number of employees at Safeway by 77 employees. It is estimated that the number of peak shift employees would increase from 35 to 67 employees. Assuming that Safeway employees would continue to have similar mode share and commuting patterns, the Safeway employee peak parking demand is estimated to be about 44 parked automobiles.

The upper level parking lot with access to and from Claremont Avenue would provide 27 parking spaces which would be assigned to Safeway employees. The Safeway employee peak parking demand would exceed the provided supply by about 17 parking spaces.

Parking Analysis Conclusions

As discussed in previous sections, the parking supply provided for the proposed project would not be adequate to meet City code requirements or estimated demand. Project customers and employees would use on-street parking when the project parking facilities operate near or above capacity. In addition, the parking garage would be open to the general public. Thus, non-project customers would also use the parking garage.

The existing on-street parking supply and demand were discussed on page 4.3-12. While the overall on-street parking occupancy in the study area was about 68 percent during both weekday and Saturday peak periods, the majority of on-street parking on College Avenue adjacent to the project site has an overall occupancy of 85 percent or more during both Friday and Saturday peak periods. The additional parking demand from the proposed project that cannot be accommodated on-site (26 vehicles during weekday peak period and 36 vehicles during the Saturday peak period) would result in higher on-street parking occupancies. It is estimated that the parking occupancies on streets adjacent to the project site and within one block of the site would be at or near capacity during peak periods. Since on-street parking spaces on residential streets west of College Avenue have no restrictions and no charge, parking demand may spill to these streets.

Improvement Measure TRANS-2: Although not required to address an adverse environmental impact, the City should consider the following strategies to reduce the expected parking deficit and potential for intrusion in the adjacent residential neighborhoods:

- Consider limiting parking in the underground garage to two hours.
- Implement a Transportation Demand Management (TDM) plan to encourage more project employees to use other travel modes than driving.
- Install an automated parking counting system including variable message signs to inform motorists of the number of parking spaces available in the underground parking garage and reduce potential traffic circulation.
- Consider strategies to maximize the use of available parking spaces. These may include providing tandem parking spaces or parking lifts in the employee parking lot, or attendant parking.
- Consider strategies to manage the on-street parking supply. Potential strategies may include:
  - Consider installing parking meters along project frontage on Claremont Avenue.
  - Consider implementing Residential Parking Permit (RPP) on the residential streets west of College Avenue in Oakland. Note that implementation of an RPP is dependent on neighborhood support and is subject to approval by the City of Oakland City Council. The neighborhood support for RPP is currently not known.

It is not yet known which of these strategies may be implemented and if so whether it would be as part of the project or independent of the proposed project, as most of the strategies have pros and cons and would likely be the subject of debate. Some of the strategies being considered may also be found to be infeasible.

The environmental consequences of each strategy listed above have been considered. It is not anticipated that the implementation of any of these strategies would result in any significant CEQA impacts.

Truck Access and Circulation

Off-street loading facilities are required for commercial uses per City Municipal Code Section 17.116.140. According to the code, total commercial uses providing less than 10,000 square feet of net floor area do not require any loading berths; uses between 25,000 and 49,999 square feet of net floor area require two loading berths; and uses between 50,000 and 99,999 square feet of net floor area require three loading berths. The proposed project would provide 62,167 square feet of commercial uses. Thus, it requires three loading berths. However, the project would provide two loading berths. The proposed project would not meet the City's requirements for off-street loading facilities.

Loading facilities for Safeway would be located on the upper level employee parking lot with access to and from Claremont Avenue. Delivery trucks would approach and leave from the site using Claremont Avenue and other designated truck routes in Oakland and Berkeley. They are not expected to use the local residential streets, including Alcatraz Avenue between Claremont and College Avenues.

Transit Ridership

This section analyzes the transit system with trips associated with the proposed project added to the existing system. This analysis presents the extent of project impacts relative to existing transit conditions.

Since the proposed project primarily serves the local neighborhood, it is expected to generate very few trips that would use BART. Thus, potential impacts of the proposed project on BART train occupancy and station gate capacity are expected to be minimal and are not further discussed.

AC Transit Ridership

Table 4.3-11 on page 4.3-44 summarized the current customer mode share at the existing Safeway store. Currently, about 7 percent of weekday PM peak hour trips and 1 percent of Saturday peak hour trips are by transit. Based on the existing mode share, the proposed project is estimated to generate 20 new weekday PM peak hour and four new Saturday PM peak hour transit trips. All new transit trips are expected to be by bus.

An impact would occur on an AC Transit line if the project would add more than 3 percent to the total ridership on a line when the average passengers per seat rate (i.e., load factor) on that line exceeds 125 percent.

Transit operations are evaluated against the existing conditions using the transit trips generated by the proposed project. Table 4.3-23 shows AC Transit maximum passenger load factors for buses serving the project site. Two local bus routes currently serve the project site: Line 49 and Line 51B. Service on Line 49 started in March 2010 and no current ridership is available. Line 51B was split was Line 51 in March 2010 and is assumed to have the same ridership profile as Line 51. Currently the 51B line has a maximum load factor of 108 percent in the northbound direction and 105 percent in the southbound direction.

Table 4.3-23 AC Transit Maximum Loads (No Project and Plus Project)

Bus Line	Stop Location	Direction	Average Capacity (Seats)	No Project		Plus Project	
				Maximum Load[1]	Max. Load Factor[2]	Maximum Load[1]	Max. Load Factor[2]
49[3]	Claremont Ave at Mystic St	NB	32	N/A		N/A	
		SB					
51B[4]	College Ave at Claremont Ave	NB	40	43	108%	45	113%
		SB		42	105%	44	110%
	College Ave at Alcatraz Ave	NB	40	43	108%	45	113%
		SB		42	105%	45	110%

Notes: **Bold** indicates maximum load factor above seating capacity.
1. Maximum number of passengers on the bus observed on a typical weekday.
2. Maximum load divided by average seated capacity.
3. As of March 28, 2010, this line was discontinued in this area. No ridership data available.
4. The No Project ridership is for Line 51. Line 51B is assumed to have the same ridership as Line 51.

Source: Fehr & Peers, 2010.

This analysis conservatively assumes that all transit trips generated by the proposed project would use Line 51B. Of the 20 weekday PM peak-hour AC Transit trips generated by the proposed project, about two additional riders are expected to be added to each northbound or southbound 51B bus. This would result in a 5 percent increase in load factors in both northbound and southbound directions. However, since the overall load factors would continue to be less than 125 percent, the project-generated ridership increases to AC Transit lines would result in a less than significant impact.

Intersection Queuing Analysis

Environmental impacts of the project on intersection traffic operations were analyzed through the delay/LOS analysis presented earlier in this document. Although not an environmental impact, in addition, an analysis on project's impacts on queuing at intersections was also completed to provide additional information to aid the public and decision makers in evaluating and considering the merits of the project.

Queuing analysis for intersections in the project vicinity was completed for all analysis scenarios using the Synchro software. The software calculates the expected queue using a formula that extrapolates the length of queue based on two cycle lengths. This methodology provides reasonable results for locations operating in the LOS A through D, but can miss-represent conditions as intersection operations approach capacity. In these instances, the software output denotes the condition with a letter/symbol adjacent to the analysis output worksheet.

Queuing impacts were identified where the project trips would add 25 or more feet to the existing 95th percentile queue if the existing 95th percentile queue was already over the available storage length or where project trips would extend the queue over the available storage length. The findings are summarized below and in Appendix K.

Project Impact on Existing Conditions

5. Alcatraz Avenue/College Avenue:

   Eastbound through/left/right-turn – Project would increase queue from 485 feet to 500 feet in the weekday PM peak hour and from 205 feet to 215 feet in the Saturday PM peak hour ; storage length is 225 feet. The proposed mitigation measures would decrease the weekday PM peak hour queue to 490 feet and increase the Saturday PM peak hour queue to 260 feet.

   Northbound through/left/right-turn – Project would increase queue from 260 feet to 355 feet in the weekday PM peak hour and from 265 feet to 400 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would decrease the queue to 205 feet in the weekday PM peak hour and 205 feet in the Saturday PM peak hour.

7. 63rd Street/College Avenue:

   The intersection would not result in queues because it is not signalized. However, queues from upstream intersections on College Avenue at Alcatraz Avenue and Claremont Avenue would spill back into this intersection during both weekday PM and Saturday PM peak hours. The proposed mitigation measures would reduce the queues on northbound College Avenue at Alcatraz Avenue so that it would not spill back to 63rd Street. However, queues on southbound College Avenue at Claremont Avenue would continue to spill back past 63rd

Street with mitigation measures. The westbound Safeway Driveway would have a queue of 115 during the weekday PM peak hour and 285 feet during the Saturday peak hour.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn – Project would increase queue from 480 feet to 530 feet in the weekday PM peak hour and from 445 feet to 515 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to 480 feet during the weekday PM peak hour and 455 feet during the Saturday PM peak hour.

Southbound through/left/right-turn – Project would increase queue from 510 feet to 540 feet in the weekday PM peak hour and from 585 feet to 655 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would decrease the queue to 480 feet in the weekday PM peak hour and 570 feet in the Saturday PM peak hour, less than Existing No Project conditions.

2015 Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn – Project would increase queue from 555 feet to 575 feet in the weekday PM peak hour and from 245 feet to 285 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 555 feet during the weekday PM peak hour and 305 feet during the Saturday PM peak hour.

Northbound through/left/right-turn – Project would increase queue from 330 feet to 430 feet in the weekday PM peak hour and from 365 feet to 490 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would decrease the queue to 300 feet in the weekday PM peak hour and 305 feet in the Saturday PM peak hour.

6. Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn – Project would decrease the queue from 575 feet to 510 feet during the weekday PM peak hour; storage length is 560 feet. The queue would decrease due to the proposed signalization of the upstream intersection on Claremont Avenue at Safeway Driveway, which would meter through traffic on Claremont Avenue. The proposed mitigation measures would further reduce the queue to 210 feet.

7. 63rd Street/College Avenue:

The intersection would not result in queues because it is not signalized. However, queues from upstream intersections on College Avenue at Alcatraz Avenue and Claremont Avenue would spill back into this intersection during both weekday PM and Saturday PM peak hours. The upstream queues would continue to spill back into the intersection if the proposed mitigation measures are implemented. In addition, the westbound Safeway Driveway would have a queue of 150 feet during the weekday PM peak hour and 320 feet during the Saturday peak hour.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn – Project would increase queue from 600 feet to 650 feet in the weekday PM peak hour and from 490 feet to 555 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to

610 feet during the weekday PM peak hour and 505 feet during the Saturday PM peak hour.

Southbound through/left/right-turn – Project would increase queue from 600 feet to 650 feet in the weekday PM peak hour and from 680 feet to 750 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would decrease the queue to 570 feet in the weekday PM peak hour and 665 feet in the Saturday PM peak hour, which are lower than Existing No Project conditions.

2035 Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn – Project would increase queue from 795 feet to 810 feet in the weekday PM peak hour and from 375 feet to 390 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 750 feet during the weekday PM peak hour and 390 feet during the Saturday PM peak hour.

Northbound through/left/right-turn – Project would increase queue from 485 feet to 540 feet in the weekday PM peak hour and from 480 feet to 550 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would decrease the queue to 420 feet in the weekday PM peak hour and 355 feet in the Saturday PM peak hour.

6. Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn – The weekday PM peak hour queue would exceed beyond the available 560-foot storage length regardless of the project. The proposed mitigation measures would reduce the queue to 505 feet.

7. 63rd Street/College Avenue:

The intersection would not result in queues because it is not signalized under the 2035 No Project or 2035 Plus Project conditions. However, queues from upstream intersections on College Avenue at Alcatraz Avenue and Claremont Avenue would spill back into this intersection during both weekday PM and Saturday PM peak hours. The upstream queues would continue to spill back into the intersection if the proposed mitigation measures are implemented. In addition, the westbound Safeway Driveway would have a queue of 125 feet during the weekday PM peak hour and 450 feet during the Saturday peak hour. The proposed mitigation would reduce the driveway queues to less than 50 feet during both peak hours.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn – Project would increase queue from 915 feet to 955 feet in the weekday PM peak hour and from 730 feet to 785 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would result in queues of 920 feet during the weekday PM peak hour and 740 feet during the Saturday PM peak hour.

Southbound through/left/right-turn – Project would increase queue from 635 feet to 710 feet in the weekday PM peak hour and reduce queue from 765 feet to 670 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would result in queues of 750 feet in the weekday PM peak hour and 740 feet in the Saturday PM peak hour.

Neighborhood Traffic Intrusion

The traffic operations analysis presented in previous sections assumed that automobiles would access the site using arterials and major streets in the project vicinity. The proposed mitigation measures, to the extent feasible, would ensure that the major streets would have adequate capacity to serve the project site. However, considering the existing and expected traffic congestion in the area, the proposed project may result in additional traffic on surrounding residential neighborhood streets. Additional traffic generated by the proposed project may use adjacent residential streets, such as 63rd Street, as cut-through routes to divert from potential congestion on College, Alcatraz or Claremont Avenues.

Since neighborhood traffic intrusion would not exceed the capacity of these residential streets, it would not result in a significant impact based on the identified significant criteria. As a result, no mitigation measure is required; however, the following recommended improvements should be considered during review of the project's merits to reduce potential cut-through traffic:

Improvement Measure TRANS-3: Project applicant should pay to monitor traffic volumes and speeds on the following roadways before and after the completion of the proposed project.

- 63rd Street between College Avenue and Colby Street
- Hillegass Avenue between Claremont Avenue and Alcatraz Avenue
- Mystic Street
- Auburn Avenue, Manoa Street, and Rockwell Street between Mystic Street and Florio Street
- Alcatraz Avenue between College and Claremont Avenues

In consultation with local residents, and in accordance with all legal requirements, appropriate traffic calming measures, such as speed humps, or roadway closures, should be considered if and when excessive traffic volumes or speeding are observed. These potential improvements should be funded by the project applicant.

In addition, implementation and regular enforcement of a Residential Parking Permit (RPP) program (See Improvement Measure TRANS-2) would reduce traffic intrusion in residential streets by discouraging drivers looking for on-street parking from these streets.

References – Transportation, Circulation and Parking

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4.4 Air Quality

This section presents an overview of region-specific information related to air quality, including a description of current air quality conditions in the project vicinity, expected emissions associated with the project, and sensitive receptors that could be affected by air pollution.

Following the discussion of the setting, this section identifies any potentially significant air quality impacts and, if necessary, appropriate mitigation measures or standard conditions of approval. Pursuant to the City's amendment to the Oakland General Plan (City of Oakland, 2005), as well as Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts that may result from the project.

4.4.1 Environmental Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

Regional Topography, Meteorology, and Climate

The potential for high pollutant concentrations to develop at a given location depends upon the quantity of pollutants emitted into the atmosphere in the surrounding area or upwind, and the ability of the atmosphere to disperse the air pollutants. The atmospheric pollution potential, as the term is used in this EIR, is independent of the location of emission sources and is instead a function of factors such as topography and meteorology.

The proposed project site is located in the City of Oakland in Alameda County, California, which falls within the boundaries of the San Francisco Bay Area Air Basin (Basin). The Basin encompasses the nine-county region, including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. Within the Basin, 11 subregions have been defined based on their unique climatology and topography. The proposed project is located within the Northern Alameda County and Western Contra Costa Counties subregion. This subregion stretches from Richmond to San Leandro and is bound by San Francisco Bay to the west and by the Oakland-Berkeley Hills to the east. The prevailing winds for most of this area are from the west. Temperatures have a narrow range due to the proximity of the moderating marine area; maximum summer temperatures average in the mid-70s, with minimums in the mid-50s. Winter highs are in the mid- to high-50s, with lows in the low- to mid-40s.

The air pollution potential is lowest for parts of the subregion that are closest to the bay, due to largely good ventilation and less influx of pollutants from upwind sources. Major sources of air pollution this subregion include a number of industrial sources and traffic congestion on major roadways and freeways.[25]

Existing Air Quality

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network that measures the ambient concentrations of criteria pollutants. Existing levels of air quality in the study area can generally be inferred from ambient air quality measurements conducted by BAAQMD at its long-term station closest to the proposed site, which is the Oakland monitoring site at 9925 International Boulevard which began operating in 2007.[26]

Background ambient concentrations of pollutants are determined by pollutant emissions in a given area as well as wind patterns and meteorological conditions for that area. As a result, background concentrations can vary among different locations within an area. However, areas located close together and exposed to similar wind conditions can be expected to have similar background pollutant concentrations. Table 4.4-1 on the following page shows a summary of monitoring data collected at the 9925 International Boulevard for 2007 through 2009.

The data are compared with the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS) that are currently applicable.

Sensitive Receptors

For the purposes of air quality and public health and safety, sensitive receptors are generally defined as land uses with population concentrations that would be particularly susceptible to disturbance from dust and air pollutant concentrations, or other disruptions associated with project construction and/or operation. The reasons for greater than average sensitivity include preexisting health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public.

Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

The closest sensitive receptors to the project site are residences immediately adjacent the site to the north. Residential receptors are also located across Claremont Avenue to the east and across College Avenue to the west.

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25 Bay Area Air Quality Management District, CEQA Air Quality Guidelines, June 2010.

26 This site is 8 miles south-southeast of the project site, but is more representative of project site conditions than other east bay monitoring sites such as San Pablo, Concord or Fremont.

Table 4.4-1 Oakland Air Quality Monitoring Summary

Pollutant	Averaging Time (Units)	2007	2008	2009
Ozone	Maximum 1 Hour (ppm) Days > State Standard (0.09 ppm)	0.040 0	0.086 0	0.092 0
	Maximum 8 Hour (ppm) Days > 2008 Federal Standard (0.075 ppm) Days > State Standard (0.07 ppm)	0.037 0 0	0.064 0 0	0.062 0 0
Nitrogen dioxide (NO_2)	Annual Average (ppm)	*	0.015	0.014
	Max 1 Hour (ppm) Days > State Standard	0.059 0	0.070 0	0.062 0
Carbon monoxide (CO)	Maximum 1 Hour (ppm)[1]	2.00	2.32	2.84
	Maximum 8 Hour (ppm) Days > State Standard (9.0 ppm) Days > Federal Standard (9 ppm)	1.40 0 0	1.63 0 0	1.99 0 0
Ultra fine particulate matter ($PM_{2.5}$)	Annual Average ($\mu g/m^3$)	*****	23.8	26.7
	Maximum 24 Hour ($\mu g/m^3$) Est. Days > Federal Standard (35 $\mu g/m^3$)	***** *-	22.8 0	**36.3** **3**

Notes:
> = exceed
ppm = parts per million
* = Insufficient (or no) data available.
Exceedances are listed in **bold.**
[1]The CARB does not report 1-hour average CO concentrations in its database, only 8-hour CO concentrations. Therefore, the 1-hour CO concentration was derived by dividing the 8-hour concentration by 0.7.
Source: California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2010. (http://www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart).

Regulatory Context

Air quality within the Basin is addressed through the efforts of various federal, State, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs.

The air pollutants of concern and agencies primarily responsible for improving the air quality within the Basin and the pertinent regulations are discussed below.

Criteria Air Pollutants

Regulation of air pollution is achieved through both national and State ambient air quality standards and emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the US Environmental Protection Agency (USEPA) has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set "primary" and "secondary" maximum ambient thresholds for each of the criteria pollutants. Primary thresholds were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants. Table 4.4-2 on the following page presents both sets of ambient air quality standards (i.e., national and State) and the Basin's attainment status for each standard. California has also established State ambient air quality standards for sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants are not expected under the project and thus, they are not discussed further in this EIR.

As shown, the Basin is currently classified as non-attainment for the one-hour State ozone standard as well as non-attainment for the federal and State eight-hour standards. Additionally, the Basin is classified as non-attainment for State 24-hour and annual arithmetic mean PM_{10} standards as well as the State annual arithmetic mean and the national 24-hour $PM_{2.5}$ standards. The Basin is unclassified or classified as attainment for all other pollutants standards.

Ozone

Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NOx under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Carbon Monoxide

CO is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high

Table 4.4-2 Federal and State Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	Attainment Status	Federal Standard	Attainment Status
Ozone (O_3)	1 hour	0.09 ppm	N	—	
	8 hour	0.070 ppm	N	0.075 ppm	N
Respirable particulate matter (PM_{10})	24 hour	50 µg/m^3	N	150 µg/m^3	U
	Mean	20 µg/m^3	N	—	
Fine particulate matter ($PM_{2.5}$)	24 hour	—		35 µg/m^3	N
	Mean	12 µg/m^3	N	15.0 µg/m^3	A
Carbon monoxide (CO)	1 hour	20 ppm	A	35 ppm	A
	8 hour	9.0 ppm	A	9 ppm	A
Nitrogen dioxide (NO_2)	1 hour	0.18 ppm	A	—	
	Mean	0.030 ppm		0.053 ppm	A
Sulfur dioxide (SO_2)	1 hour	0.25 ppm		—	
	24 hour	0.04 ppm		0.075 ppm	A
Lead	30-day	1.5 µg/m^3	A	—	
	Quarter	—		1.5 µg/m^3	A
Sulfates	24 hour	25 µg/m^3	A	No Federal Standard	
Hydrogen sulfide	1 hour	0.03 ppm	U		
Vinyl chloride**	24 hour	0.01 ppm	No Information Available		
Visibility-reducing particles	8 hour	Extinction coefficient of 0.23 per kilometer, visibility of 10 miles or more from particles when relative humidity is less than 70%.	U		

Abbreviations:
A = Attainment; N = Nonattainment; U = Unclassified; ppm = parts per million; µg/m^3 = micrograms per cubic meter
30-day = 30-day average; Quarter = Calendar quarter; Mean = Annual Arithmetic Mean

Source: Bay Area Air Quality Management District, Air Quality Standards and Attainment Status, http://hank.baaqmd.gov/pln/air_quality/ambient_air_quality.htm, accessed November 8, 2010.

concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Nitrogen Dioxide

NO_2 is an air quality pollutant of concern because it acts as a respiratory irritant. NO_2 is a major component of the group of gaseous nitrogen compounds commonly referred to as oxides of nitrogen (NOx). A precursor to ozone formation, NOx is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, NOx emitted from fuel combustion is in the form of nitric oxide (NO) and nitrogen NO_2. NO is often converted to NO_2 when it reacts with ozone or undergoes photochemical reactions in the atmosphere.

Particulate Matter

PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects.[27] Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. According to a recent study by the California Air Resources Board (CARB), exposure to $PM_{2.5}$ from 2004 through 2006 can be associated with an average of approximately 18,000 premature annual deaths statewide.[28] Particulates can also damage materials and reduce visibility.

Other Criteria Pollutants

SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (both PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead.

Toxic Air Contaminants (TACs)

Non-criteria air pollutants or TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects(i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations,

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27 PM_{10} and $PM_{2.5}$ represent fractions of particulate matter 10 microns and 2.5 microns or less in diameter, respectively. A micron is one-millionth of a meter.

28 California Air Resources Board, Methodology for Estimating Premature Deaths Associated with Long-Term Exposure to Fine Airborne Particulate Matter in California, October 24, 2008.

and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

In 2001, the CARB assessed the statewide health risks from exposure to diesel exhaust and to other toxic air contaminants. It is difficult to distinguish the health risks of diesel emissions from the other air toxics, since diesel exhaust contains about 40 different TACs. The CARB study (CARB, 2000) detected diesel exhaust by using ambient air carbon soot measurements as a surrogate for diesel emissions. The Study reported that in 2000, the statewide cancer risk from exposure to diesel exhaust was about 540 per million (i.e., 540 cancers per million people) as compared to a total risk for exposure to all ambient air toxics of 760 per million. This estimate of risk from diesel exhaust, which accounts for about 70 percent of the total risk from TACs, included both urban and rural areas in the state. It can be considered as an average worst-case for the state, since it assumes constant exposure to outdoor concentrations of diesel exhaust and does not account for expected lower concentrations indoors, where people spend most of their time.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors. The *CEQA Guidelines* recommends that odor impacts be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the source will reduce odor impacts.

4.4.2 Regulatory Setting

Federal

The USEPA is responsible for implementing the programs established under the federal Clean Air Act, such as establishing and reviewing the NAAQS and judging the adequacy of State Implementation Plans (SIPs), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented. The federal CAA requires USEPA to define NAAQS to protect U.S. public health and welfare.

State

CARB is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying toxic air contaminants (TACs). CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California’s air quality management districts, which are organized at the county or regional level.

County or regional air quality management districts are primarily responsible for regulating stationary sources at industrial and commercial facilities within their geographic areas and for preparing the air quality plans that are required under the federal CAA and California CAA.

Regional and Local Plans and Policies

Bay Area Air Quality Management District

BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various non-governmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

BAAQMD is responsible for bringing and/or maintaining air quality in the Basin within federal and State air quality standards. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the Basin and to develop and implement strategies to attain the applicable federal and State standards.

In June 2010, BAAQMD adopted an updated guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA.[29] The BAAQMD CEQA Air Quality Guidelines is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein. The document describes the criteria that BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

Air Quality Plans

The 1977 FCAA amendments require that regional planning and air pollution control agencies prepare a regional *Air Quality Plan* to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 CCAA also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards. Air quality plans developed to meet federal requirements are referred to as *State Implementation Plans*.

Bay Area plans are prepared by the BAAQMD with the cooperation of the Metropolitan Transportation Commission (“MTC”) and the Association of Bay Area Governments (“ABAG”). Currently, there are three plans for the Bay Area. These are:

- The Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard developed to meet federal ozone air quality planning requirements

[29] Bay Area Air Quality Management District, CEQA Air Quality Guidelines, June 2010

- The Bay Area 2005 Ozone Strategy developed to meet planning requirements related to the state ozone standard; and
- The 1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas, developed by the air districts with jurisdiction over the ten planning areas including the BAAQMD to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the USEPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004.

The Bay Area 2001 *Ozone Attainment Plan* was prepared as a proposed revision to the Bay Area part of California's plan to achieve the national ozone standard. The plan was prepared in response to USEPA's partial approval and partial disapproval of the Bay Area's 1999 *Ozone Attainment Plan* and finding of failure to attain the national ambient air quality standard for ozone. The revised plan was adopted by the Boards of the co-lead agencies at a public meeting and approved by the CARB in 2001. In July 2003, the USEPA approved the plan. The USEPA also made an interim final determination that the plan corrects deficiencies identified in the 1999 plan. Following three years of low ozone levels (2001, 2002 and 2003), in October 2003, USEPA proposed a finding that the Bay Area had attained the national one-hour standard and that certain elements of the 2001 plan (attainment demonstration, contingency measures and reasonable further progress) were no longer required. In April 2004, USEPA made final the finding that the Bay Area had attained the one-hour standard and approved the remaining applicable elements of the 2001 plan: emissions inventory; control measure commitments; motor vehicle emission budgets; reasonably available control measures; and commitments to further study measures.

The USEPA recently transitioned from the national one-hour standard to a more health protective 8-hour standard. Defined as "concentration-based," the new national ozone standard is set at 85 parts per billion averaged over eight hours. The new national 8-hour standard is considered to be more health protective because it protects against health effects that occur with longer exposure to lower ozone concentrations. In April 2004, USEPA designated regions as attainment and non-attainment areas for the 8-hour standard. These designations took effect on June 15, 2004. USEPA formally designated the Bay Area as a non-attainment area for the national 8-hour ozone standard and classified the region as "marginal" according to five classes of non-attainment areas for ozone, which range from marginal to extreme. Marginal non-attainment areas were charged with attaining the national 8-hour ozone standard by June 15, 2007. While certain elements of Phase 1 of the 8-hour implementation rule are still undergoing legal challenge, USEPA signed Phase 2 of the 8-hour implementation rule on November 9, 2005. Although the Bay Area did not achieve attainment by the June 2007 deadline, it is not currently anticipated that marginal areas will be required to prepare attainment demonstrations for the 8-hour standard, though other planning elements may be required. The Bay Area plans to address all requirements of the national 8-hour standard in subsequent documents.

For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for ozone. The "serious" classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the *Clean Air Plan* ("CAP") every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area's record of progress in implementing previous measures must also be reviewed. On January 4, 2006, the BAAQMD adopted the most recent revision to the CAP - the *Bay Area 2005 Ozone Strategy*. The control strategy for the *2005 Ozone Strategy* is to implement all feasible measures on an expeditious schedule in order to reduce emissions of ozone precursors and consequently reduce ozone levels in the Bay Area and reduce transport to downwind regions.

On September 15, 2010, the BAAQMD adopted the final Bay Area 2010 Clean Air Plan (CAP), and certified the Final Environmental Impact Report on the CAP. The 2010 CAP serves to update the Bay Area ozone plan in compliance with the requirements of the Chapter 10 of the California Health & Safety Code. In addition, the 2010 CAP provides an integrated, multi-pollutant strategy to improve air quality, protect public health, and protect the climate.

City of Oakland General Plan

Open Space, Conservation and Recreation Element (OSCAR). The OSCAR Element of the Oakland General Plan (Oakland, 1996) contains the following Air Quality policies that address criteria pollutants and would apply to the proposed project.

- *Policy CO-12.1: Land use patterns which promote air quality*. Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.
- *Policy CO-12.4: Design of development to minimize air quality impacts*. Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; (c) designs which encourage transit use and facilitate bicycle and pedestrian traffic.
- *Policy CO-12.5*: Use of best available control technology. Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.
- *Policy CO-12.6*: Control of dust emissions. Require construction, demolition and grading practices which minimize dust emissions.

City of Oakland Municipal Code

Pursuant to the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, 15.36.100 Dust Control Measures:

'Best Management Practices' shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies. (Ord. 12152 § 1, 1999)

City of Oakland Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City's Standard Conditions of Approval are incorporated into projects regardless of a project's environmental determination. As applicable, the Standard Conditions of Approval are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects. For the proposed project, the relevant standard conditions regarding air quality would be incorporated as part of the project. If a Standard Condition of Approval would reduce a potentially significant impact to less than significant, the impact will be determined to be less than significant and no mitigation is imposed. Where there are impacts associated with a project site that will result in significant environmental impacts despite implementation of the Standard Conditions of Approval, additional mitigation measures are recommended.

The City's Standard Conditions of Approval relevant to this project's air quality impacts are shown below for reference.

AIR-1: Dust Control

Prior to issuance of a demolition, grading or building permit. During construction, the project applicant shall require the construction contractor to implement the following measures required as part of the City of Oakland's basic and enhanced dust control procedures required for construction sites. These include:

a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
g) Idling times shall be minimized either by shutting equipment off when not is use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations. Clear signage to this effect shall be provided for construction workers at all access points.
h) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and

determined to be running in proper condition prior to operation.

i) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.

The following enhanced control measures would also be required due to the need for demolition and extensive soil export (approximately 15,500 cubic yards):

a) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

b) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

c) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

d) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

e) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

f) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.

g) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

h) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

i) All trucks and equipment, including tires, shall be washed off prior to leaving the site.

j) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

k) Minimize the idling time of diesel-powered construction equipment to two minutes.

l) The project applicant shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate matter (PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as they become available.

m) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

n) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

o) Off-road heavy diesel engines shall meet the CARB's most recent certification standard.

AIR-2: Construction Emissions

Prior to issuance of a demolition, grading or building permit. To minimize construction equipment emissions during construction, the Project Applicant shall require the construction contractor to:

a) Demonstrate compliance with BAAQMD Regulation 2, Rule 1 (General Requirements) for all portable construction equipment subject to that rule. BAAQMD Regulation 2, Rule 1 provides the issuance of authorities to construct and permits to operate certain types of portable equipment used for construction purposes (e.g., gasoline or diesel-powered engines used in conjunction with power generation, pumps, compressors, and cranes) unless such equipment complies with all applicable requirements of the "California Air Pollution Control Officers Association (CAPCOA)" Portable Equipment Registration Rule" or with all applicable requirements of the Statewide Portable Equipment Registration Program. This exemption is provided in BAAQMD Rule 2-1-105.

b) Perform low- NOx tune-ups on all diesel-powered construction equipment greater than 50 horsepower (no more than 30 days prior to the start of use of that equipment).Periodic tune-ups (every 90 days) should be performed for such equipment used continuously during the construction period.

AIR-3: Asbestos Removal in Structures

Prior to issuance of a demolition permit. If asbestos-containing materials (ACM) are found to be present in building materials to be removed, demolished and disposed, the Project Applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health & Safety Code 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended.

In addition, the following SCAs located in other sections of this EIR would also serve to reduce vehicle miles traveled (VMT), thus reducing pollutant emissions:

- TRANS-1: Transportation Demand Management Plan (Section 4.3, *Traffic and Circulatio*n)

4.4.3 Impacts and Mitigation Measures

Significance Criteria

The proposed project would result in a significant impact to air quality if it would:

Project-Level Impacts

1. During project construction result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10};
2. During project operation result in average daily emissions of 54 pounds per day of ROG, NOx, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NOx, or $PM_{2.5}$ or 15 tons per year of PM_{10};
3. Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour. [**NOTE**: Pursuant to BAAQMD Guidelines, localized CO concentrations should be estimated for projects in which (1) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (2) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways).];
4. During either project operation or project construction expose persons by siting a new source or a new receptor to substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 10 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of greater than 0.3 micrograms per cubic meter of annual average $PM_{2.5}$ [**NOTE**: Pursuant to BAAQMD Guidelines, when siting new TAC sources consider receptors located within 1,000 feet, and when siting new receptors consider TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, ports, and rail lines. The cumulative analysis should consider the combined risk from all existing and reasonably foreseeable future sources. For this threshold receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers] or;
5. Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people [**NOTE**: For this threshold sensitive receptors include residential uses, schools, daycare centers, nursing homes, and medical centers.].

Project-Level Cumulative Impacts

1. During either project operation or project construction expose persons by siting a new source or a new receptor to substantial levels of TACs resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) an increase of greater than 0.8 micrograms per cubic meter of annual average $PM_{2.5}$.

The City of Oakland air quality thresholds are based on the BAAQMD significance thresholds, as described in the document *CEQA Air Quality Guidelines*.[30]. BAAQMD significance thresholds are summarized in Table 4.4-3.

Table 4.4-3 BAAQMD Project-Level Air Quality Thresholds of Significance

Pollutant	Construction-Related	Operational-Related	
Criteria Air Pollutants and Precursors (Regional)	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_x	54	54	10
PM_{10} (Exhaust)	82	82	15
$PM_{2.5}$ (Exhaust)	54	54	10
$PM_{10}/PM_{2.5}$ (Fugitive Dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Risks and Hazards (Individual Projects)	Same as Operational Thresholds	Compliance with a Qualified Community Risk Reduction Plan OR Increased cancer risk of >10.0 in a million OR Increased non-cancer risk of >1.0 Hazard Index (Chronic or Acute)Ambient $PM_{2.5}$ increase > 0.3 µg/m^3 annual average	
Risks and Hazards (Cumulative Threshold)	Same as Operational Thresholds	Compliance with a Qualified Community Risk Reduction Plan OR Cancer: > 100 in a million (from all local sources) Non-cancer: >10.0 Hazard Index)from all local sources) $PM_{2.5}$ > 0.8 µg/m^3 annual average (from all local sources)	
Accidental Release of Acutely Hazardous Air Pollutants	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors	None	5 confirmed complaints per year averaged over 3 years	

Notes: CO = carbon monoxide; CO_2e = carbon dioxide equivalent; lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$= fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ROG = reactive organic gases.

Approach to Analysis

Project-related air quality impacts fall into two categories: impacts due to construction, and impacts due to project operation. First, during project construction, the project would increase local particulate concentrations primarily due to fugitive dust sources. Over the long-term, the project would result in an increase in emissions primarily due to increased motor vehicle trips. Onsite area sources (such as natural

30 Bay Area Air Quality Management District, CEQA Air Quality Guidelines, June 2010.

gas for water and space heating, and emissions from landscaping and use of consumer products) would result in lesser quantities of pollutant emissions.

Air quality assessment methodologies in this section conform to those identified by BAAQMD in its *CEQA Air Quality Guidelines*. Construction emissions were estimated using the California Emissions Estimator Model (CalLEEMod). Operational phase emissions were also estimated using CalLEEMod.

BAAQMD screening methodologies were applied to the proposed project to evaluate construction TAC impacts and carbon monoxide impacts on streets providing access to the project site.

Impacts and Mitigation Measures

Construction Air Quality Impacts

Construction activities would include demolition of the existing buildings. Demolition activities may result in airborne entrainment of asbestos, a TAC. Some asbestos-containing materials have been identified within the existing buildings on site.[31] However, these materials would be removed in accordance with regulatory requirements prior to demolition. In order to ensure that no impacts would occur from release of asbestos and lead during demolition activities, Standard Condition of Approval AIR-3, Asbestos Removal in Structures, would apply.

Impact AIR-1: Activities associated with demolition, site preparation, and construction would generate short-term emissions of criteria pollutants. (Less than Significant)

In addition to demolition, construction activities would include site excavation and grading as well as general construction. Heavy duty construction equipment, construction-related on-road trucks, and worker vehicles would also result in exhaust emissions of ROG, NOx, PM_{10}, and $PM_{2.5}$ during construction of the proposed project. Exhaust emissions would vary depending on the number and type of construction equipment used, number of truck trips to the site, and number of workers present.

The CalLEEMod program was used to quantify construction emissions. Construction-related emissions for the proposed project and corresponding thresholds of significance are presented in Table 4.4-4, below. The estimated emissions consider the following basic construction phases: demolition, excavation/ grading, building construction, and application of architectural coatings. To be consistent with the BAAQMD thresholds of significance, an average emission, in pounds per day, was calculated using the CalLEEMod output.

The average emissions shown in Table 4.4-4 are well below the BAAQMD thresholds of significance as indicated above in Table 4.4-4. This would be a less-than-significant impact.

Mitigation: None required

[31] Monte Deignan & Associates, Asbestos Survey for Safeway Store 687/2870 6310 College Avenue in Oakland, California, July 25, 2007.

Table 4.4-4 Average Daily Construction Emissions in Pounds Per Day

	ROG	NO_x	PM_{10} (Exhaust)	$PM_{2.5}$ (Exhaust)
Construction Emissions	6.00	25.36	1.36	1.36
Threshold of Significance	**54.00**	**54.00**	**82.00**	**54.00**
Significant?	**No**	**No**	**No**	**No**

Notes:
ROG = Reactive Organic Gases
NO_x = Nitrogen Oxides
PM_{10} = Particulate Matter, 10 micron
$PM_{2.5}$ = Particulate Matter, 2.5 micron

Impact AIR-2: Activities associated with demolition, site preparation, and construction would generate short-term emissions of fugitive dust. (Less than Significant)

The BAAQMD's approach to analyses of fugitive dust emissions from construction is to emphasize implementation of effective and comprehensive dust control measures rather than detailed quantification of emissions. The BAAQMD considers any project's construction-related impacts to be less than significant if the required dust-control measures are implemented. Without these measures, the impact is generally considered to be significant, particularly if sensitive land uses are located in the project vicinity. In addition, through its Municipal Code, the City of Oakland requires demolition projects to use best management practices for dust control. Construction activities would occur intermittently at the project site throughout the phases of construction. Although the related impacts would be temporary, construction related activities could cause adverse effects on the local air quality, primarily from dust emissions.

Construction activities would include site preparation, earthmoving and general construction. Site preparation includes activities such as demolition, general land clearing, and grubbing. Earthmoving activities would include cut-and-fill operations, trenching, soil compaction and grading. About 15,500 cubic yards of soil would be exported from the site. General construction includes adding improvements such as roadway surfaces, structures and facilities. These activities would result in dust emissions (including PM_{10} and $PM_{2.5}$) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance.

Construction-related fugitive dust emissions at the project site would vary from day to day, depending on the level and type of activity, silt content of the soil and the weather. Without mitigation, construction activities would result in significant quantities of dust and as a result, local visibility and PM_{10} and $PM_{2.5}$ concentrations would be adversely affected. The project would be subject to dust control measures recommended by BAAQMD, which are included in SCA AIR-1, listed above, and to City of Oakland Municipal Code 15.36.100 Dust Control Measures. Implementation of the measures would reduce impacts from fugitive dust to on- and off-site receptors to a less-than-significant level.

Mitigation: None required.

Impact AIR-3: Construction activities would expose nearby sensitive receptors to $PM_{2.5}$ and toxic air contaminants (TACs), which may lead to adverse health effects. (Significant)

The BAAQMD has developed a screening approach to conduct initial evaluations of potential health risks from exposure to toxic air contaminants (TACs), including diesel particulate matter (DPM), and particulate matter with an aerodynamic resistance diameter of less than 2.5 micrometers ($PM_{2.5}$) from construction activities.[32] DPM, $PM_{2.5,}$ and several TACs are all emitted from construction activity that uses traditional diesel-powered equipment such as bulldozers, generators, and cranes. The BAAQMD methodology uses screening tables to estimate air quality health risk impacts associated with construction activity in accordance with the BAAQMD's CEQA thresholds of significance.

According to the BAAQMD screening tables, the minimum offset distance (buffer distance) to ensure that a sensitive receptor would have a less-than-significant impact would be 150 meters (approximately 500 feet). There are numerous existing residential units located within this distance. Since the project cannot be shown to have a less-than-significant impact based on the screening tables, a site-specific health risk assessment was prepared. This health risk assessment contains three quantitative determinations: emissions calculation, air dispersion modeling and health risk characterization. Emissions from diesel vehicles and equipment were estimated over the construction period. Concentrations of toxic air contaminants and $PM_{2.5}$ affecting neighboring properties were estimated by inputting emission estimates into the ISCST-PRIME dispersion model. Results of the air modeling exposure predictions were then applied to the respective cancer health risk factors and chronic non-cancer reference exposure levels to perform a health risk characterization that quantified individual health risks associated with predicted levels of exposure.

The health risk assessment found the highest annual DPM concentrations would be located east of the project site along the Claremont Avenue sidewalk, but this area is not considered a sensitive land use. The maximum off-site annual average concentration of DPM at any sensitive land use would be 0.339 PPM, within the residential area just north of the project site. The calculated cancer risk at this location would be 30.9 in one million, compared to the threshold of significance of 10 in one million. This represents a significant impact unless mitigated.

The health risk assessment found the maximum chronic Hazard Index would be 0.068. The acute Hazard Index, based on peak hour acrolein concentrations, would be 0.161. Both these values are well below the BAAQMD thresholds of significance of 1.0. Therefore, project construction impacts related to non-cancer health effects would be less-than-significant.

Concentrations of $PM_{2.5}$ above 0.3 $\mu g/m^3$ extend eastward from the project site over the adjacent sidewalk and part way into Claremont Avenue. Concentrations at all neighboring properties, however, would be less than the 0.03 $\mu g/m^3$ BAAQMD threshold of significance. Therefore, project construction impacts related to $PM_{2.5}$ emissions would be less-than-significant.

> **Mitigation Measure AIR-1:** The project applicant shall develop a Diesel Emission Reduction Plan including, but not limited to alternatively fueled equipment, engine retrofit technology, after-treatment products and add-on devices such as particulate filters, and/or other options as they become available, capable of achieving a project wide fleet-average of 70 percent particulate matter

[32] Bay Area Air Quality Management District, Screening Tables for Air Toxics Evaluation During Construction, May 2010.

(PM) reduction compared to the most recent California Air Resources Board (CARB) fleet average. This Plan shall be submitted for review and approval by the City, and the project applicant shall implement the approved Plan.

Impact after Standard Conditions and Mitigation: Implementation of Mitigation Measure AIR-1 above would reduce TAC, including DPM, exhaust emissions by implementing feasible controls and requiring up-to-date equipment. With mitigation, the calculated maximum excess cancer risk from construction activities would be reduced from 30.9 in one million to 9.3 in one million. This would be considered less-than significant after mitigation.

Operational Air Quality Impacts

Impact AIR-4: Operation of the proposed project would result in increased long-term emissions of criteria pollutants. (Less than Significant)

Operational emissions for vehicle trips and area sources were calculated using the CalEEMod computer model. The CalEEMod model was applied to both the existing and proposed Safeway stores. Net new emissions were estimated and compared to the appropriate threshold of significance.

As shown in Table 4.4-5 on the following page, the proposed project would not result in an increase in criteria pollutant emissions that would be considered significant under the City of Oakland's thresholds of significance. Therefore, impacts would be less than significant.

Mitigation: None required.

Impact AIR-5: The proposed project would not frequently create substantial objectionable odors affecting a substantial number of people. (Less than Significant)

The City of Oakland's thresholds of significance provide that odor impacts could result from siting a new odor source near existing sensitive receptors or siting a new sensitive receptor near an existing odor source. Examples of land uses that have the potential to generate considerable odors include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The proposed project would not include uses that have been identified by the City of Oakland as potential sources of objectionable odors. The operation of the proposed supermarket t would not generate objectionable odors. The proposed project includes a restaurant that could generate cooking odors that are not normally considered objectionable odors. Additionally, any food services would need to comply with local ordinances regarding appropriate ventilation of cooking areas.

The proposed project would have a less than significant odor impact because it would not frequently create substantial objectionable odors affecting a substantial number of people.

Mitigation: None required.

Table 4.4-5 Average Daily Operational Emissions in Pounds Per Day

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Existing Safeway Store	15.62	30.79	7.67	1.15
Proposed Safeway Store	23.01	46.41	13.64	1.81
Net Increase	7.39	15.62	8.97	0.66
Threshold of Significance	**54.00**	**54.00**	**82.00**	**54.00**
Significant?	**No**	**No**	**No**	**No**

Notes:
ROG = Reactive Organic Gases
NO_x = Nitrogen Oxides
PM_{10} = Particulate Matter, 10 micron
$PM_{2.5}$ = Particulate Matter, 2.5 micron

Impact AIR-6: The proposed project would not contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour. (Less than Significant)

The City of Oakland has developed a preliminary screening methodology that provides a conservative indication of whether the implementation of a proposed project would result in CO emissions that exceed the CO thresholds of significance. The screening method provides peak hourly traffic volumes for intersections that, if not exceeded, indicate that there is no potential to violate the CO air quality standards. Quantification of CO impacts is only required if the screening traffic volumes are exceeded. For a development proposal, a proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway)

The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour, and would not affect any intersections where vertical and/or horizontal mixing is substantially limited. Based on the City of Oakland's criteria, the proposed project would have a less-than-significant impact on carbon monoxide concentrations

Mitigation: None required.

Impact AIR-7: The project would continue to attract diesel powered delivery trucks, which are sources of diesel particulate, a Toxic Air Contaminant. (Less than Significant)

The project is not expected to result in the construction of any new stationary sources of emissions with potential toxic air contaminate components. However, diesel powered delivery trucks would continue to be used to make deliveries to the site, and diesel emissions would be released in conjunction with this activity.

Trucks accessing the existing truck loading dock at the north end of the site enter and exit from the driveway off Claremont at the northeast corner of the site. The new loading dock would be located slightly further from the boundary of the neighboring residential properties along Alcatraz Avenue than at present. More importantly, the driveway for trucks would be located about 150 feet further south along Claremont Avenue.

Currently, two or three Safeway trucks utilize the loading dock daily, along with five small vendor trucks. There are also two or three semi-sized non-Safeway truck deliveries per week.

With the project, there would be three or four daily Safeway trucks utilizing the loading dock. Small vendor truck trips would remain at five per day, and semi-sized non-Safeway truck deliveries would remain at two or three per week.

Anticipated truck traffic increases to the loading docks would be about one additional truck per day. At the same time, the new design would re-direct truck traffic further away from the closest residences located just north of the project site, with the result that exposures to truck exhausts would be similar to existing conditions. This would be a less-than-significant impact.

Mitigation: None required.

Cumulative Air Quality Impacts

Impact AIR-8: The proposed project could result in a cumulatively considerable contribution to a cumulative air quality impact from criteria pollutant emissions. (Less than Significant)

The geographic area considered for the air quality cumulative is generally the San Francisco Bay Area air basin. According to City of Oakland significance criteria, any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

Since the project's individual impacts were found to be less than significant or would be reduced to a less-than-significant level through mitigation, the project would not have any cumulative air quality impacts.

Mitigation: None required.

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4.5 Greenhouse Gas Emissions

The October 2009 Initial Study included an assessment of potential air quality impacts of the project based on scientific information and regulatory requirements current at that time. However, in October 2009 neither the state nor the BAAQMD had established significance thresholds for GHG emissions, and thus GHG was not addressed in that analysis.

Following review of the Notice of Preparation and the Initial Study, the BAAQMD indicated that although the District had not, at that time, established significance thresholds for GHG emissions, analytical methodologies and tools did exist to quantify GHG emissions associated with the project. BAAQMD recommended that the EIR quantify emissions from the project, and that the project sponsors minimize the project's contribution to climate change by implementing all feasible mitigation measures to reduce GHG emissions. BAAQMD further recommended that the City refer to the California Air Pollution Control Officers Association's resource guide to addressing GHG emissions subject to CEQA, *CEQA and Climate Change*.

Since then, there has been a significant advancement in scientific understanding of the relationship between certain air emissions and trend-line changes in climatic conditions that have national and even global ramifications. New information about GHG emissions and their potential effects on global climate change, as well as new public environmental policy has emerged and become more formalized. Guidance has been issued by the state regarding requirements for environmental review under CEQA for proposed projects related to GHG emissions and global climate change, and the Bay Area Air Quality Management District (BAAQMD) has recently adopted CEQA *Thresholds of Significance* and issued new *CEQA Guidelines* which include thresholds of significance for levels of GHG emissions attributable to projects and plans.[33]

In light of the more recent legislative action on this topic, the BAAQMD's recently adopted *Thresholds of Significance*, the City has developed its own thresholds of significance for GHG emissions. In recognition that climate change as an environmental issue now warranting review under CEQA, this EIR provides a thorough assessment of this project's contribution to GHG and its effects on climate change. The analysis contained in this EIR relies upon the City's thresholds, which are based upon recommendations and suggested methodologies for lead agencies as contained in the BAAQMD 2010 CEQA Guidelines and the adopted June 2010 BAAQMD *Thresholds of Significance*.

4.5.1 Physical Setting

There is a general scientific consensus that global climate change is occurring, caused in whole or in part, by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere, in much the same way as glass traps heat in a greenhouse. While many studies show evidence of warming over the last century and predict future global warming, the precise causes of such warming and its potential effects are far less certain.[34] While the greenhouse effect is responsible for

[33] BAAQMD, *California Environmental Quality Act Guidelines Update* and *Thresholds of Significance*, June 2, 2010.

[34] "Global climate change" is a broad term used to describe any worldwide, long-term change in the earth's climate. "Global warming" is more specific and refers to a general increase in temperatures across the earth, although it can cause other climatic changes, such as a shift in the frequency and intensity of weather events and even cooler temperatures in certain areas, even though the world, on average, is warmer.

maintaining a habitable climate on Earth, human activity has caused increased concentrations of these gases in the atmosphere, contributing to an increase in global temperatures and alteration of climatic conditions.

The U.S. EPA has recently concluded that scientists have a good understanding of the following relationships and data supporting them:

- Human activities are changing the composition of Earth's atmosphere. Increasing levels of GHGs like carbon dioxide (CO2) in the atmosphere since pre-industrial times are well-documented and understood.
- The atmospheric buildup of CO2 and other GHGs is largely the result of human activities such as the burning of fossil fuels.
- An "unequivocal" warming trend of about 1.0 to 1.7°F occurred from 1906-2005. Warming occurred in both the Northern and Southern Hemispheres, and over the oceans
- The major GHGs emitted by human activities remain in the atmosphere for periods ranging from decades to centuries. It is therefore virtually certain that atmospheric concentrations of GHGs will continue to rise over the next few decades.
- Increasing GHG concentrations tend to warm the planet."[35]

At the same time, there is much uncertainty concerning the magnitude and rate of the warming. Specifically, the US EPA notes that "Important scientific questions remain about how much warming will occur, how fast it will occur, and how the warming will affect the rest of the climate system including precipitation patterns and storms. Answering these questions will require advances in scientific knowledge in a number of areas:

- Improving understanding of natural climatic variations, changes in the sun's energy, land-use changes, the warming or cooling effects of pollutant aerosols, and the impacts of changing humidity and cloud cover.
- Determining the relative contribution to climate change of human activities and natural causes.
- Projecting future greenhouse emissions and how the climate system will respond within a narrow range.
- Improving understanding of the potential for rapid or abrupt climate change."[36]

Greenhouse Gases

Carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) are the principal GHGs, and when concentrations of these gases exceed the natural concentrations in the atmosphere, the greenhouse effect may be enhanced. CO_2, CH_4, and N_2O occur naturally, but are also generated through human activity.

[35] http://www.epa.gov/climatechange/science/stateofknowledge.html, accessed November 12, 2010.

[36] Ibid.

Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Other human-generated GHGs, which have much higher heat-absorption potential than CO_2, include fluorinated gases, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6), which are byproducts of certain industrial processes.[37]

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO_2 emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO_2 concentrations were found to have increased by nearly 30 percent above pre-industrial (c.1860) concentrations.

The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP),[38] and is expressed as a function of how much warming would be caused by the same mass of CO_2. Thus, GHG emissions are typically measured in terms of pounds or tons of CO_2 equivalents (CO2E).

Global Emissions

Worldwide emissions of GHGs in 2004 were 30 billion tons of CO2E per year[39] (including both ongoing emissions from industrial and agricultural sources, but excluding emissions from land use changes).

U.S. Emissions

In 2004, the United States emitted about 8 billion tons of CO2E or about 25 tons/year/person. Of the four major sectors nationwide - residential, commercial, industrial and transportation - transportation accounts for the highest fraction of GHG emissions (approximately 35 to 40 percent); these emissions are entirely generated from direct fossil fuel combustion.[40]

State of California Emissions

In 2004, California emitted approximately 550 million tons of CO2E, or about 6 percent of the U.S. emissions. This large number is due primarily to the sheer size of California compared to other states. By contrast, California has one of the fourth lowest per capita GHG emission rates in the country, due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise.[41] Another

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37 CalEPA, 2006b. *Final 2006 Climate Action Team Report to the Governor and Legislature.* Sacramento, CA. April 3.

38 The potential of a gas or aerosol to trap heat in the atmosphere.

39 United Nations Framework Convention on Climate Change (UNFCCC), *Sum of Annex I and Non-Annex I Countries Without Counting Land-Use, Land-Use Change and Forestry (LULUCF). Predefined Queries: GHG total without LULUCF* (Annex I Parties). Bonn, Germany, http://unfccc.int/ghg_emissions_data/predefined_queries/items/3814.php, accessed November 12, 2010.

40 US EPA website, op cit.

41 California Energy Commission (CEC), Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report, publication # CEC-600-2006-013-SF, Sacramento, CA, December 22, 2006; and January 23, 2007 update to that report.

factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

The California EPA Climate Action Team stated in its March 2006 report that the composition of gross climate change pollutant emissions in California in 2002 (expressed in terms of CO_2 equivalence) were as follows:

- Carbon dioxide (CO_2) accounted for 83.3 percent;
- Methane (CH_4) accounted for 6.4 percent;
- Nitrous oxide (N_2O) accounted for 6.8 percent; and
- Fluorinated gases (HFCs, PFC, and SF_6) accounted for 3.5 percent.[42]

The California Energy Commission found that transportation is the source of approximately 41 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent, and industrial sources at 20 percent. Agriculture and forestry is the source of approximately 8.3 percent, as is the source categorized as "other," which includes residential and commercial activities.[43]

Bay Area Emissions

In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area's GHG emissions, accounting for just over half of the Bay Area's 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about 25 percent of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at 7 percent. Oil refining currently accounts for approximately 6 percent of the total Bay Area GHG emissions.[44]

Oakland Emissions

The City of Oakland, in partnership with the Local Governments for Sustainability (ICLEI), has developed a GHG emissions inventory estimating citywide GHG emissions for the year 2005 at approximately 3 million metric tons of CO2E.[45] Table 4.5-1 identifies what those emissions are. This citywide GHG emissions inventory reflects all the energy used and waste produced within the Oakland city limits. When emissions from highway transportation are considered in this total, approximately 58 percent of Oakland's GHG emissions are associated with the transportation sector. Natural gas consumption represents approximately 22 percent of Oakland's GHG emissions, while electricity use and decomposition represent 16 percent and 4 percent of Oakland's GHG emissions, respectively.

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42 Cal EPA, 2006b, op. cit.

43 California Energy Commission (CEC), 2007, op. cit.

44 BAAQMD 2006, *Source Inventory of Bay Area Greenhouse Gas Emissions*, November.

45 City of Oakland Resolution Approving Preliminary Planning Targets for Development of the Draft Oakland Energy and Climate Action Plan. June 23, 2009

Table 4.5-1 Oakland Estimated Community-Wide Greenhouse Gas Emissions, 2005

GHG Emission Source	Metric Tons of Carbon Dioxide Equivalent (CO2E)	Percent of Total
Non-Highway Transportation	759,883	22%
Highway Transportation	1,006,911	29%
Mobile Sources (Port of Oakland)	211,910	6%
Commercial/Industrial Electricity	320,212	9%
Commercial/Industrial Natural Gas	285,365	8%
Residential Electricity	150,105	4%
Residential Natural Gas	346,339	10%
Other Stationary Sources	226,900	7%
Landfill Methane from Solid Waste	126,361	4%
Total	**3,433,986**	**100%**

Note: Individual percentages do not sum to total due to rounding.
Source: City of Oakland, Garrett Fitzgerald, Sustainability Coordinator.

Construction and Development Emissions

The construction and operation of developments, such as the proposed project, cause GHG emissions. Operational phase GHG emissions result from energy use associated with heating, lighting and powering buildings (typically through natural gas and electricity consumption in Oakland), pumping and processing water, as well as fuel used for transportation and decomposition of waste associated with building occupants. New development can also create GHG emissions in its construction and demolition phases including the use of fuels in construction equipment, creation and decomposition of building materials, vegetation clearing, natural gas usage, electrical usage (since electricity generation by conventional means is a major contributor GHG emissions, discussed below), and transportation.

However, it is important to acknowledge that new development does not necessarily create entirely new GHG emissions, since most of the persons who will visit or occupy new development will come from other locations where they were already causing such GHG emissions. Further, as discussed above, it has not been demonstrated that new GHG emissions caused by a local development project can affect global climate change, or that a project's net increase in GHG emissions, if any, when coupled with other activities in the region, would be cumulatively considerable.

Potential Effects of Human Activity on Global Climate Change

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about

0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming is taking place, including substantial loss of ice in the Arctic.[46]

However, the understanding of GHG emissions, particulate matter, and aerosols on global climate trends remains uncertain. In addition to uncertainties about the extent to which human activity rather than solar or volcanic activity is responsible for increasing warming, there is also evidence that some human activity has cooling, rather than warming, effects, as discussed in detail in numerous publications by the International Panel on Climate Change (IPCC), namely "Climate Change 2001, The Scientific Basis"(2001).[47]

Acknowledging uncertainties regarding the rate at which anthropogenic GHG emissions would continue to increase (based upon various factors under human control, such as future population growth and the locations of that growth; the amount, type, and locations of economic development; the amount, type, and locations of technological advancement; adoption of alternative energy sources; legislative and public initiatives to curb emissions; and public awareness and acceptance of methods for reducing emissions), and the impact of such emissions on climate change, the IPCC devised a set of six "emission scenarios" which utilize various assumptions about the rates of economic development, population growth, and technological advancement over the course of the next century.[48] These emission scenarios are paired with various climate sensitivity models to attempt to account for the range of uncertainties which affect climate change projections. The wide range of temperature, precipitation, and similar projections yielded by these scenarios and models reveal the magnitude of uncertainty presently limiting climate scientists' ability to project long-range climate change (as previously discussed).

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects, according to the IPCC.[49]

- Snow cover is projected to contract, with permafrost areas sustaining thawing;
- Sea ice is projected to shrink in both the Arctic and Antarctic;
- Hot extremes, heat waves, and heavy precipitation events are likely to increase in frequency;
- Future tropical cyclones (typhoons and hurricanes) will likely become more intense;
- Non-tropical storm tracks are projected to move poleward, with consequent changes in wind, precipitation, and temperature patterns. Increases in the amount of precipitation are very likely in high-latitudes, while decreases are likely in most subtropical regions; and
- Warming is expected to be greatest over land and at most high northern latitudes, and least over the Southern Ocean and parts of the North Atlantic Ocean.

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46 International Panel on Climate Change (IPCC) Special Report on Emissions Scenarios, 2000, www.grida.no/climate/ipcc/emission/002.htm, accessed November 12, 2010.

47 The IPCC was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation.

48 IPCC, 2000, op. cit.

49 Ibid.

Potential secondary effects from global warming include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Potential Effects of Climate Change on State of California

According to the California Air Resources Board (CARB), some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years.[50] Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts. In addition, projecting regional impacts of climate change and variability relies on large-scale scenarios of changing climate parameters, using information that is typically at too general a scale to make accurate regional assessments.[51]

Below is a summary of some of the potential effects reported in an array of studies that could be experienced in California as a result of global warming and climate change:

- <u>Air Quality</u> – Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. For other pollutants, the effects of climate change and/or weather are less well studied, and even less well understood.[52] If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State.[53]
- <u>Water Supply</u> – Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. For example, models that predict drier conditions (i.e., parallel climate model (PCM)) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows.[54]

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[50] California Air Resources Board (CARB), 2006c. Public Workshop to Discuss Establishing the 1990 Emissions Level and the California 2020 Limit and Developing Regulations to Require Reporting of Greenhouse Gas Emissions, Sacramento, CA. December 1.

[51] Kiparsky, M. and P.H. Gleick, 2003. *Climate Change and California Water Resources: A Survey and Summary of the Literature*. Oakland, CA: Pacific Institute for Studies in Development. July 2003.

[52] US EPA, 2007, op. cit.

[53] California Climate Change Center (CCCC), 2006. Our Changing Climate: Assessing the Risks to California, CEC500-2006-077, Sacramento, CA. July.

[54] Brekke, L.D., et al, 2004. "Climate Change Impacts Uncertainty for Water Resources in the San Joaquin River Basin, California." Journal of the American Water Resources Association. 40(2): 149–164. Malden, MA, Blackwell Synergy for AWRA.

A July 2006 technical report prepared by the California Department of Water Resources (DWR) addresses the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta. Although the report projects that "[c]limate change will likely have a significant effect on California's future water resources … [and] future water demand," it also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood."[55] DWR adds that "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future."[56] Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.[57] Water purveyors, such as the East Bay Municipal Utilities District (EBMUD), are required by state law to prepare Urban Water Management Plans (UWMPs) (discussed below, under Regulatory Context for Greenhouse Gas Emissions and Climate Change) that consider climatic variations and corresponding impacts on long-term water supplies.[58] DWR has published a 2005 SWP Delivery Reliability Report, which presents information from computer simulations of the SWP operations based on historical data over a 73-year period (1922–1994). The DWR notes that the results of those model studies "represent the best available assessment of the delivery capability of the SWP." In addition, the DWR is continuing to update its studies and analysis of water supplies. EBMUD would incorporate this information from DWR in its update of its current UWMP 2005 (required every five years per the California Water Code), and information from the UWMP can be incorporated into Water Supply Assessments (WSAs) and Water Verifications prepared for certain development projects in accordance with Cal. Water Code Section 10910, et. seq. and Cal. Government Code Section 66473.7, et. seq.

- Hydrology – As discussed above, climate change could potentially affect the following: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes -- expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could also jeopardize California's water supply. In particular, saltwater intrusion would threaten the quality and reliability of the state's major fresh water supply that is pumped from the southern portion of the Sacramento/San Joaquin River Delta. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.
- Agriculture – California has a $30 billion agricultural industry that produces half the country's fruits and vegetables. The California Climate Change Center (CCCC) notes that higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be

55 California Department of Water Resources (DWR), 2006. Progress on Incorporating Climate Change into Management of California Water Resources, Sacramento, CA. July.

56 Ibid.

57 Kiparsky 2003, op. cit; DWR, 2005, op. cit.; Cayan, D., et al, 2006. Scenarios of Climate Change in California: An Overview (White Paper, CEC-500-2005-203-SF), Sacramento, CA. February.

58 California Water Code, Section 10631(c).

threatened by a less reliable water supply, and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year that certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[59]

- Ecosystems and Wildlife – Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. In 2004, the Pew Center on Global Climate Change released a report examining the possible impacts of climate change on ecosystems and wildlife.[60] The report outlines four major ways in which it is thought that climate change could affect plants and animals: (1) timing of ecological events, (2) geographic range, (3) species' composition within communities, and (4) ecosystem processes such as carbon cycling and storage.

4.5.2 Regulatory Context for GHG Emissions and Climate Change

Global climate change is addressed through the efforts of various federal, state, regional and local government agencies as well as national and international scientific and governmental conventions and programs. These agencies work jointly, as well as individually to understand and regulate the effects of GHG emissions and resulting climate change through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies, conventions and programs focused on global climate change are discussed below.

International and Federal

Kyoto Protocol

The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008–2012. It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol's commitments.

Copenhagen Summit

The 2009 United Nations Climate Change Conference (Copenhagen Summit) was held in Denmark in December 2009. The conference included the 15 Conference of the Parties to the United Nations Framework Convention on Climate Change, and the fifth meeting of the Parties to the Kyoto Protocol. A framework for climate change mitigation beyond 2012 was to be agreed there. The Copenhagen Accord was drafted by the US, China, India, Brazil, and South Africa on December 18, and judged to be a "meaningful agreement" by the United Stated government. It was "taken note of" but not "adopted" in a debate of all the participating countries the next day, and it was not passed unanimously. The document recognized that climate change is one of the greatest challenges of the present day and that actions should

[59] California Climate Change Center (CCCC), 2006, op. cit.

[60] Parmesan, C. and H. Galbraith, *Observed Impacts of Global Climate Change in the U.S.*, Arlington, VA: Pew Center on Global Climate Change, November 2004.

be taken to keep any temperature increases to below 2 degrees C. The document is not legally binding and does not contain any legally binding commitments for reducing CO2 emissions.

Climate Change Technology Program

The United States has opted for a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol's mandatory framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (which is led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative.[61]

U.S. Environmental Protection Agency (U.S. EPA)

To date, the U.S. EPA has not regulated GHGs under the Clean Air Act (discussed above) based on its assertion in *Massachusetts et. al. v. EPA et. al*[62] that the "Clean Air Act does not authorize it to issue mandatory regulations to address global climate change and that it would be unwise to regulate GHG emissions because a causal link between GHGs and the increase in global surface air temperatures has not been unequivocally established," However, in the same case from 2007, (*Massachusetts v. EPA*) the U.S. Supreme Court held that the U.S. EPA can, and should, consider regulating motor-vehicle GHG emissions.

In December of 2009 the EPA issued an "endangerment" finding about carbon dioxide and other GHGs. The endangerment finding classified six GHGs as pollutants that threaten health: carbon dioxide, methane, nitrous oxide, hydro-fluorocarbons, perfluorocarbons and sulfur hexafluoride. These findings could potentially enable the EPA to make rules restricting GHG emissions under the Clean Air Act, but to date no such rules have been enacted.

State of California

Assembly Bill (AB) 1493

On July 1, 2002, the California Assembly passed Assembly Bill (AB) 1493 (signed into law on July 22, 2002), requiring the CARB to "adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." The regulations were to be adopted by January 1, 2005, and apply to 2009 and later model-year vehicles. In September 2004, CARB responded by adopting "CO_2-equivalent fleet average emission" standards. The standards will be phased in from 2009 to 2016, reducing emissions by 22 percent in the "near term" (2009–2012) and 30 percent in the "mid term" (2013–2016), as compared to 2002 fleets.

[61] Climate Change Technology Program (CCTP), About the U.S. Climate Change Technology Program (web page), Washington, D.C., last updated July 2008, http://www.climatetechnology.gov/about/index.htm, November 12, 2010.

[62] U.S. Supreme Court, Massachusetts et. al. v. EPA et. al (No. 05-1120, 415F 3d 50), April 2, 2007.

Executive Order (EO) S-3-05

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05, establishing statewide GHG emission reduction targets. This EO provides that by 2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels. The Secretary of the California Environmental Protection Agency (CalEPA) is charged with coordinating oversight of efforts to meet these targets and formed the Climate Action Team (CAT) to carry out the EO. Several of the programs developed by the CAT to meet the emission targets are relevant to residential construction and are outlined in a March 2006 report.[63] These include prohibition of idling of certain classes of construction vehicles, provision of recycling facilities within residential buildings and communities, compliance with the Energy Commission's building and appliance energy efficiency standards, compliance with California's Green Buildings and Solar initiatives, and implementation of water-saving technologies and features.

California Assembly Bill 32 (AB 32)

On August 31, 2006, the California Assembly passed Bill 32 (AB 32) (signed into law on September 27, 2006), the California Global Warming Solutions Act of 2006. AB 32 commits California to reduce GHG emissions to 1990 levels by 2020 and establishes a multi-year regulatory process under the jurisdiction of the CARB to establish regulations to achieve these goals. The regulations shall require monitoring and annual reporting of GHG emissions from selected sectors or categories of emitters of GHGs. By January 1, 2008, CARB was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. By January 1, 2011, CARB is required to adopt rules and regulations, which shall become operative January 1, 2012, to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

On April 20, 2007, CARB published *Proposed Early Actions to Mitigate Climate Change in California*.[64] There are no early action measures specific to residential development included in the list of 36 measures identified for CARB to pursue during calendar years 2007, 2008, and 2009. Also, this publication indicated that the issue of GHG emissions in CEQA and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions. As noted in that report, "AB 32 requires that all GHG reduction measures adopted and implemented by the Air Resources Board be technologically feasible and cost effective."[65] The law permits the use of market-based compliance mechanisms to achieve those reductions and also requires that GHG measures have neither negative impacts on conventional pollutant controls nor any disproportionate socioeconomic effects (among other criteria).

On December 11, 2008, CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. The Scoping Plan contains the main strategies California will

63 California Environmental Protection Agency (CalEPA), 2006a. Climate Action Team, Executive Summary. Climate Action Team Report to Governor Schwarzenegger and the California Legislature. Sacramento, CA, March.

64 CalEPA, Air Resources Board (CARB), Proposed Early Actions to Mitigate Climate Change in California. Sacramento, CA, April 20, 2007.

65 Ibid.

implement to reduce CO2E emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO2E under a business-as-usual scenario. The Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state's GHG inventory. While CARB has identified a GHG reduction target of 15 percent for local governments themselves, it has not yet determined what amount of GHG emissions reductions it recommends from local government land use decisions. However, the Scoping Plan does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The measures approved by CARB will be developed over the next two years and be in place by 2012.

The Scoping Plan also includes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in Table 4.5-2 by sector, also put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels.

California Senate Bill 1368 (SB 1368)

On August 31, 2006, the California Senate passed SB 1368 (signed into law on September 29, 2006), which required the Public Utilities Commission (PUC) to develop and adopt a "GHG emission performance standard" by February 1, 2007, for the private electric utilities under its regulation. The PUC adopted an interim standard on January 25, 2007, but formally requested a delay until September 30, 2007, for the local publicly-owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities. The California Energy Commission (CEC) was required to adopt a consistent standard by June 30, 2007. However, this date was missed, and CEC will address the concerns of the Office of Administrative Law (OAL) and resubmit the rulemaking as soon as possible. The rulemaking then must be approved by the OAL before it can take effect.

California Senate Bill 97 (SB 97)

Governor Schwarzenegger signed SB 97 (Chapter 185, Statutes 2007) into law on August 24, 2007. The legislation provides partial guidance on how GHGs should be addressed in certain CEQA documents.

SB 97 required the Governor's Office of Planning and Research (OPR) to prepare CEQA Guidelines for the mitigation of GHG emissions, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency was required to certify and adopt the guidelines by January 1, 2010. OPR and the Resources Agency are then required to periodically review the guidelines to incorporate new information or criteria adopted by CARB pursuant to the Global Warming Solutions Act, scheduled for 2012.

Table 4.5-2 List of Recommended Actions by Sector

Measure Description GHG Reductions No. (Annual Million Metric Tons CO2E)		
	Transportation	
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3[1]	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. Ship Electrification at Ports System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
	Electricity and Natural Gas	
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) Increased Utility Energy Efficiency Programs More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) Utility Energy Efficiency Programs Building and Appliance Standards Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
	Green Buildings	
GB-1	Green Buildings	26
	Water	
W-1	Water Use Efficiency	1.4†
W-2	Water Recycling	0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
	Industry	
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.1

Notes:

1. This is not the SB 375 regional target. CARB will establish regional targets for each MPO region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375.

† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

<u>2008 OPR Technical Advisory</u>: On June 19, 2008, OPR published a technical advisory on CEQA and climate change. The advisory provided OPR's perspective on the emerging role of CEQA in addressing climate change and GHG emissions, while recognizing that approaches and methodologies for calculating GHG emissions and addressing environmental impacts through CEQA review are rapidly evolving. The advisory recognized that OPR will develop, and the Resources Agency will adopt, amendments to the CEQA Guidelines pursuant to SB 97. In the interim, the technical advisory "offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents."

The technical advisory pointed out that neither CEQA nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. The advisory stated, "This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable." OPR recommended that "the global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions." Until such a standard is established, OPR advises that each lead agency should develop its own approach to performing an analysis for projects that generate GHG emissions. OPR set out the following process for evaluating GHG emissions.

- First, agencies should determine whether GHG emissions may be generated by a proposed project, and if so, quantify or estimate the emissions by type or source. Calculation, modeling, or estimation of GHG emissions should include the emissions associated with vehicular traffic, energy consumption, water usage, and construction activities.
- Lead agencies should then assess whether the emissions are "cumulatively considerable" even though a project's GHG emissions may be individually limited. OPR states, "Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment." Individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- Finally, if the lead agency determines emissions are a cumulatively considerable contribution to a significant cumulative impact, the lead agency must investigate and implement ways to mitigate the emissions. OPR states, "Mitigation measures will vary with the type of project being contemplated, but may include alternative project designs or locations that conserve energy and water, measures that reduce vehicle miles traveled (VMT) by fossil-fueled vehicles, measures that contribute to established regional or programmatic mitigation strategies, and measures that sequester carbon to offset the emissions from the project." OPR concludes that, "A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is "less than significant." The technical advisory includes a list of mitigation measures that can be applied on a project-by-project basis.

<u>2008 California Air Pollution Control Officers Association (CAPCOA) "White Paper"</u>: In January 2008, the California Air Pollution Control Officers Association (CAPCOA) issued a "white paper" on evaluating and addressing GHGs under CEQA. This resource guide was prepared to support local governments as they develop their programs and policies around climate change issues. The paper was not a guidance document. It was not intended to dictate or direct how any agency chooses to address GHG emissions. Rather, it was intended to provide a common platform of information about key

elements of CEQA as they pertain to GHG, including an analysis of different approaches to setting significance thresholds.

The paper noted that for a variety of reasons local agencies may decide not to have a CEQA threshold. Local agencies may also decide to assess projects on a case-by-case basis when the projects come forward. The paper also discussed a range of GHG emission thresholds that could be used. The range of thresholds discussed includes a GHG threshold of zero and several non-zero thresholds. Non-zero thresholds include percentage reductions for new projects that would allow the state to meet its goals for GHG emissions reductions by 2020 and perhaps 2050. These would be determined by a comparison of new emissions versus business as usual emissions and the reductions required would be approximately 30 percent to achieve 2020 goals and 90 percent (effectively immediately) to achieve the more aggressive 2050 goals. These goals could be varied to apply differently to new projects, by economic sector, or by region in the state.

Other non-zero thresholds discussed in the paper include:

- 900 metric tons/year CO2E (a market capture approach);
- 10,000 metric tons/year CO2E (potential CARB mandatory reporting level with Cap and Trade);
- 25,000 metric tons/year CO2E (the CARB mandatory reporting level for the statewide emissions inventory);
- 40,000 to 50,000 metric tons/year CO2E (regulated emissions inventory capture – using percentages equivalent to those used in air districts for criteria air pollutants),
- Projects of statewide importance (9,000 metric tons/year CO2E for residential, 13,000 metric tons/year CO2E for office project, and 41,000 metric tons/year CO2E for retail projects); and
- Unit-based thresholds and efficiency-based thresholds that were not quantified in the report.

<u>2009/2010 Amendments to the CEQA Guidelines</u>: In January 2009, OPR released preliminary proposed amendments to the CEQA Guidelines regarding GHG emissions. No significance threshold was included in the draft and the guidelines afforded the customary deference provided to lead agencies in their analysis and methodologies. The introductory preface to the amendments recommended that CARB set state-wide thresholds of significance. OPR emphasized the necessity of having a consistent threshold available to analyze projects, and the analyses should be performed based on the best available information. The proposed revisions included a new section specifically addressing the significance of GHG emissions, building upon OPR's 2008 technical advisory. Like the advisory, the proposed Guidelines section calls for quantification of GHG emissions. The proposed section states that the significance of GHG impacts should include consideration of the extent to which the project would result in the following:

- help or hinder compliance with AB 32 goals;
- increase energy use, especially energy use generated by fossil fuel combustion;
- improve energy efficiency; and
- result in emissions that would exceed any applicable significance threshold.

In April 2009, OPR forwarded the draft revisions to the California Natural Resources Agency for review and proposed adoption. On July 3, 2009, the California Natural Resources Agency began the formal rulemaking process for adopting the CEQA Guidelines. As directed by SB 97, the Natural Resources Agency adopted Amendments to the CEQA Guidelines for GHG emissions on December 30, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010. Among the changes included in these recent CEQA Guidelines amendments are guidance for determining the significance of impacts from GHG emissions (CEQA Guidelines Section 15064.4). These guidelines indicate that "The determination of the significance of GHG emissions calls for a careful judgment by the lead agency … A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project." A lead agency shall have discretion to determine, in the context of a particular project, whether to use a model or other methodology to quantify GHG emissions resulting from a project, and which model or methodology to use, or whether to rely on a qualitative analysis or performance based standard.

These Guidelines also indicate that a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- "The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions."

In determining thresholds of significance for GHG emissions, Section 15064.7 indicates that "Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. When adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."

Finally, in considering mitigation measures related to GHG emissions, Section 15126.4 indicates that "lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of GHG emissions. Measures to mitigate the significant effects of GHG emissions may include, among others:

- Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- Reductions in emissions resulting from a project through implementation of project features, project design, or other measures;
- Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions; and
- Measures that sequester GHGs;
- In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of GHG emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions."

California Senate Bill 375 (SB 375)

Governor Schwarzenegger signed SB 375 into law in September 2008 (Chapter 728, Statutes of 2008). The legislation aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires metropolitan planning organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS) that will prescribe land use allocation in the MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012.

California Urban Water Management Act

The California Urban Water Management Planning Act requires various water purveyors throughout the State of California (such as EBMUD) to prepare UWMPs, which assess the purveyor's water supplies and demands over a 20-year horizon (California Water Code, Section 10631 *et seq*.). As required by that statute, UWMPs are updated by the purveyors every five years. As discussed above, this is relevant to global climate change which may affect future water supplies in California, as conditions may become drier or wetter, affecting reservoir inflows and storage and increased river flows.[66]

Bay Area Air Quality Management District (BAAQMD)

The BAAQMD's prior CEQA Guidelines, which were last updated in 1999, contained no thresholds of significance for GHG emissions. However, in May of 2010 the BAAQMD issued its most recent draft

66 Brekke, 2004, op. cit.

update to its CEQA Guidelines, and on June 2, 2010 the BAAQMD Board of Directors adopted new *Thresholds of Significance* (*2010 Thresholds*).[67]

The adopted June 2010 *Thresholds of Significance* identify a project-specific threshold of 1,100 metric tons per year, and an efficiency-based threshold of 4.6 metric tons per year per service population (residents and employees) as resulting in a cumulatively considerable contribution of GHG emission and a cumulatively significant impact to global climate change.

City of Oakland

Oakland Energy and Climate Action Plan

In July 2009 the Oakland City Council directed staff to develop a draft Oakland Energy and Climate Action Plan using a preliminary planning GHG reduction target equivalent to 36% below 2005 GHG emissions by 2020, annual benchmarks for meeting the target. Based on Oakland's baseline 2005 GHG inventory, totaling approximately 3 million metric tons of CO2E emissions and current forecasts of business-as-usual emissions growth, reducing GHG emissions by the equivalent of 36% below 2005 levels by 2020 will require taking actions that cumulatively add up to approximately 1.1 million metric tons of CO2E reductions. A draft Oakland Energy and Climate Action Plan was released in early 2010.

City of Oakland General Plan

Land Use and Transportation Element (LUTE). The LUTE (which includes the Pedestrian Master Plan and Bicycle Master Plan) of the Oakland General Plan contains the following policies that address issues related to GHG emissions and climate change:

- *Policy T.2.1:* Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.
- *Policy T.2.2:* Transit-oriented developments should be pedestrian-oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
- *Policy T3.5:* The City should include bikeways and pedestrian ways in the planning of new, reconstructed, or realigned streets, wherever possible.
- *Policy T3.6:* The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated "transit streets" as shown on the Transportation Plan.
- *Policy T4.2:* Through cooperation with other agencies, the City should create incentives to encourage travelers to use alternative transportation options.

[67] BAAQMD, Thresholds Of Significance For Use In Determining The Significance Of Projects' Environmental Effects Under The California Environmental Quality Act (*Thresholds of Significance*), June 2, 2010.

- *Policy N3.2:* In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.
- *Policy T4.5:* The City should prepare, adopt, and implement a Bicycle and Pedestrian Master Plan as a part of the Transportation Element of [the] General Plan.

Open Space, Conservation and Recreation Element (OSCAR). The OSCAR Element includes policies that address GHG reduction and global climate change. Listed below are the following types of OSCAR policies: policies that encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO2; policies that encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and policies that encourage energy efficiency and use of alternative energy sources, which directly address reducing GHG emissions.

- *Policy OS-1.1:* Conserve existing City and Regional Parks characterized by steep slopes, large groundwater recharge areas, native plant and animal communities, extreme fire hazards, or similar conditions.
- *Policy OS-2.1*: Manage Oakland's urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.
- *Policy CO-5.3*: Employ a broad range of strategies, compatible with the Alameda Countywide Clean Water Program. See Policy CO-12.1 under OSCAR policies that address general air quality.
- *Policy CO-12.3*: Expand existing transportation systems management and transportation demand management strategies which reduce congestion, vehicle idling, and travel in single passenger autos. See Policy CO-12.4 under OSCAR policies that address general air quality.
- *Policy CO-12.5*: Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.
- *Policy CO-13.2*: Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.
- *Policy CO-13.3*: Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
- *Policy CO-13.4:* Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

Historic Preservation Element (HPE). A key HPE policy relevant to climate change encourages the reuse of existing building (and building materials) resources, which could reduce landfill material (a source of methane, a GHG), avoid the incineration of materials (which produces CO2 as a by-product), avoid the need to transport materials to disposal sites (which produces GHG emissions), and eliminate the need for materials to be replaced by new product (which often requires the use of fossil fuels to obtain raw and manufacture new material).[68]

Safety Element. Safety Element policies that address wildfire hazards related to climate change in that increased temperatures could increase fire risk in areas that become drier due to climate change.[69] Also, wildfire results in the loss of vegetation; carbon is stored in vegetation, and when the vegetation burns, the carbon returns to the atmosphere.[70] The occurrence of wildfire also emits particulate matters into the atmosphere. Safety Element policies also address storm-induced flooding hazards related to the potential to accommodate potential increase in storms and flooding as a result of climate change. Pertinent safety Element policies including the following:

- *Policy FI-3:* Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.
- *Policy FL-1:* Enforce and update local ordinances and comply with regional orders that would reduce the risk of storm-induced flooding.
- *Policy FL-2:* Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

Other City of Oakland Programs and Policies

The City of Oakland has supported and adopted a number of programs and policies designed to reduce GHG emissions and continue Oakland's progress toward becoming a model sustainable city. Programs and policies of relevance to new residential development include:

- Sustainable Oakland Program – Oakland's sustainability efforts are coordinated through the Sustainable Oakland program, a product of the Oakland Sustainability Community Development Initiative created in 1998 (ordinance 74678 C.M.S.)
- Green Building – The City of Oakland has implemented Green Building principles in City buildings through the following programs: Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy, water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers.

68 US EPA, 2006a. General Information on the Link Between Solid Waste and Greenhouse Gas Emissions (web page), October, http://www.epa.gov/climatechange/wycd/waste/generalinfo.html, accessed November 13, 2010.

69 US EPA, Climate Change – Health and Environmental Effects: Health (web page), October 2006b, www.epa.gov/climatechange/effects/health.html, accessed November 13, 2010.

70 National Aeronautics and Space Administration (NASA), El Nino-Related Fires Increase Greenhouse Gas Emissions, January 5, 2005, http://www.nasa.gov/centers/goddard/news/topstory/2004/0102firenino.html, accessed November 13, 2010.

- Downtown Housing – The 10K Downtown Housing Initiative has a goal of attracting 10,000 new residents to downtown Oakland by encouraging the development of 6,000 market-rate housing units. This effort is consistent with Smart Growth principles.
- Waste Reduction and Recycling – The City of Oakland has implemented a residential recycling program increasing the collection of yard trimmings and food waste. This program has increased total yard trimming collections by 46 percent compared to 2004, and recycling tonnage by 37 percent. The City also adopted a *Construction and Demolition Recycling* program, for which the City passed a resolution in July 2000 (Ordinance 12253. OMC Chapter 15.34), requiring certain nonresidential or apartment house projects to recycle 100 percent of all asphalt & concrete (A/C) materials and 65 percent of all other materials.
- Polystyrene Foam Ban Ordinance - In June 2006 the Oakland City Council passed the Green Food Service Ware Ordinance (Ordinance 14727, effective as of January 1, 2007), which prohibits the use of polystyrene foam disposable food service ware and requires, when cost neutral, the use of biodegradable or compostable disposable food service ware by food vendors and City facilities.
- Zero Waste Resolution – In March 2006 the Oakland City Council adopted a Zero Waste Goal by 2020 Resolution (Resolution 79774 C.M.S.), and commissioned the creation of a Zero Waste Strategic Plan to achieve the goal.
- Stormwater Management – On February 19, 2003, the Regional Water Quality Control Board, San Francisco Bay Region, issued a municipal stormwater permit under the National Pollutant Discharge Elimination System (NPDES) permit program to the Alameda Countywide Clean Water Program (ACCWP). The purpose of the permit is to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to effectively prohibit non-stormwater discharges into municipal storm drain systems and watercourses. The City of Oakland, as a member of the ACCWP, is a co-permittee under the ACCWP's permit and is, therefore, subject to the permit requirements. Provision C.3 of the NPDES permit is the section of the permit containing stormwater pollution management requirements for new development and redevelopment projects. Among other things, Provision C.3 requires that certain new development and redevelopment projects incorporate post-construction stormwater pollution management measures, including stormwater treatment measures, stormwater site design measures, and source control measures, to reduce stormwater pollution after the construction of the project. These requirements are in addition to standard stormwater-related best management practices (BMPs) required during construction.
- Community Gardens and Farmer's Markets – Community Garden locations include Arroyo Viejo, Bella Vista, Bushrod, Golden Gate, Lakeside Horticultural Center, Marston Campbell, Temescal, and Verdese Carter. Weekly Farmer's Market locations include the Jack London Square, Old Oakland, Grand Lake, Mandela, and Temescal districts. Both efforts promote and facilitate the principal of growing and purchasing locally, which effects reductions in truck and vehicle use and GHG emissions.

4.5.3 Impacts, Standard Conditions of Approval, and Mitigation Measures

Criteria of Significance

GHG/Climate Change Thresholds of Significance

The project would have a significant impact on the environment if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:

   Project-Level Impacts[71]

   a. For a project involving a stationary source,[72] produce total emissions of more than 10,000 metric tons of CO2E annually.

   b. For a project involving a land use development,[73] produce total emissions of more than 1,100 metric tons of CO2E annually **AND** more than 4.6 metric tons of CO2E per service population[74] annually.[75]

   c. For projects that involve both a stationary source and a land use development, calculate each component separately and compare to the applicable threshold.

2. Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing GHG emissions.

Approach and Conclusion to CEQA Analysis of GHG Emissions and Climate Change Impacts in this EIR

This EIR does discuss, for consideration by decision makers, estimated GHG emissions of the proposed project, project-related activities that could contribute to the generation of increased GHG emissions, the project design features that would avoid or minimize those emissions.

The approach employed in this EIR is both quantitative and qualitative. The quantitative approach is used to address the numeric thresholds identified above (i.e., would the project generate GHG emissions, either

[71] The projects expected greenhouse gas emissions during construction should be annualized over a period of 40 years and added to the expected emissions during operation for comparison to the threshold. A 40-year period is used because 40 years is considered the average life expectancy of a building before it is remodeled with considerations for increased energy efficiency. The thresholds are based on the BAAQMD thresholds. The BAAQMD thresholds were originally developed for project operation impacts only. Therefore, combining both the construction emissions and operation emissions for comparison to the threshold represents a conservative analysis of potential greenhouse gas impacts.

[72] Stationary sources are projects that require a BAAQMD permit to operate.

[73] Land use developments are projects that do not require a BAAQMD permit to operate.

[74] The service population includes both the residents and the employees of a proposed project.

[75] A project's impact would be considered significant if the emissions exceed **BOTH** the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if a project's emissions are below **EITHER** of these thresholds.

directly or indirectly, that exceed adopted numeric thresholds which would result in the project having a significant impact on the environment). The quantifiable numeric thresholds discussed above are used to determine if this threshold is met.

The qualitative approach is used to address the second threshold (i.e., would the project conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions). Theoretically, if a project implements reduction strategies identified in AB 32, the Governor's Executive Order S-3-05, or other strategies to help toward reducing GHGs to the level proposed by the governor and targeted by the City of Oakland, it could reasonably follow that the project would not conflict with any applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions. Alternatively, a project could reduce a potential cumulative contribution to GHG emissions through energy efficiency features, density and locale (e.g., compact development near transit and activity nodes of work or shopping) and by contributing to available mitigation programs such as reforestation, tree planting, or carbon trading.

However, the analysis in this EIR considers that, because the quantifiable threshold established in the June 2010 BAAQMD Thresholds was formulated based on AB 32 reduction strategies, a project cannot exceed the numeric threshold without also conflicting with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of GHG. Therefore, if the proposed project does not meet the first threshold and therefore results in a significant cumulative impact because it exceeds the numeric threshold, the project would also result in a significant cumulative impact under the second threshold, even though the project may incorporate measures and have features that would reduce its contribution to cumulative GHG emissions.

Further, the methodology applied here assumes that all emission sources with the project would be new sources that would combine with existing conditions. For this assessment, it is not possible to predict whether emission sources (residents and businesses) associated with the project would move from outside the air basin (and thus generate "new" emissions within the air basin), or whether they are sources that already exist and are merely relocated within the air basin. Because the effects of GHGs are global, if the project merely shifts the location of the GHG-emitting activities (locations of businesses and where people drive), there would not be a net new increase of emissions. It also cannot be determined until buildout of the project whether patrons of the proposed development would, as a result of frequenting to the project, have shorter travel distances, require fewer vehicle trips, walk, bike, or use public transit more often, instead of driving, or use overall less energy by virtue of the project's location. If these types of changes occur, overall vehicle miles traveled could be reduced and it could be argued that the project would result in a potential net reduction in GHG emissions, locally and globally.

The GHG emissions associated with solid waste disposal and refrigeration leaks are presented since BAAQMD's CEQA Guidelines indicate that these should be quantified, however inclusion of these categories is inconsistent with BAAQMD's justification for deriving the 1,100 metric ton (MT) threshold of significance and therefore the emission inventory is conservative by including these. The reduction in refrigerant emission resulting from Safeway's efficiency programs is included as a net reduction in emissions. Furthermore, solid waste methods suggested by BAAQMD would result in the inappropriate combination of operational emissions with a life-cycle emissions estimation with vastly different jurisdictional boundaries. Therefore, the analysis utilized the solid waste methods utilized by the

California Emission Estimator Model (CalEEMod) which is a comprehensive state-wide model used for estimation of GHG and air quality emissions for land use development projects.[76]

GHG Effects on Flooding and Sea-Level Rise

Since the project site is not located in an area that would be subject to coastal or other flooding resulting from climate change (i.e., is not in an area vulnerable to either a 15-inch or a 55-inch sea level rise),[77] the potential effects of climate change (e.g. effects of flooding on the project site due to sea level rise) on the proposed project are not discussed in this EIR.

GHG Emissions

Impact GHG-1: Construction and operation of the proposed project would result in significant GHG emissions under the City's thresholds. (Less than Significant)

The City's thresholds of significance include a threshold for large stationary sources such as power generators that would require a BAAQMD permit. The proposed project would not require a BAAQMD permit, and therefore Threshold of Significance 1a (10,000 MTCO2E annually) for stationary sources would not apply to the proposed project, and instead Threshold of Significance 1b would apply to the project.

Threshold of Significance 1b provides for project-specific GHG emissions thresholds of 1,100 metric tons per year, *and* more than 4.6 metric tons of CO2E per service population annually. That is, a project would result in a significant impact only if emissions were above both thresholds. Application of these thresholds includes both direct emissions from a project's vehicle trip generation and on-site water and space heating and other stationary sources, as well as indirect emissions from off-site electrical generation and water conveyance and treatment.

Construction and operation of the proposed project would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during operation. Typically more than 80 percent of the total energy consumption takes place during the use of buildings and less than 20 percent is consumed during construction.[78]

Overall, the following activities associated with a typical development could contribute to the generation of GHG emissions:

- Removal of Vegetation – The net removal of vegetation for construction results in a loss of the carbon sequestration in plants. However, planting of additional vegetation would result in additional carbon sequestration and lower the carbon footprint of the project.

76 Environ, *Greenhouse Gas Emission Inventory Analysis, Safeway Project at 6310 College Avenue, Oakland, California*, June 2011, page 3.

77 http://www.bcdc.ca.gov/planning/climate_change/maps/16_55/cbay.pdf.

78 United Nations Environment Programme (UNEP), 2007. Buildings and Climate Change: Status, Challenges and Opportunities, Paris, France.

- Construction Activities – Construction equipment typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as carbon dioxide, methane and nitrous oxide. Furthermore, methane is emitted during the fueling of heavy equipment.
- Gas, Electric and Water Use – Natural gas use results in the emissions of two GHGs: methane (the major component of natural gas) and carbon dioxide from the combustion of natural gas. Methane is released prior to initiation of combustion of the natural gas (as before a flame on a stove is sparked), and from the small amount of methane that is uncombusted in a natural gas flame. Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy intensive. Preliminary estimates indicate that total energy used to pump and treat this water exceeds 15,000 GWh per year, or at least 6.5 percent of the total electricity used in the State per year.[48]
- Motor Vehicle Use – Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips. However, these emissions would not be "new" since drivers are likely diverted from retail uses.

While the proposed project and all developments of similar land uses would generate GHG emissions as described above, the City of Oakland's ongoing implementation of its Sustainability Community Development Initiative (which includes an array of programs and measures, discussed previously under *Regulatory Context for GHG Emissions and Climate Change*) will collectively reduce the levels of GHG emissions and contributions to global climate change attributable to activities throughout Oakland.

Construction-Generated GHG Emissions

The construction-generated GHG emissions of the project were estimated and are shown in Appendix L (CalEEMod outputs). An estimated total of 387 US tons per year of CO2E, or 351 MTCO2E from project construction equipment and vehicles would be emitted over the approximately 13-month estimated construction period.

Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons "per year." Assuming a 40-year development life of the project until it is demolished or remodeled for energy efficiency (which is the common standard currently used in practice), total construction emissions represent approximately nine (9) MTCO2e annually, over 40 years.

The BAAQMD Guidelines do not include a specific threshold or methodology for assessing construction-related GHG emissions for CEQA analysis. The City's methodology adds the 40-year annualized construction-related GHG emissions to the project's total operational-related emissions, to assess construction-related GHG emissions against the BAAQMD thresholds and the project's ability to meet AB 32 GHG reduction goals, as discussed below.

The project includes characteristics that specifically contribute it being consistent with AB 32 GHG reduction goals during construction. The analysis of construction emissions only considers improvements in construction equipment exhaust emissions through manufacturer requirements and turnover. In addition to considering the CO_2e emission from construction activities, the project would incorporate dust control measures recommended by BAAQMD (Oakland SCA AIR-1, Dust Control), and measures related to construction exhaust emissions (Oakland SCA AIR-2, Construction Emissions). Further, the SCAs that apply to the project align with BAAQMD regulations that relate to portable equipment (e.g., concrete batch plants, and gasoline- or diesel powered engines used for power generation, pumps, compressors, pile drivers, and cranes), architectural coatings, and paving materials. Equipment used during project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered Statewide Portable Equipment); BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings); and BAAQMD Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts).

In summary, the annualized GHG emissions from construction of the project would not conflict with the goals of AB 32.

Long-Term Total Operational Emissions

A qualified greenhouse gas consultant estimated the proposed project's greenhouse gas emissions, the results of which are summarized below.[79]

This section describes the methodology that was used to develop the GHG emissions inventories associated with baseline and proposed project conditions. These inventories consider five categories of GHG emissions: energy use associated with non-residential buildings, mobile sources, solid waste, water and wastewater, and refrigeration leaks. Electrical power will be supplied to the project site by Pacific Gas & Electric Company (PG&E). Accordingly, indirect GHG emissions from electricity usage are calculated using the PG&E's carbon-intensity factors in CalEEMod based on the 2008 Power/Utility Reporting Protocol. Legislation and rules regarding climate change, as well as the scientific understanding of the extent to which different activities emit GHGs, continue to evolve; as such, the inventories in this report are a reflection of the guidance and knowledge currently available.

The greenhouse gas consultant primarily utilized the California Emission Estimator Model version 2011.1.1 (CalEEMod)[80] to assist in quantifying the GHG emissions in the inventories presented in this report for baseline conditions and proposed project conditions. CalEEMod is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the South Coast Air Quality Management District (SCAQMD) and received input from other California air districts including BAAQMD, and is currently supported by several lead agencies for use in quantifying the emissions associated with development projects undergoing environmental review. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the USEPA AP-42 emission factors,[81] CARB's on-road and off-road equipment emission models such as the EMission FACtor model (EMFAC) and the Offroad Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle. The greenhouse gas consultant used Alameda County CalEEMod defaults in the model runs unless otherwise

79 Environ, op. cit.

80 Available at: http://www.caleemod.com/.

81 The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. More information is available at http://www.epa.gov/ttnchie1/ap42/

noted in the methodology descriptions below. Details regarding the specific methodologies used by CalEEMod can be found in the CalEEMod User's Guide and associated appendices[82]. The CalEEMod output files are provided for reference in Appendix L to this report. BAAQMD has concluded that CalEEMod is an acceptable model to use to quantify GHG emissions for the proposed project.[83]

Site-Specific Data

The project applicant, Safeway, provided utility consumption data for electricity, natural gas, and water usage at the existing Safeway store[84]. Safeway also provided utility consumption data from newer Safeway stores that were built with similar project design features as the project[85]. Safeway provided a customer trip length for the store based on the weighted distance of customers who utilized Safeway club cards[86]. Average electricity intensity to supply, treat and distribute water for the East Bay Municipal Utility District (EBMUD) was used[87]. The subsections below describe the methodology used in developing the GHG emission inventories.

Building Energy Use

The greenhouse gas consultant analyzed the utility consumption data provided by Safeway. For the new store, utility consumption intensity was calculated for the representative store (e.g., for electricity kWh/sq ft/year), and the intensity was used with the square footage of the new store to estimate consumption intensity for the proposed project. The retail, restaurant, and gas station energy consumption was estimated using CalEEMod default data from the California Commercial End-Use Survey (CEUS) for climate zone 5[88]. This is a survey that provides energy consumption intensity for various commercial land uses by climate zones.

Emission factors were used to convert the consumption data in kilowatt-hours (kWh) and Therms, for electricity and natural gas, respectively, to GHG emissions in MT CO_2e. As noted earlier, ENVIRON used carbon intensity emission factors for electricity collected from the Pacific Gas and Electric (PG&E)

82 Available at: http://www.caleemod.com.

83 Email Communication from Alison Kirk of BAAQMD, June 2, 2011. Re: Use of CalEEMod software for GHG Analysis.

84 Email Communication from Todd Paradis of Safeway on May 10, 2010. #687 Energy Data.xls

85 Email Communication from Todd Paradis of Safeway on May 10, 2010. #687 Energy Comparison (Santa Cruz Usage).xls This data isolated a year of data starting with period 2 and filled in the missing period 6 with the higher of the period surrounding the missing value.

86 Email Communication from Todd Paradis of Safeway on May 10, 2010. Avg HH Distance by Zip4.xls

87 EBMUD. Energy: Generating Renewable Power. Available at: http://www.ebmud.com/sites/default/files/pdfs/2010_EBMUD_Energy.pdf

88 Itron, Incorporated. 2006. California Commercial End-Use Survey (CEUS) Results. CEC-400-2006-005. Available at http://www.energy.ca.gov/ceus/

Power/Utility Reporting Protocol[89,90]. Natural gas emission factors used were from the California Climate Action Registry's General Reporting Protocol[91].

Table 4.5-3 identifies the GHG emissions associated with electricity and natural gas usage for the project and baseline with further details by land use available in Appendix L of this report

Water and Wastewater

Emission factors were also used to convert from consumption data in millions of gallons (MG) water use, to equivalent electricity use, and then to GHG emissions in MT CO_2e. Water use was converted to equivalent electricity consumption using the energy intensity values for EBMUD water use which includes the supply, conveyance, treatment, and distribution. The electricity associated with transportation, treatment and disposal of wastewater was evaluated based on CEC's 2006 report. Electricity consumption was converted to CO_2e using the method described earlier. Consistent with BAAQMD draft guidance, ENVIRON only calculated GHG emissions from electricity associated with wastewater treatment, and ENVIRON did not calculate the direct biogenic GHG process emissions associated with wastewater treatment.

Water usage for the existing and proposed grocery store was estimated based on the existing Safeway store as well as the upper end of water use per square foot for model new stores. The retail, restaurant and gas station water use intensity was estimated based on CalEEMod default data described in "Waste Not, Want Not: The Potential for Urban Water Conservation in California."[92]

Table 4.5-3 shows the baseline and project GHG emissions associated with water and wastewater with further details by land use available in Appendix L of this report.

Mobile Sources

Greenhouse gas emissions from mobile sources were calculated using the predicted number of vehicle trips that are associated with the project and baseline operations. The daily trips for the baseline operations, and project were based on total daily trips for each land use according to Institute of Transportation Engineers (ITE) Trip Generation Handbook 8th edition. Using the number of trips on weekdays and weekends, with average trip length, the total annual miles travelled were estimated.

Except for the grocery store customer primary trip length, each type of trip is associated with an average primary trip length based on the default urban trip lengths for Alameda County recommended by BAAQMD as defaults. The grocery store customer primary trip length was modified based on Safeway's estimate of the location of existing customers. Safeway analyzed customer club card data to determine the

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89 CO_2 Emission factor for electricity provided by PG&E for the year 2008, California Climate Action Registry Database. 2009. Pacific Gas and Electric 2008 PUP Report. Available at: https://www.climateregistry.org/CARROT/public/Reports.aspx

90 CH_4 and N_2O emission factors for electricity from Table G.6 California Grid Average Electricity Emission Factors (1990-2004) of CARB 2008 Local Government Operations Protocol Version 1.0.

91 Emission factors for natural gas obtained from California Climate Action Registry. 2009. General Reporting Protocol 3.1, Tables C7 and C9.

92 Gleick, P.H.; Haasz, D.; Henges-Jeck, C.; Srinivasan, V.; Cushing, K.K.; Mann, A. 2003. Waste Not, Want Not: The Potential for Urban Water Conservation in California. Published by the Pacific Institute

distance customers traveled to the existing stores.[93] All trip lengths were further adjusted to account for the percent of trips that would be classified as diverted or pass-by instead of primary which is based on CalEEMod default data from ITE or SANDAG. Consistent with CalEEMod methods, the diverted trip length was assumed to be 25% of the primary trip length and pass-by trip length was 0.1 miles. Total vehicle miles traveled (VMT) were calculated by multiplying the number of trips by the average trip length for each type of trip.

VMT = Number of Trips * Average Trip Length

The CO_2 emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors from EMFAC2007 as provided in CalEEMod. Emission factors from 2010 were used with the baseline estimate as CalEEMod does not contain the 2009 emission factors. If 2009 emission factors would have been used, the baseline emissions would have been higher and, therefore, this is conservative. Emission factors from 2012 were used to represent the project at build out.

Table 4.5-3 shows the baseline and project GHG emissions associated with mobile trips with further details by land use available in Appendix L of this report. These are estimated to be conservative since the Safeway store is located near a BART station and transportation studies indicate that there is a high percentage of customers and workers who use modes of transportation besides vehicles, which has not been considered in this analysis.

Solid Waste Disposal

Greenhouse gas emissions from solid waste disposal were calculated using the predicted amount of waste disposed and sent to a landfill with landfill gas capture flaring. Defaults from CalEEMod were used in all instances, which is based on data from CalRecycle, the California Air Resources Board (ARB) Local Government Operations Protocol for degradation of solid waste material. The equations used have been modified from the Local Government Operations Protocol to capture all of the future GHG emissions resulting from the waste degradation in the landfill and attribute it to the year it was placed into the landfill. This is more fully described in CalEEMod User's Guide Appendix A.[94]

Table 4.5-3 shows the baseline and project GHG emissions associated with solid waste disposal with further details by land use available in Appendix M of this report.

Offsetting Reductions in Emissions - Refrigerant Leaks

While refrigerant leaks are not counted in the threshold of 1100 MT CO_2e/yr, the reduction in refrigerant emissions associated with Safeway's sustainability programs can be used as a source of offsetting emissions. The use of refrigerated systems results in leakage of some of the charged refrigerant. Refrigerants are usually classified as high global warming potential gases. Safeway provided records indicating the typical leakage rates of refrigerant from the refrigerated systems at the existing store. These data along with the amount and type of refrigerant used at the store was used to estimate the total amount of refrigerant leaks from the existing store. Safeway estimated the amount and leak rate for the new store based on information from similar newer stores. For each refrigerant type, the global warming potential

93 Email Communication from Todd Paradis of Safeway on May 10, 2010. Avg HH Distance by Zip4.xls

94 Available online at http://www.caleemod.com/.

(GWP) was calculated based on the values utilized in BAAQMD Guidelines and associated recommended Models for specific refrigerants identified. The global warming potential indicates, on a pound for pound basis, the potency of the chemical compared to carbon dioxide. Multiplying the pounds of refrigerant by the GWP results in the GHG emissions from refrigeration leaks in terms of carbon dioxide equivalency.

Table 4.5-4 illustrates the calculations for reduction in emissions associated with the reduction in refrigeration leaks from the existing and new store. Table 4.5-3 summarizes this information.

Total Operational GHG Emissions

Table 4.5-3 shows the total GHG emissions from all source categories included in the baseline, project and net emission inventory. The baseline GHG emissions inventory is an average of 2,391 MTCO2E per year. The project GHG emissions inventory is 3,458 MTCO2Eper year. This results in net operational GHG emissions of 1,067 MTCO2Eper year, less than the the City of Oakland's emission significance threshold of 1,100 MT per year. The addition of nine MTCO2E annualized construction emissions discussed under Construction-Generated GHG Emissions above, would bring the emissions estimate to 1,076 MTCO2E per year, less than the City of Oakland's numerical threshold of significance.

Efficiency-Based Threshold

The City's criterion of significance 1b includes an efficiency-based threshold of 4.6 metric tons of CO2E emissions per year per service population. GHG efficiency metrics can be utilized as thresholds to assess the GHG efficiency of a project on a per capita basis (residential only projects) or on a "service population" basis (the sum of the number of jobs and the number of residents provided by a project). This method allows an assessment of whether projects that may have a high mass emissions based on their size, can still meet the overall reduction goals of AB 32 (i.e., 1990 GHG emissions levels by 2020) based on energy efficient design. Final methodology for calculating a project's GHG emissions under this efficiency-based threshold have not yet been fully developed in the 2010 *CEQA Guidelines*, but an approximation is provided below.

- The project is estimated to result in net gain of approximately 77 employees.
- Dividing the total GHG emissions for the project of 1,076 metric tons of CO2E per year by a service population of 77 persons, results in a rate of 13.97 metric tons per year of CO2E emissions per service population.

This efficiency-based emission level is far above the 2010 City's threshold of 4.6 metric tons per year of emissions per service population. However, as discussed above, the proposed project would not produce total emissions of more than 1,100 metric tons of CO2E annually; thus, the conclusion of this EIR is that the project would not result in a cumulatively considerable contribution of GHG emissions or a cumulatively significant impact to global climate change.

Mitigation Measures: None required.

Table 4.5-3: GHG Emission Inventory

Scenario	Electricity[1]		Natural Gas[1]		Water[2]		Traffic	Waste		Refrigeration Leaks	Total
	Consumption (kWh.yr)	(MTCO2E/ year)[4]	Consumption Therms/yr)	(MTCO2E/ year)[5]	Consumption (MG/yr)	(MTCO2E/ year)[6]	(MTCO2E/ year)[7]	Consumption (kWh.yr)	(MTCO2E/ year)[7]	(MTCO2E/ year)[8]	(MTCO2E/ year)
Sum Baseline	1,537,720	450.14	18,696	100.37	1.44	1.62	1,514	141	59.83	265	2,391
Sum of Project	1,632,423	477.87	23,994	128.82	4.1	4.47	2,491	301	127.73	228	3,458
Net	**94,703**	**28**	**5,298**	**28**	**3**	**3**	**977**	**160**	**68**	**-37**	**1,067**

Notes:

1 Electricity and Natural Gas use is based on the following information:

Existing stores is based on the utility bills from store
New Safeway is based on the utility bills from a newer Safeway store with similar features.
Gas Station, Retail and Restaurant is based on the energy intensity from the California Commercial End-Use Survey for climate zone 5.

2 Water and wastewater consumption is based on utility bills for the Safeway stores and the study by Gleick et al Waste Not, Want Not: The Potential for Urban Water Conservation in California.

3 Trip rate information is based on ITE trip rates. Trip lengths are CalEEMod default except for the grocery store customer trip lengths which is based on an analysis of customer trip lengths using club card data to the existing stores as provided by Safeway set to 2.7 miles. Trip type and purpose is based on CalEEMod defaults for each land use category.

4 Electricity emission factorsare based on the CalEEMod default values for PG&E.

5 Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C6 and C9..

6 Energy intensity value for EBMUD was used which includes the supply, conveyance, treatment, and Distribution. Emission factor for electricity provided by Pacific Gas and Electric (PG&E). Wastewater was assumed to be an aerobic process.

7 Emission factors for the baseline conservatively used 2010 vehicle emission factors for Alameda County since 2009 values are not available in CalEEMod. Emission factors for the project used 2012 vehicle emission factors for Alameda County.

8 Refrigeration leaks is based on the amount of refrigerant charged or anticipated to be charged along with anticipated leakage rates. This has then been converted to CO 2e based on global warming potentials for the different refrigerants.

Abbreviations:

CO2: Carbon dioxide CH4: Methane GHG: Greenhouse gas kWh: kilowatt hour lbs: pounds MG: million gallons MT: Metric Tons N2O: Nitrous oxide

Sources:

California Air Resources Board (ARB). 2008. Local Government Operations Protocol, For the quantification and reporting of greenhouse gas emissions inventories, Version 1.0. September 25.
California Climate Action Registry. 2009. General Reporting Protocol, Version 3.1. January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf
California Energy Commission. 2006. California Commercial End-Use Survey. Prepared by Itron Inc. Available at: Available at: http://www.energy.ca.gov/ceus/
EBMUD. Energy: Generating Renewable Power. Available at: http://www.ebmud.com/sites/default/files/pdfs/2010_EBMUD_Energy.pdf
Gleick, P.H.; Haasz, D.; Henges-Jeck, C.; Srinivasan, V.; Cushing, K.K.; Mann, A. 2003. Waste Not, Want Not: The Potential for Urban Water Conservation in California. Published by the Pacific Institute

Table 4.5-4: GHG Emissions from Refrigerant Leaks

	R-507	R-134A	R-22	R-404A	R-407A	GHG Emissions[1]
	lbs refrigerant/year					(MTCO2E/ year)
Existing Safeway Store[2]	89.60	32.00	144.00	9.60	0.00	265
Proposed Project[3]	0.00	0.00	0.00	0.00	330.00	228
Net	**-89.60**	**-32.00**	**-144.00**	**-9.60**	**330.00**	**-37**

Notes:

1 The pounds of refrigerant leaks is multiplied by the global warming potential (GWP) for each refrigerant and converted to metric tonnes. The GWP is listed below:

R-507	3300
R-134a	1300
R-22	1500
R-404A	3260
R-407a	1526

2. The amount of refrigerant leaks per year is based on the total charge of each refrigerant type at the store multiplied by the average leak percent (15%).
3. The amount of refrigerant leaks per year is based on the total charge of each refrigerant type at the store multiplied by the average leak (15%).

Abbreviations:
CO2E: Carbon dioxide equivalent
lbs: pounds
MT: Metric Tons
yr: Year

Sources:

Safeway Refrigerant Data

Conflict with an Applicable Plan, Policy or Regulation Adopted for the Purpose of Reducing GHG Emissions

Impact GHG-2: The project would not comply with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions. (Less than Significant)

The project incorporates several characteristics, such as its transit-oriented location and building and site design features, and will comply with several BAAQMD and other strategies and regulatory requirement that would reduce the project's contribution to cumulative GHG emissions generated during construction and operation of the project.

An Oakland Energy and Climate Action Plan (ECAP) is being developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP will identify energy and climate goals, clarify policy direction, and identify priority actions for reducing energy use and GHG emissions. On July 7, 2009, the Oakland City Council directed staff to develop the draft Oakland ECAP using a GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). Since the City issued a draft ECAP for public review in April 2010, but it has not adopted this ECAP at this time, it is unknown if the project would conflict with policies and actions that may be included. However, the project does not appear to conflict with the current City Sustainability Programs or General Plan policies regarding GHG reductions.

The project's GHG emissions generated during construction and operation would be minimized by virtue of the building characteristics and site design features that the project proposes. In addition, the project is subject to all the regulatory requirements including the City's Standard Conditions of Approval, which would reduce GHG emissions of the project. These include conditions to address adherence to best management construction practices and equipment use (see SCA AIR-1 and AIR-2) and to minimize post construction stormwater runoff that could affect the ability to accommodate potentially increased storms and flooding within existing floodplains and infrastructure systems. Overall, the project would entail implementing reduction strategies identified in AB 32, the Governor's Executive Order S-3-05, and other strategies to help reduce GHGs to the level proposed by the governor and targeted by the City of Oakland, and the project's impacts on GHG reduction plans or policies would be less than significant.

Mitigation Measure: None required.

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4.6 Noise

This section evaluates potential impacts on ambient noise levels from construction and operation of the proposed project. The analysis presented below is based on ambient noise measurements taken near the proposed project site and local noise ordinances and regulations set by the City of Oakland. This section identifies any potentially significant noise impacts and, if necessary, appropriate mitigation measures or standard conditions of approval. Pursuant to the City's amendment to the Oakland General Plan (City of Oakland, 2005), as well as Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts that may result from the project.

4.6.1 Environmental Setting

Noise Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of Hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). When all the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum.

The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. However, noise levels rarely persist consistently over a long period of time. In fact, community noise varies continuously with time with respect to the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with the individual contributors unidentifiable. Background noise levels change throughout a typical day, but do so gradually, corresponding with the addition and subtraction of distant noise sources and atmospheric conditions. The addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens) makes community noise constantly variable throughout a day.

These successive additions of sound to the community noise environment vary the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The noise descriptors used in this analysis are summarized below:

L_{eq}: The equivalent sound level is used to describe noise over a specified period of time, in terms of a single numerical value. The L_{eq} is the constant sound level which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

L_{max}: The instantaneous maximum noise level measured during the measurement period of interest.

L_{dn}: The energy average of the A-weighted sound levels occurring during a 24-hour period, and which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night (“penalizing” nighttime noises). Noise between 10:00 PM and 7:00 AM is weighted (penalized) by adding 10 dBA to take into account the greater annoyance of nighttime noises.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers at industrial plants often experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way the new noise compares to the existing noise levels that one has adapted, which is referred to as the “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise would be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;

- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

These relationships occur in part because of the logarithmic nature of sound and the decibel system. A ruler is a *linear* scale: it has marks on it corresponding to equal quantities of distance. One way of expressing this is to say that the ratio of successive intervals is equal to one. A *logarithmic* scale is different in that the ratio of successive intervals is not equal to one. Each interval on a logarithmic scale is some common factor larger than the previous interval. A typical ratio is 10, so that the marks on the scale read: 1, 10, 100, 1,000, 10,000, etc., doubling the variable plotted on the x-axis. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather they combine logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Point sources of noise, including stationary mobile sources such as idling vehicles or onsite construction equipment, attenuate (lessen) at a rate of 6.0 to 7.5 dBA per doubling of distance from the source, depending upon the type of ground surface. Widely distributed noises such as a large industrial facility spread over many acres or a street with moving vehicles (a “line” source) would typically attenuate at a lower rate of approximately 3.0 to 4.5 dBA per doubling distance from the source also dependent upon the type of ground surface (California Department of Transportation [Caltrans], 1998).

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the affect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (Federal Transit Administration [FTA], 2006). Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Existing Ambient Noise Environment

Noise Survey Procedure

Long-term noise surveys were performed by Wilson, Ihrig & Associates, Inc. (WIA) at four locations on or adjacent to the site over a one-week period between Wednesday, February 13, and Tuesday, February 19. 2008 using precision, calibrated, Type 1 logging sound level meters. One of the monitoring locations (L-1) was in the rear yard at 2712 Alcatraz, the closest residence to the existing store's loading dock. The second monitoring location (L-2) was on Alcatraz Avenue, at the intersection with Lewiston Avenue. The third location (L-3) was in the side garden of the residence at 3306 Claremont Avenue, adjacent to one of the existing site entrances from Claremont Avenue. The fourth location (L-4) was on the roof of the existing Safeway store adjacent to College Avenue. These monitoring locations are indicated on an aerial photo of the site in Figure 4.6-1.

The noise loggers were programmed to record various statistical noise levels over consecutive hourly intervals. The statistical noise levels included the L_{eq} (equivalent continuous, or essentially the sound-over-time mean noise level) and the L_{25}, L_{33}, L_{50}, and L_{90} (the levels exceeded for 25%, 33%, 50%, and 90% of each hour, respectively). L_{90} is a commonly used measure of the background or average minimum noise level. The other metrics were chosen for general consistency with some of the metrics used in the City of Oakland Noise Ordinance, the City of Berkeley Noise Ordinance, and the Oakland Noise Ordinance, which include limits for noise occurring 30 minutes per hour (50% of the time), and 20 minutes per hour (33% of the time).

Short-term noise samples were also recorded on the afternoon of Tuesday, February 19, 2008, near the noise loggers at L-1 (2712 Alcatraz) and L-3 (3306 Claremont). The samples, each of approximately two hours' duration, were recorded on Digital Audio Tape using precision, calibrated sound level meters and DAT recorders.

Monitoring Results

Graphs showing the hourly statistical noise levels for each complete 24-hour period are presented in Appendix M. The Day-Night Average Sound Level (L_{dn}[95]) values at the long-term monitoring locations over each complete 24-hour period during the survey are summarized in Table 4.6-1. Note that Monday, 2/18/08 was the Presidents' Day public holiday.

Existing Noise Environment

The operational noise from the existing Safeway store can be heard from the adjoining residential properties located along the northern boundary of the site. The loading dock is adjacent to the residence at 2712 Alcatraz Avenue, one of the long-term monitoring locations used in the survey. A refrigerated trailer, which is used to store perishable goods at certain times of the year, including Thanksgiving, is permanently located in the loading dock area. A trash compactor is also adjacent to the residential property boundary along the northern side of the site (Figure 4.6-2). A recycling center is next to one of the site entrances from Claremont Avenue. Other noise sources associated with the existing store include roof-mounted mechanical equipment (Figure 4.6-3).

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95 The noise exposure at a site, measured using the L_{dn} metric, represents the A-weighted equivalent continuous noise exposure level (essentially the average sound level) for a 24-hour period, with a 10 decibel adjustment added to the sound levels occurring during the nighttime hours (10:00 PM to 7:00 AM). This adjustment is meant to account for the higher sensitivity of people to noise during the nighttime relative to the daytime. See Appendix A for additional definitions of the terminology used in this report.

Table 4.6-1 Summary of Day-Night Average (L_{dn}) Sound Levels at Long-Term Monitoring Locations

Date	L-1	L-2	L-3	L-4
2/13/08 (Wed.)	59	63	60	64
2/14/08 (Thurs.)	57	64	61	68
2/15/08 (Fri.)	60	64	63	67
2/16/08 (Sat.)	56	62	61	65
2/17/08 (Sun.)	54	61	60	64
2/18/08 (Mon.)	57	64	60	65
2/19/08 (Tues.)	58	65	64	67

Note: Results rounded to nearest whole decibel.

The noise-monitoring results obtained at Location L-1 (the rear yard at 2712 Alcatraz) include some fairly high-noise-level events over the week-long survey, with the logger recording maximum noise levels exceeding 80 dBA at times. Since the noise monitoring location was fairly well shielded from street traffic noise, it is inferred that many of these high-noise events can be attributed to the Safeway site, including truck movements and activities at the loading dock area.

During the two-hour attended measurements at 2712 Alcatraz (Location L-1) and 3306 Claremont (Location L-3) on the afternoon of Tuesday, 2/19/08 no large Safeway trucks delivered goods at the loading dock. The maximum noise levels recorded during these measurements were 80 dBA at 2712 Alcatraz and 78 dBA at 3306 Claremont, due to a helicopter flyover. There was also a jet aircraft that produced maximum noise levels of 75 dBA at 2712 Alcatraz and 73 dBA at 3306 Claremont. Noise from breaking glass at the recycling center was quite noticeable at both locations, producing maximum noise levels of up to 73 dBA at 3306 Claremont and up to 70 dBA at 2712 Alcatraz.

Other noise sources observed during these attended measurements included the raising and lowering of the roll-up door at the Safeway loading dock, employees talking in the loading dock area, movement of shopping carts, opening and closing of car doors, cars starting, and vehicle movements in the parking lot. Noise from the Safeway site was more clearly audible at 2712 Alcatraz due to the lower ambient noise levels and its close proximity to the loading dock area. Noise from the Safeway site was generally less noticeable at 3306 Claremont due primarily to the masking provided by noise from Claremont Avenue traffic, although the recycling center noise was higher at this location.

Mechanical equipment noise from the roof of the existing Safeway store was also audible at the adjacent residential boundary. Wilson Ihrig & Associates measured a noise level of 68 dBA at the roof level boundary of the residential property at 3217 College Avenue adjacent to the roof-mounted air exhaust louvers (seen in the left foreground in Figure 4.6-3).

1. Loading dock at northeast corner of existing store (adjacent to residence at 2712 Alcatraz)

2. Existing Trash Compactor adjacent to Residential Property Boundary

Source: Wilson Ihrig

4-2-11

Noise Monitoring Locations Figure 4.6-2

3. Existing Recycling Center Adjacent to Claremont Avenue Entrance Near NE Corner of Site

4 Mechanical Equipment and Ventilation Louvers on Existing Store Roof

Source: Wilson Ihrig

4-2-11

Noise Monitoring Locations Figure 4.6-3

Figures B-29 through B-32 (in Appendix M) shows the hourly L_{90} (average minimum, or background) noise levels at each monitoring location over the full week-long survey. The background noise levels at L-1, L-2, and L-3 all fell to lows of around 35 dBA at night. The background noise levels at L-4 (on the roof of the existing Safeway store, overlooking College Avenue) fell to night-time levels of around 45 dBA.

4.6.2 Regulatory Setting

Federal, State, and local agencies regulate different aspects of environmental noise. Federal and State agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans; local noise ordinances establish standards and procedures for addressing specific noise sources and activities.

Local Plans, Policies and Regulations

City of Oakland General Plan

The Noise Element of the City of Oakland General Plan contains guidelines for determining the compatibility of various land uses with different noise environments (City of Oakland, 2005). The Noise Element recognizes that some land uses are more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. The City uses State noise guidelines for judging the compatibility between various land uses and their noise environments (City of Oakland, 2005). For institutional uses such as hospitals, nursing homes, schools, libraries, and churches, the guidelines indicate that a noise environment of 60 dBA Ldn or less is "normally acceptable," while a noise environment between 60 and 70 dBA Ldn is considered "conditionally acceptable" and 70 to 80 dBA Ldn is "normally unacceptable." Noise environments of greater than 80 dBA Ldn are considered "clearly unacceptable" for such uses. For commercial, business, and office uses, which are generally less noise-sensitive, a noise environment of 65 dBA Ldn or less is considered normally acceptable, while a noise environment between 65 and 75 dBA Ldn is considered conditionally acceptable.

In this context, "normally acceptable" is defined as satisfactory for the specific land use, assuming that normal conventional construction is used in buildings. "Conditionally acceptable" means that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventionally constructed buildings, with closed windows would normally suffice. "Normally unacceptable" means that new construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features must be included in the design.

The Noise Element also identifies the following maximum interior noise levels as generally acceptable for various common land uses:

- 45 dB: residential, hotels, motels, transient lodging, institutional (churches, hospitals, classrooms, libraries), movie theaters;
- 50 dB: professional offices, research and development, auditoria, meeting halls;
- 55 dB: retail, banks, restaurants, sports clubs; and
- 65 dB: manufacturing, warehousing.

Oakland's community noise regulations are contained in Chapter 17.120 (Performance Standards) of the Oakland Municipal Code. Section 17.120.050 (Noise) states that the noise level received by any legal residential activity, school, child-care, health care or nursing home, public open space, and similarly sensitive land use shall not exceed prescribed exterior limits. The residential standards are applied to the proposed project as they are the most conservative and if the project meets them, then the project impacts with respect to surrounding commercial uses would be less than significant. The residential limits are summarized in Table 4.6-2.

Table 4.6-2 City of Oakland Residential and Civic Noise Level Standards

Cumulative Number of Minutes in Either the Daytime or Nighttime One Hour Period	Daytime (7 am to 10 pm)	Nighttime (10 pm to 7 am)
20	60	45
10	65	50
5	70	55
1	75	60
0	80	65

Source: City of Oakland, 2009.

The Oakland Planning Code also states that the limits shall be reduced by 5 dBA for tonal noises (such as whines, screeches, or hums), for noise consisting primarily of speech and music, or for recurring impulse noise such as hammering or riveting. Planning Code Sections 17.120.050.I (regarding commercial refrigeration units) and J (regarding commercial exhaust systems) likely are also relevant. Municipal Code Section 8.18 (regarding nuisances) would also apply.

Temporary construction and demolition activities are not subject to the noise restrictions set forth above. However, per Municipal Code Chapter 17.120.050, these activities are required to abide by the noise level standards shown in Table 4.6-3. Short-term construction activities are those that last less than ten days while long-term construction activities are those that last ten days or more. Nighttime noise levels produced by any construction and demolition activity between weekday hours of seven PM and seven AM or between eight PM and nine AM on weekends and federal holidays shall not exceed the applicable noise level standards outlined in the above table (City of Oakland, 2009).

Table 4.6-3 City of Oakland Maximum Allowable Noise Level Standards from Construction Activities

Type of Activity	Receiving Land Use	Noise Level (dBA)	
		Weekdays (7 AM to 7 PM)	**Weekends (9 AM to 8 PM)**
Construction (Short-Term)	Residential / Commercial, Industrial	80 / 85	65 / 70
Construction (Long-Term)	Residential / Commercial, Industrial	65 / 70	55 / 60

Source: City of Oakland, 2009.

City of Oakland Standard Conditions of Approval and Uniformly Applied Development Standards Imposed as Standard Conditions of Approval

The City's Standard Conditions of Approval relevant to noise are listed below for reference. If the proposed project is approved by the City, then all applicable Standard Conditions of Approval would be adopted as conditions of approval and required of the project to help ensure less-than significant impacts to noise. The Standard Conditions of Approval are incorporated and required as part of the project, so they are not listed as mitigation measures. Standard Conditions of Approval applicable to potential noise impacts due to the project include:

NOI-1: Days/Hours of Construction Operation. *Ongoing throughout demolition, grading, and/or construction*. The project applicant shall require construction contractors to limit standard construction activities as follows:

a) Construction activities are limited to between 7:00 AM and 7:00 PM Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 AM and 4:00 AM Monday through Friday.

b) Any construction activity proposed to occur outside of the standard hours of 7:00 AM to 7:00 PM Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.

c) Construction activity shall not occur on Saturdays, with the following possible exceptions:

    i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.

ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.

d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.

e) No construction activity shall take place on Sundays or Federal holidays.

f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

g) Applicant shall use temporary power poles instead of generators where feasible.

NOI-2: Noise Control. *Ongoing throughout demolition, grading, and/or construction.* To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

b) Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.

d) If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.

NOI-3: Noise Complaint Procedures. *Ongoing throughout demolition, grading, and/or construction*. Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);

b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor’s telephone numbers (during regular construction hours and off-hours);

c) The designation of an on-site construction complaint and enforcement manager for the project;

d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and

e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

NOI-4: Interior Noise. *Prior to issuance of a building permit and Certificate of Occupancy.* If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e., windows, exterior doors, and walls), and/or other appropriate features/measures, shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval prior to issuance of building permit. Final recommendations for sound-rated assemblies, and/or other appropriate features/measures, would depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and

b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.

c) Prohibition of Z-duct construction.

NOI-5: Extreme Noise Generators. *Ongoing throughout demolition, grading, and/or construction.* To further reduce extreme noise generating construction impacts greater than 90 dBA, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation would be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of the following measures. These attenuation measures shall include as many of the following control strategies as feasible:

a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

b) Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example; and

e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.

NOI-6. Operational Noise-General. *Ongoing.* Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

4.6.3 Impacts and Mitigation Measures

Significance Criteria

The project would have a significant impact on the environment if it would:

1) Expose people to or generate noise levels in excess of standards established in the Oakland General Plan or applicable standards of other agencies (e.g., OSHA);
2) Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise;
3) Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed;
4) Violate the City of Oakland Noise Ordinance (Oakland Municipal Code Section 8.18.020) regarding nuisance of persistent construction-related noise;
5) Create a vibration not associated with motor vehicles, trains, or temporary construction or demolition work which is perceptible without instruments by the average person at or beyond any lot line containing the vibration-causing activity, except vibration-causing activities located in the M-40 zone or in the M-30 zone more than 400 feet from any legally occupied residential property (Oakland Planning Code Section 17.120.060);
6) Expose persons to or generate rail-related groundborne vibration in excess of standards established by the Federal Transit Administration (FTA);
7) Generate interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);
8) Result in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; If the cumulative increase in noise results in a 5 dBA permanent increase in ambient noise levels in the project vicinity above existing levels without the project (i.e., cumulative conditions including the proposed project compared to existing conditions), the project's contribution to the cumulative increase would be cumulative considerable and significant if it results in a 3 dBA permanent increase attributable to the project (i.e., cumulative conditions including the proposed project compared to cumulative conditions without the proposed project).
9) Conflict with land use compatibility guidelines for all specified land uses for determination of acceptability of noise after incorporation of all applicable Standard Conditions of Approval;
10) Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or
11) Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

In general, projects within the City of Oakland are considered to have a significant noise impact if they would violate the City of Oakland Noise Ordinance or result in a five dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Furthermore, projects that would create vibration not associated with motor vehicles, trains, or temporary construction or demolition work, which is perceptible without instruments by the average person at or beyond any lot line containing the vibration-causing activity, would be considered significant. Since the proposed project would not include any vibration-causing activity aside from that associated with construction and motor vehicles, it can be assumed that no impact would occur with regard to criterion 6).

The proposed project is not located within the vicinity of a private airstrip nor is it located within the land use plan area for Oakland Airport or any other airport. Therefore, impacts associated with criteria 10) and 11) are not discussed further in this EIR.

Impacts and Mitigation Measures

Impact NOI-1: Construction activities associated with the proposed project would temporarily generate noise levels that could conflict with standards established in the City noise ordinance. (Less than Significant)

The demolition/construction period for a development of this type could be at least a year, indicating the potential for adverse noise impacts on neighboring properties without effective noise-control provisions. The anticipated schedule would be:

- Demolition 3 weeks
- Grading/Excavation 5 weeks
- Foundation through Podium 2.5 months
- Building Shell and Safeway Store 40 weeks

Construction of the proposed project would result in temporary increases to ambient noise levels associated with operation of heavy duty construction equipment; pile driving has not been proposed. Demolition/construction noise sources would likely include diesel-powered mobile equipment (such as bulldozers, graders, front-end loaders, vibrating rollers, cranes, and material delivery trucks); air compressors; welding machines; jackhammers, power saws; power drills; angle grinders; and hand tools, such as hammers. Construction vibration sources would typically include vibration compactors, loaded, dump trucks, and bulldozers.

Table 4.6-4 lists heavy duty construction equipment that would likely be required as well as typical noise levels for each piece of equipment measured at 50 feet from the source. As shown, equipment noise levels in the vicinity of the construction sites would range from 80 dBA up to 88 dBA.

As discussed previously, noise from construction equipment generally attenuates (decreases) at a rate of 6.0 to 7.5 dBA per doubling of distance. Construction activities associated with the project could take place as close as 100 feet from the nearest existing sensitive receptors.

The highest construction noise and vibration exposures would likely be generated during excavation and earthmoving operations. Bulldozers, front-end loaders, excavators, backhoes, and graders would likely be involved during this phase of the project. The levels of noise emission associated with diesel-powered

Table 4.6-4 Typical Construction Equipment Noise and Vibration

Type of Equipment	Duty Cycle per 8 Hour Shift	Maximum Noise Level at 50 ft (dBA)	Maximum Vibration at 50 ft (in/sec PPV)
Backhoe	40%	78	0.031
Hand compactor	20%	83	0.012
Compactor	20%	83	0.074
Concrete Pump Truck	20%	81	NS
Crane	16%	81	NS
Dozer	40%	82	0.031
Dump Truck*	1%	77	0.027
Excavator	40%	81	NS
Front End Loader	40%	79	NS
Generator	50%	81	NS
Grader	40%	85	NS
Pickup Truck*	1%	75	NS
Roller	20%	80	0.074
Soil Mix Drill Rig	50%	80	0.071
Pile driver (impact)	20%	101	0.537
Pile driver (vib)	20%	101	0.260

Notes:
* based on 20-second passby, 15 trucks per shift
NS: Not a significant source of vibration

Source: FHWA Roadway Construction Noise Model, 2006, FTA 2006 and WIA.

excavation and construction machinery are largely dependent on the extent of exhaust silencing and whether the engine is housed within an acoustic enclosure. Noise emission levels and potential annoyance also depend on the condition of the equipment, the type of operation, its duration and the time of day.

The noise levels from diesel-powered excavation and construction equipment operating under maximum load near the closest residential boundaries (at 10 feet distance) would be approximately 14 dB higher than the levels shown in the above table, which would clearly exceed Oakland's 65 dBA daytime noise limit for long-term construction activities. Without mitigation, the buffer distance from noisy construction activities would typically be around 500 feet.

The vibration generated by construction activities at 10 feet from residential buildings would potentially exceed the recommended 0.3 in/sec PPV vibration impact criterion, and activities such as vibratory compaction should be conducted at least 20 feet from any residential building.

Summary

Implementation of Standard Conditions NOI-1, *Days/Hours of Construction Operation*, NOI-2, *Noise Control*, NOI-3, *Noise Complaint Procedures*, and NOI-5, *Extreme Noise Generators*, would reduce impacts from construction noise by limiting hours of construction activities, requiring best available noise control technology, and by requiring the project applicant and/or its contractors to notify local residents of construction activities and to track and respond to noise complaints. To specifically address impacts from extreme noise generating construction activities that may expose sensitive receptors to noise levels greater than 90 dBA, Lmax, the proposed project, to comply with part of the Standard Condition NOI-5, would be required to develop and submit for review and approval by the City and to implement a Site-specific Construction Noise Reduction Plan that would ensure that maximum feasible noise attenuation would be achieved. Implementation of Standard Conditions NOI-1 through NOI-3 and NOI-5 would reduce temporary noise nuisance impacts associated with construction to a less-than-significant level.

Mitigation: None required.

Impact NOI-2: Noise levels from project generated traffic would increase roadside ambient noise levels. (Less than Significant)

The new store would generate small changes in the traffic conditions, most of which would be small increases in traffic volume and some changes to lane configurations. The traffic study prepared by Fehr and Peers[96] indicates that the new store would typically increase traffic by up to 10 percent in the project vicinity. A 10 percent increase in traffic volume would theoretically produce a 0.4 dBA increase in traffic noise levels at a given receiver, assuming the same traffic mix and speed, well below the 5 dBA threshold of significance for permanent project noise increases. Therefore, impacts from the proposed project would be less than significant.

Mitigation: None required.

Impact NOI-3: Operational noise sources generated by HVAC equipment, emergency generators, proposed parking structures, and truck loading/unloading may impact nearby noise-sensitive receptors. (Less than Significant)

The proposed project would involve the replacement of the existing Safeway store with a new Safeway and eight additional small businesses in a new configuration with substantially different site design and architectural characteristics. The effects of these changes on operational noise levels in the vicinity of the site and, more particularly, at the neighboring residential properties, are discussed below.

Vehicle Movements in Service Area

Safeway reports that the existing store is supplied by an average of three large delivery trucks a day, arriving between 7:00 AM and 7:00 PM; and furthermore, that the frequency of these truck movements is unlikely to substantially increase once the new store is operational.

Based on measurements taken at other Safeway sites and the current truck-noise limits in California (80 dBA at 50 feet distance from the truck centerline, for trucks manufactured after 1988) noise levels of

96 Fehr and Peers, *College Avenue Safeway ADEIR*, dated June 2010

up to approximately 76 dBA could be expected at the rear facades of the adjoining homes along Alcatraz when the trucks are maneuvering on the surface parking space accessed on Claremont Avenue that is above the parking garage.. This would comply with the 80 dBA daytime limit in the Oakland Noise Ordinance for sporadic noises without additional noise control measures, and would not result in a significant noise impact. Because project-generated trucks would be in motion, they would not be subject to one of the lower standards. The new 7.5 feet high barrier along the north wall (proposed as part of the project) would partially shield the trucks and reduce truck noise on the order of 10 dB or more at ground level receivers, well below all local ordinances. This new, solid wall would provide more noise attenuation than the existing fences along the rear of these properties. For example, the existing rear fence at 2712 Alcatraz comprises wood slats in a chain mesh fence, which provides little, if any, sound attenuation.

The surface parking lot on Claremont Avenue above the parking garage would also provide a parking lot for employees. While the noise monitoring at the existing site did not specifically identify the sounds of employees using their cars, the employee cars using the outdoor parking space would be moving at slow speed and thus generating low noise levels on the order of 60 dBA or less at the property line, well below the applicable ordinances. Car doors slammed closed could generate noise levels on the order of 60 to 65 dBA at a distance of 50 feet. The 7.5-foot-high barrier along the north wall would reduce the sound from car doors on the order of 10 dBA, less reduction would be provided for cars further away from the property line, but the distance would also be greater. Noise from employee cars would be expected to comply with the 65 dBA nighttime noise limit. Therefore, impacts from the proposed project would be less than significant.

Parking Garage Noise

As noted above, most of the parking spaces for store customers would be in the new ground floor (College Avenue level) garage. The noise from the movement of shopping carts, opening and closing of car doors, cars starting, and vehicle movements in the basement garage would be contained within the garage, with little, if any, noise emanating towards the neighboring properties; this would be a substantial improvement from the existing surface-level parking lot.

However, the north wall of the parking garage would not be entirely solid, and some sound from the garage could emit to the adjoining residential properties through ventilation openings designed into the wall (though the impact of such noise on nearby residences would be less than significant). Although not required to address a CEQA impact, the following improvement measures are recommended to address this consideration:

Improvement Measure 1: To eliminate the potential for noise impact from the ventilation openings, acoustical louvers could be installed in these vent openings to reduce the transmission of garage sounds.

Improvement Measure 2: To further reduce the noise levels within the garage and further reduce noise emanating from the garage, the underside of the garage ceiling could be fully lined with spray-on thermal/acoustic insulation. This additional noise control measure would typically be provided on the garage ceiling directly below the store.

Noise from Automobile Traffic Entering/Leaving the Site

Automobile traffic arriving at the site would enter or leave the property at the new signalized intersection on Claremont Avenue or at the proposed entry/exit on College Avenue. The automobile traffic from Claremont Avenue would travel on a ramp down to the basement garage at slow speed (15-25 mph) and would potentially generate a noise level well below 60 dBA at a distance of 5 to 10 feet. Vehicles on the ramp would probably be about 5 to 10 feet from the property lines. of the residence at 3306 Claremont Avenue and the residences at 2724, 2720, and 2716 Alcatraz Avenue. The vehicle noise would also be shielded from the retaining structure and from the new sound wall, an approximately 15 dBA reduction. Thus, the net result would be that car traffic on the ramp would generate maximum noise levels or 45 dBA or less, which would comply with the most restrictive Oakland Noise Ordinance limit of 65 dBA at nighttime.

While noise from cars on the ramp would not result in a significant impact under CEQA, it could be further reduced through implementation of the following improvement measure:

Improvement Measure 3: As an added noise control measure, sound-absorptive material could be applied to the ramp walls to further reduce noise from vehicle movements on the ramp. Potential tire noise could be reduced by avoiding a polished (squeaky) concrete slab surface.

Loading Dock

The proposed new loading dock would be located slightly further from the boundary of the neighboring residential properties along Alcatraz Avenue than at present and would be at a similar elevation. More importantly, the loading dock area would be enclosed and roll-up doors would be provided at the eastern end of the area. The new loading dock would accommodate one Safeway truck and one vendor truck. Thus, the enclosure would serve to reduce noise from loading dock activities since under most circumstances delivery trucks would fit within the loading dock; on occasion, additional vendor trucks could be on-site, in which case those additional trucks would have to park in the service area lot. After delivery trucks have backed into the loading dock, the roll-up doors would be closed, with the result that the noise levels at the neighboring residential properties during truck unloading would be lower than at present. Therefore, impacts from the proposed project would be less than significant.

Trash Compactor

The trash compactor would be located in an enclosure (with roll-up doors) on the south side of the loading dock, further from the northern property boundary than the existing location. The trash compactor noise at the neighboring residential properties should be substantially lower than at present. Therefore, impacts from the proposed project would be less than significant.

Removal of Recycling Center

Safeway has indicated there would no longer be a free-standing recycling center at the proposed new store, thus removing an existing noise source.

Miscellaneous Operational Noise

Other sources of noise that can typically occur in the operation of a grocery store include garbage truck pickups and shopping cart cleaning. The project would move the shopping cart cleaning activities into the garage, which would reduce or eliminate the impact of that noise on the community. The noise from the garbage truck pickups would be reduced from the existing levels due to the new layout and sound wall. (The existing levels are potentially in the range of 80 to 88 dBA from trash-related activities as noted in the existing conditions section above). Thus, the new sound wall should reduce future noise from daytime trash pickup by at least 9 dBA, which would reduce trash pickup noise below the Oakland Noise Ordinance Limit of 80 dBA during the daytime. Nevertheless, while trash pickup activities are intermittent and of short duration and would not result in significant noise impacts, they have the potential to be annoying and result in neighbor complaints. While noise from this miscellaneous noise ramp would not result in a significant impact under CEQA, it could be further reduced through the following management practices:

Improvement Measure 4: Methods to reduce noise from shopping cart power washing would include conducting the washing activities within the enclosed loading dock area, or at the far end of the service deck, away from residential neighbors.

Improvement Measure 5: Methods to reduce noise or annoyance from garbage truck pickup activity would be to limit hours to 9 AM to 6 PM.

Mechanical Equipment Noise

The locations of the future roof-top mechanical equipment (air-conditioning units, refrigeration units, exhaust fans, and similar equipment) have been conceptually located, and operation of all such equipment would be subject to the City's noise ordinance standards. Noise levels from this equipment shall comply with the performance standards of Sections 17.120 and Section 8.18 of the Oakland Municipal Code. The applicable design standard would be 45 dBA at adjacent residences (taking into account all operational noise). Because the mechanical equipment must be designed and used in a manner that complies with these standards, the related noise impact to adjacent residences would not be significant.

Cumulative Noise Impacts

Impact NOI-4: Project traffic, in combination with cumulative traffic, could substantially increase traffic noise levels in the project area. (Less than Significant)

The project is expected to increase area noise from vehicular traffic by less than 3 dBA. Moreover, it is also expected to reduce noise impacts due to site circulation and operations (e.g., as noted above, garage parking, shielded rooftop mechanical equipment, enclosed trash compactor, and enclosed loading dock further from residents) as compared to the existing Safeway store, On balance, the project therefore is expected to result in similar noise levels for the future noise level (Year 2035).

The geographic area considered for cumulative noise analysis includes areas within close proximity to the project site and roadways examined in the transportation analysis. Longer-term noise from cumulative development (including past, present, existing, approved, pending, and reasonably foreseeable future development) in the area would primarily occur from motor vehicle traffic. Cumulative traffic noise levels in the project area were estimated using traffic data provided by Fehr and Peers. The combination of project and cumulative traffic would increase the traffic noise levels by up to 0.4 dBA along the analyzed roadway segments which would fall below the significance criteria of 5 dBA for a cumulative noise increase Thus, the project's contribution to the cumulative noise environment would be less than significant.

Noise impacts under cumulative conditions must consider other projects in the vicinity that could contribute a significant cumulative impact on sensitive receptors. Two types of noise impacts would occur during demolition and construction phases for both the proposed and cumulative projects. The first is the increase in traffic flow on local streets associated with the transport of workers, equipment, and materials to and from the project sites. Although one or more projects may result in increases in traffic volumes on the same roadway segments (such as along Claremont Avenue), these increases would be expected to be minimal (fractions of the existing volume) and would result in a less-than-significant impact on sensitive receptors in the vicinity.[97]

The second type of noise impact is related to the noise generated by heavy equipment operating on the project site. Demolition and site preparation phases are typically the loudest phases of construction due to the types of equipment used. The worst case combined noise level during this phase of construction would be approximately 88 dBA Lmax at a distance of 50 feet from an active construction area. There are no identified projects under construction or planned within 1,000 feet of the proposed project and it is not anticipated there would be cumulative construction noise impacts in the project area., Thus cumulative construction noise impacts would be considered less-than-significant.

Moreover, potential impacts from construction noise simultaneously occurring at two or more sites, including drilling for piles, would be reduced with implementation of the City's Days/Hours of Construction Operation, and Noise Control Noise Complaint Procedures, and Pile Driving and Other Extreme Noise generators Standard Conditions of Approval (see NOI-1, NOI-2, NOI-3 and NOI-5). Compliance with the conditions of approval applicable to construction hours of operation, noise control, noise complaint procedures, and pile driving and other extreme noise generators, would ensure that all projects on the cumulative project list comply with the City's Noise Ordinance. The City's Standard and Uniformly Applied Conditions of Approval are included as part of the project.

Mitigation: None required.

[97] A traffic increase of 100% would cause a noise increase of 3 dBA. A 10% volume increase would cause a noise increase of less than 1 dBA, and a 50% volume increase would cause a 1.7 dBA noise increase.

CHAPTER 5
Alternatives

5.1 Criteria for Selecting Alternatives

CEQA requires that the EIR compare the effects of a "reasonable range of alternatives" to the effects of the project. The alternatives selected for comparison should attain most of the basic objectives of the project and avoid or substantially lessen one or more significant effects of the project (CEQA Guidelines Section 15126.6). The "range of alternatives" is governed by the "rule of reason" which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation (CEQA Guidelines Section 15126.6[f]). CEQA generally defines "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors.

The alternatives addressed in this EIR were selected based on the following factors:

1. The extent to which the alternative would accomplish most of the basic objectives of the project (identified in Chapter 1);
2. The extent to which an alternative contributes to a "reasonable range" of alternatives necessary to permit a reasoned choice;
3. The feasibility of the alternative, taking into account the consistency with applicable plans and zoning regulations, site suitability, access, and other factors;
4. The extent to which the alternative would avoid or lessen any of the identified significant environmental effects of the project (discussed throughout Chapter 4); and
5. The requirement of the CEQA Guidelines to consider a no-project alternative and to identify an environmentally superior alternative in addition to the no-project alternative (CEQA Guidelines, Section 15126.6(e)).

5.2 Significant Project Impacts

To determine alternatives that would avoid or lessen any of the identified significant environmental impacts of the project, the significant impacts of the project must be considered. Impacts that are not mitigated to a less-than-significant level are considered "significant and unavoidable" ("SU"). The SU impacts of the proposed project that are evaluated in this Alternatives chapter are listed below:

Traffic and Transportation:

1. (Impact TRANS-1) – Ashby Avenue/College Avenue. Under existing plus project conditions, the project would contribute to LOS E operations and increase the average intersection delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the volume to capacity (v/c) ratio by more than 0.01 during the Saturday peak hour. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley and Caltrans; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
2. (Impact TRANS-2) – Alcatraz Avenue/College Avenue. Under existing plus project conditions, the proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
3. (Impact TRANS-3) – Alcatraz Avenue/Claremont Avenue. Under existing plus project conditions, the proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue intersection which would meet the peak hour signal warrant. The EIR conservatively treats this as a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection and/or because the City may determine the mitigation measure to be infeasible.
4. (Impact TRANS-5) – Ashby Avenue/College Avenue. Under the 2015 scenario, the project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley and Caltrans; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
5. (Impact TRANS-6) – Alcatraz Avenue/College Avenue. Under the 2015 scenario, the proposed project would contribute to LOS F operations during the weekday PM peak hour and degrade the intersection operations from LOS D to E in the Saturday PM peak hour. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley and Caltrans; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
6. (Impact TRANS-7) – Alcatraz Avenue/Claremont Avenue. Under the 2015 scenario the project would contribute to LOS F operation at the side-street stop sign controlled eastbound approach. The EIR conservatively treats this as a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection and/or because the City may determine the mitigation measure to be infeasible.
7. (Impact TRANS-9) – Ashby Avenue/College Avenue. Under the 2035 scenario, the proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley and Caltrans; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
8. (Impact TRANS-10) – Ashby Avenue/Claremont Avenue. Under the 2035 scenario, the proposed project would contribute to LOS F operations during the weekday PM peak hour. This is a significant

impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.

9. (Impact TRANS-11) – Alcatraz Avenue/College Avenue. Under the 2035 scenario the proposed project would contribute to LOS F operations during the weekday PM peak hour and degrade the intersection operations from LOS D to E in the Saturday PM peak hour. This is a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley and Caltrans; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection.
10. (Impact TRANS-12) – Alcatraz Avenue/Claremont Avenue. Under the 2035 scenario the project would contribute to LOS F operation at the side-street stop sign controlled eastbound approach. The EIR conservatively treats this as a significant impact based on Berkeley's criteria. Mitigation would have to be approved by Berkeley; the impact is judged Significant and Unavoidable because the City of Oakland does not have jurisdiction over the intersection and/or because the City may determine the mitigation measure to be infeasible.
11. (Impact TRANS-13) – 63rd Street/College Avenue. Under the 2035 scenario the project would add more than 10 trips, which would meet the peak hour signal warrant. This is a significant impactbased on the City of Oakland's significance criteria. While mitigation measures have been identified that, if implemented, would mitigate any significant impacts at this intersection, this impact is being conservatively assumed to be significant and unavoidable. Because the mitigation would create a signalized intersection on a residential side street and would provide direct access to the College Avenue entrance for the site, it could create negative increases in traffic in the residential neighborhood along 63rd Street. This could result in undesirable quality of life and other negative effects that, while not significant impacts under CEQA, may result in a determination that the mitigation is infeasible.

The evaluation of alternatives undertaken in this chapter quantifies the extent to which the respective alternatives would reduce, avoid or add to the traffic, air quality, GHG, noise, land use and visual impacts relative to the proposed project.

5.3 Alternatives Considered

Project Alternatives

The City of Oakland, as Lead Agency, has specified four project alternatives plus the required No Project Alternative for evaluation in this EIR. This range of alternatives was developed based on applicable planning and zoning regulations, comments from the public received at the Planning Commission meeting on the Initial Study, and the need to consider feasible alternatives with the potential to avoid or lessen significant project impacts. Based on these considerations, the following alternatives to the proposed project have been developed for evaluation in this EIR:

- 1a. Mixed-use alternative with regular apartments – This alternative assumes that the proposed project would also include multi-family dwelling units. Access would be provided through driveways as proposed by the project.
- 1b. Mixed-use alternative with senior housing – This alternative assumes that the proposed project would also include senior housing. Access would be provided through driveways as proposed by the project.

2. A 40,000-square-foot reduced-size project – This alternative assumes that the proposed Safeway store would be reduced to eliminate project impacts. Access would be provided through driveways as proposed by the project.

2a. A 35,750-square-foot reduced-size project – This alternative assumes that the proposed Safeway store would be reduced, about 5,000 square feet of commercial space and 5,000 square feet of office space and a 750 square foot café/deli would be included. Access would be provided through two driveways on Claremont Avenue and a mid-block driveway on College Avenue.

2b. A 25,250-square-foot reduced-size project – This alternative assumes that the proposed Safeway store would be reduced and would also include a small café/deli along College Avenue. Access would be provided through two driveways on Claremont Avenue and a mid-block driveway on College Avenue.

3. Full project with no curb-cut on College Avenue – This alternative assumes that the full project would be developed but it would not have vehicular access to and from College Avenue. All vehicular access would be through Claremont Avenue.

4. Full project with inbound only driveway on College Avenue – This alternative assumes that the full project would be developed but the driveway on College Avenue would only provide inbound access. All outbound access would be through Claremont Avenue.

5. No Project Alternative.

Table 5-1, on page 5-5, compares the characteristics of the proposed project and project alternatives in tabular form.

Alternatives Considered and Rejected

In addition to the alternatives selected for evaluation in this EIR, an alternative site location was reviewed and rejected for further review because it was considered infeasible. The specific reasons for rejecting such an alternative include:

1. An Alternative Site Location. Relocating the project to an alternative site is considered infeasible because it would involve closing the existing Safeway store, leaving a relatively large vacant site in a neighborhood where alternative sites of similar size and accessibility are essentially unavailable. The existing store has been operating on this site for decades and is a well-established land use that provides convenient food shopping for residents in the surrounding neighborhoods. Furthermore, the Safeway company owns the existing site and does not control other sites in the vicinity. In addition, grocery stores are an appropriate and permissible land use on this site, as established by the Oakland General Plan and Oakland zoning regulations, and an alternative involving relocation of this business would not preclude the development of another grocery store on the site. For these reasons, the consideration of an Alternative Site Location was considered unfeasible and was rejected for evaluation in this EIR.

TABLE 5-1
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES CHARACTERISTICS

Description	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
Number of Buildings	1	1	1	1	2	1	1	1	2 (grocery and gas station)
Number of Stories	2	3	3	1	2	2	2	2	1
Grocery Square Footage	51,510	45,000	30,000	40,000	35,750	24,500	51,510	51,510	24,260
Retail / Restaurant Square Footage	10,657	10,750	11,820	0	5,000	750	10,657	10,657	1,120 (associa-ted with gas station)
Office Square Footage	0	0	0	0	5,000	0	0	0	0
Residential Units	0	40	54	0	0	0	0	0	0
TRANSPORTATION GRID IMPROVEMENTS									
Driveways (on College Avenue / on Claremont Avenue)	1 / 3	1 / 2	1 / 3	N/A*	1 / 2	1 / 2	0 / 3	1 / 3	4 / 5
Signalize the Claremont Avenue/Mystic Street/Safeway Driveway intersection.	Y	Y	Y	N/A*	Y	Y	Y	Y	N
Provide left-turn lanes on northbound and southbound College Avenue into 63rd Street and the Safeway driveway. The new left-turn lanes are accommodated by widening College Avenue on the east side.	Y	Y	Y	N/A*	N	N	N	N	N
Provide pedestrian bulb-outs on the east side of the 63rd Street/Safeway Driveway/College Avenue intersection on both the north and south crosswalks across College Avenue.	Y	Y	Y	N/A*	N	N	Y	Y	N

TABLE 5-1
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES CHARACTERISTICS

Description	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
Provide a pedestrian bulb-out on the project corner of the College Avenue/Claremont Avenue intersection.	Y	Y	Y	N/A*	N	N	Y	Y	N
Provide a bus bulb-out on northbound College Avenue just north of Claremont Avenue and move the existing bus stop from south of Claremont Avenue to north of Claremont Avenue.	Y	Y	Y	N/A*	N	N	Y	Y	N
Provide a short pedestrian only street between College Avenue and Claremont Avenue near the south end of the project site with fronting retail uses.	Y	N	N	N/A*	N	N	Y	Y	N

* Detailed plans not developed for this alternative.

5.4 Description of Alternatives

5.4.1 Mixed-Use Alternatives

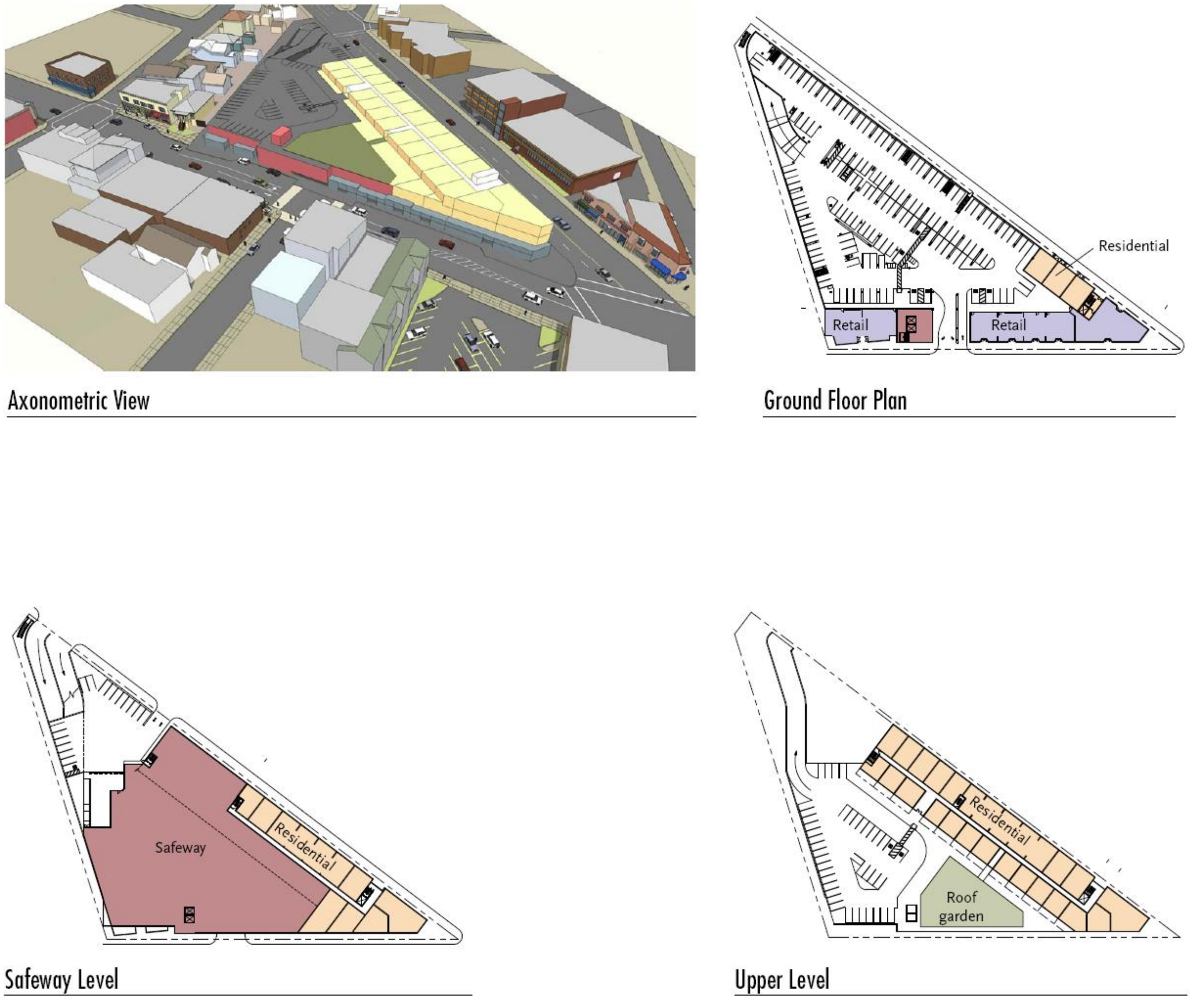
Alternative 1a – Mixed-use Alternative with Regular Apartments

Alternative 1a, which is illustrated in Figure 5.1, calls for the replacement of the existing Safeway store with a new 45,000 square feet store, to be built on the second floor, above parking and a row of seven small commercial shops along the College Avenue frontage. Compared with the proposed project, this alternative would add a new land use, housing, to the development. The City zoning would allow a total of 40 units with permitted open space and parking to be constructed along the Claremont Avenue frontage, with 3 unit on the ground level, 11 units on the second level and 26 units on a third level. There would be a mix of 1-, 2-, and 3-bedroom units. Under this Alternative the supermarket would be larger than the existing Safeway, but 5,400 square feet smaller than the supermarket proposed in the project.

The commercial shop space would be similar to the proposed project: seven spaces with 10,750 square feet as contrasted to eight spaces and 10,657 square feet.

Some of the primary project objectives include to: provide enhanced pedestrian amenities and to establish the College/Claremont area as an attractive and inviting setting for pedestrian shopping. Alternative 1a would not achieve these objectives to the same degree as the project because the proposed walkthrough from College to Claremont would be elimated under this alternative. Further, the development of housing is not one of the project objectives.

However, some of the other project objectives could be accomplished with this alternative including those related to the provision of new commercial spaces, more parking, and revitalization of the College/Claremont intersection. See Project Objectives in Chapter 1, Project Description.



Source: Lowney Architecture

4-1-11

Alternative 1A—Mixed-use Alternative with Market Rate Apartments Figure 5.1

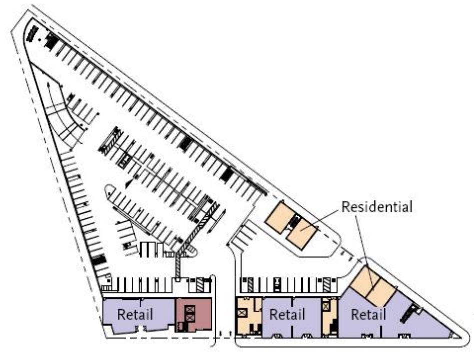
Alternative 1b – Mixed-use Alternative with Senior Housing

Alternative 1b, which is illustrated in Figure 5.2, is also a mixed-use alternative with a supermarket, small commercial spaces, and housing. Under this Alternative, the new Safeway would have about 30,000 square feet, 20 percent larger than the existing store, but 40 percent smaller than the store proposed in the project. There would be six commercial spaces, occupying 11,820 square feet, slightly more than the proposed project, although average size of the shops would be larger, as the project includes eight storefront spaces. This Alternative calls for a total of 54 senior housing units. Four would be located on the ground floor along Claremont Avenue and 50 would be developed on the second and third floors, along both the College and Claremont frontages. There would be a mix of 1- and 2 bedroom units.

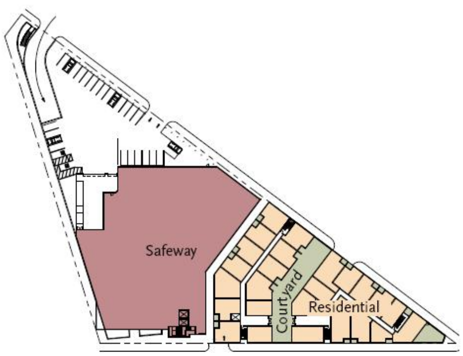
Alternative 1b would fall far short of accomplishing several of the primary objectives of the applicant, which include to: replace the existing 1960s suburban style development with a modern, urban design that de-emphasizes the prominence of surface-level parking; construct a new Safeway store sufficient in size to offer a more comprehensive range of commercial services and products to Safeway's customers, including an on-site, "from scratch" bakery, a pharmacy, expanded floral offerings, an expanded deli (including warm food table, and prepared catering food items), a "service" meat and seafood service (as compared to the pre-packaged items currently available), and a greatly expanded produce section; and create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of customers. Like Alternative 1a, Alternative 1b would not achieve certain project objectives of providing enhanced pedestrian amenities to the same degree as the project since the proposed walkthrough from College to Claremont would be eliminated under this alternative. It would also provide a lower level of employment than the proposed project due to the reduced size of the grocery store. Further, the development of housing is also not one of the project objectives.

However, some of the other project objectives could be accomplished with this alternative including those related to the provision of new commercial spaces, more parking, and revitalization of the College/Claremont intersection. See Project Objectives in Chapter 1, Project Description.

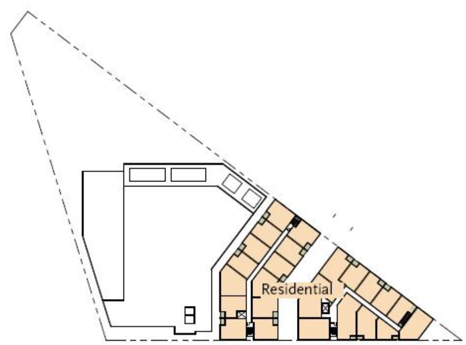
Axonometric View



Ground Floor Plan



Safeway Level



Upper Level

Source: Lowney Architecture

4-1-11

Alternative 1B – Mixed-use Alternative with Senior Housing Figure 5.2

5.4.2 Reduced Size Alternatives

Alternative 2 – 40,000-Square-Foot Reduced Size Project

This alternative assumes that the proposed Safeway store would be reduced in size to eliminate at least one significant and unavoidable transportation impact. All other aspects of the project, including access driveways, would be the same as the proposed project.

The project analysis identified a number of significant and unavoidable traffic impacts because the affected intersections are in the City of Berkeley, outside the jurisdiction of City of Oakland, which is the lead agency on this project. Impact TRANS-10, at the Ashby Avenue/Claremont Avenue intersection, is most likely to be reduced to a less-than-significant level by reducing the size of the project.

The proposed project would add 14 weekday PM peak hour trips to this intersection, which corresponds to less than 0.4 percent of the total weekday PM peak hour intersection volume under 2035 Plus Project conditions. However, this significant and unavoidable impact could be reduced to a less-than-significant level by reducing the trips generated by the project by about 57 percent (This would reduce project generated trips at the Ashby Avenue/Claremont Avenue intersection from 14 to 6 trips during the weekday PM peak hour). Alternative 2 was specifically developed to achieve this goal. Accomplishing this would require the elimination of the retail and restaurant components of the proposed project and a reduction in the size of the proposed Safeway store from 51,510 square feet to 40,000 square feet. Considering that this alternative would increase the size of the existing store by about 15,000 square feet, it is likely that this alternative would include remodeling the existing store and reconfiguring the existing parking spaces, including through roof parking, rather than constructing a new store with structured parking.

Alternative 2 would fall short of accomplishing several of the of the primary objectives of the applicant, which include to: replace the existing 1960s suburban style development with a modern, urban design that de-emphasizes the prominence of surface-level parking; create a mixed-use retail development project that promotes pedestrian activity and comparison shopping at the College/Claremont corner; provide more street-front retail opportunities similar in scope and scale to the retail frontage on College Avenue; construct a new Safeway store sufficient in size to offer a more comprehensive range of commercial services and products to Safeway's customers, including an on-site, "from scratch" bakery, a pharmacy, expanded floral offerings, an expanded deli (including warm food table, and prepared catering food items), a "service" meat and seafood service (as compared to the pre-packaged items currently available), and a greatly expanded produce section; and create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of customers. Some of the other project objectives could be accomplished with this alternative, although it would provide a lower level of employment than would the proposed project due to the reduced size of the grocery store and the elimination of the retail and restaurant components of the proposed project.

Alternative 2a – 35,750-Square-Foot Reduced Size Project

Alternative 2a would consist of a new one-story 25,000-square-foot store with rooftop parking and loading docks along Claremont Avenue; a 10,000-square-foot building on College Avenue that would contain 5,000 square feet of ground floor commercial and 5,000 square feet of office on the second floor; and a 750-square-foot café/deli building and plaza on the south corner of the project site (Figure 5-2A). The alternative would feature surface parking and landscaping. Access would be provided through two driveways on Claremont Avenue and a driveway on College Avenue opposite 63rd Street.

Alternative 2a would have fewer impacts than the proposed project but would not meet several of the primary objectives of the applicant, which include to construct a new Safeway store sufficient in size to offer a more comprehensive range of commercial services and products to Safeway's customers, including an on-site, "from scratch" bakery, a pharmacy, expanded floral offerings, an expanded deli (including warm food table, and prepared catering food items), a "service" meat and seafood service (as compared to the pre-packaged items currently available), and a greatly expanded produce section; and create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of customers. Some of the other project objectives could be accomplished with this alternative, although it would provide a lower level of employment than would the proposed project due to the reduced size of the grocery store. It would also not achieve to the same level as the project the objectives of creating amixed-use retail development project that promotes pedestrian activity and comparison shopping at the College/Claremont corner or providing more street-front retail opportunities similar in scope and scale to the retail frontage on College Avenue.

Alternative 2b – 27,250-Square-Foot Reduced Size Project

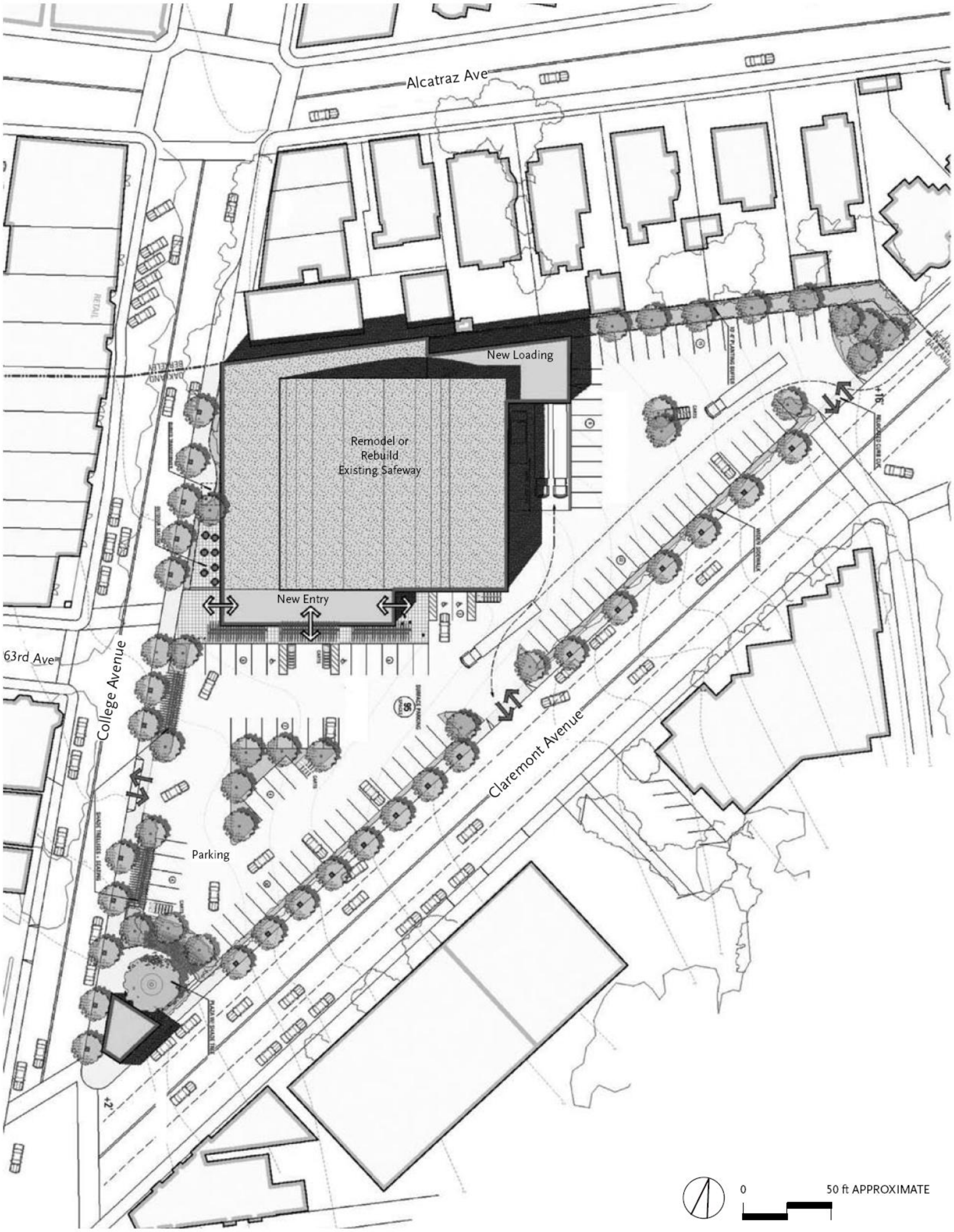
Alternative 2b would expand and renovate the existing building, add a 2,000-square-foot loading dock, and a 750-square-foot café/deli building and plaza on the south corner of the project site (Figure 5-2B). The alternative would feature surface parking and landscaping. Access would be provided through two driveways on Claremont Avenue and a mid-block driveway on College Avenue.

Alternative 2b would have fewer impacts than the proposed project but would not meet several of the primary project objectives, which include to: replace the existing 1960s suburban style development with a modern, urban design that de-emphasizes the prominence of surface-level parking; construct a new Safeway store sufficient in size to offer a more comprehensive range of commercial services and products to Safeway's customers , including an on-site, "from scratch" bakery, a pharmacy, expanded floral offerings, an expanded deli (including warm food table, and prepared catering food items), a "service" meat and seafood service (as compared to the pre-packaged items currently available), and a greatly expanded produce section; create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of customers; create a mixed-use retail development project that promotes pedestrian activity and comparison shopping at the College/Claremont corner; and provide more street-front retail opportunities similar in scope and scale to the retail frontage on College Avenue. Some of the other project objectives could be accomplished with this alternative, although it would provide a lower level of employment than would the proposed project due to the reduced size of the grocery store and the elimination of the retail and restaurant components of the proposed project.

Source: Friends and Neighbors of College Avenue

6-24-11

Alternative 2a Site Plan Figure 5-2A



Source: Friends and Neighbors of College Avenue

6-24-11

Alternative 2b Site Plan Figure 5-2B

5.4.3 Alternative 3 – Full Project with No Curb Cut on College Avenue

This alternative assumes that the full project consisting of a 51,510–square-foot Safeway store and 10,657 square feet of commercial would be developed. However, the project would not have vehicular access to and from College Avenue under this alternative. This alternative would result in a continuous uninterrupted sidewalk along the project frontage on College Avenue and eliminate potential conflicts between pedestrians on the sidewalk and automobiles entering or exiting the driveway.

While this alternative would generate the same number of vehicular trips as the proposed project, all vehicular access would be through Claremont Avenue, and traffic patterns around the site would be modified. In order to evaluate this alternative, a detailed traffic operations analysis of it was prepared and is presented below.

While Alternative 3 would accomplish most of the project's stated objectives, it would not accomplish the objective of retaining an important vehicular access point from College Avenue.

5.4.4 Alternative 4 – Full Project with Inbound Only Driveway on College Avenue

This alternative assumes that the full project consisting of a 51,510-square-foot Safeway store and 10,657 square feet of commercial would be developed. However, the project would have inbound only access on College Avenue. Vehicles from northbound and southbound College Avenue would be able to turn into the project driveway on College Avenue opposite 63rd Street. However, vehicles would not be able to exit the project site to College Avenue. All vehicles would exit the site to Claremont Avenue.

While this alternative would generate the same number of vehicular trips as the proposed project, all outbound vehicular access would be through Claremont Avenue, and traffic patterns around the site would be modified. In order to evaluate this alternative, a detailed traffic operations analysis of it was prepared and is presented below.

While Alternative 4 would accomplish most of the project's stated objectives, it would not accomplish the objective of retaining an important vehicular access point from College Avenue to the same degree as the proposed project since it would only allow inbound traffic on College Avenue.

5.4.5 Alternative 5 – No Project Alternative

Under this scenario, the project site would not be redeveloped. It is assumed that current Safeway store and parking lot would remain as they are and no aspect of the proposed project would be constructed. It is also assumed that the Safeway store would remain open for the foreseeable future, providing groceries and related products for its customers.

With the No Project Alternative the former gas station on the site would not be demolished. Although it was closed in late 2009, and remains unused and inaccessible behind a fence, the basic land use would not be changed. However, this Alternative would not preclude it from being re-opened to provide an economic return for the owners.

The No Project Alternative would not accomplish any of the project objectives.

5.5 Impacts of Alternatives

The potential impacts of the respective Alternatives relative to the impacts of the proposed project, with emphasis on the Significant and Unavoidable impacts, are evaluated in this section.

5.5.1 Mixed-use Alternatives

Alternative 1a – Mixed-Use Alternative with Apartments

Traffic Impacts. The auto trip generation estimates for Alternative 1a are shown below in Table 5-2.

Table 5-2 Alternative 1a – Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Alternative 1a Store	850[2]	45.00 ksf	270	260	530	249	239	488
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*85*	*82*	*167*	*115*	*110*	*225*
Pass-By Vehicles (36%)[3]			-30	-30	-60	-40	-40	-80
Net New Safeway Trips			***55***	***52***	***107***	***75***	***70***	***145***
Specialty Retail	814[4]	10.75 ksf	21	26	47	21	26	47
Apartment	220[5]	40 du	26	14	40	11	11	22
Total Net New Alternative Trips			***102***	***92***	***194***	***107***	***107***	***214***
Total Net New Original Project Trips			***102***	***95***	***197***	***133***	***125***	***258***
Difference			***0***	***-3***	***-3***	***-26***	***-18***	***-44***

Notes:

1. ksf = 1,000-square feet; du = Dwelling Unit
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%
   Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE *Trip Generation Handbook* (2nd Edition) average pass-by rate for supermarket
4. *ITE* Trip generation Equation Used:
   PM: T = 2.4(x) + 21.48; Enter = 44%, Exit = 56%
   Saturday: Used the PM equation since Saturday peak hour data was not available
5. *ITE* Trip generation Equation Used:
   PM: T = 0.55 (x); + 17.65; Enter = 65%, Exit = 35%
   Saturday: T = 0.52 (x); Enter = 50%, Exit = 50%

Source: *Trip Generation Manual* (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Alternative 1a would generate three fewer trips than the project during the weekday PM peak hour and 44 fewer trips during the Saturday PM peak hour. This modest change in trip generation would be expected to result in similar impacts as the proposed project. Alternative 1a would most likely continue to cause the same significant unavoidable transportation-related impacts.

Air Quality. The operational emissions from Alternative 1a would be approximately the same as with the proposed project. The increase in emissions of all criteria pollutants (ROG, NO_x, PM_{10} and $PM_{2.5}$) would be well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Like the proposed project, this alternative would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) from sensitive receptors, and would be mitigated to a less-than-significant level.

Greenhouse Gases. With Alternative 1a the operational emissions of GHGs would be reduced by approximately 10 percent relative to the proposed project's less-than-significant impacts. Alternative 1a's GHG emissions would be a less-than-significant impact. Construction period GHG emissions would be somewhat greater than for the proposed project, but would not exceed applicable standards and would be less-than-significant.

Noise Impacts. Like the proposed project, this Alternative would place the new Safeway store and parking structure 10 feet from the northerly property line, which forms a common boundary with a residential neighborhood, the most noise sensitive land use surrounding the site. This would result in several beneficial impacts relative to existing conditions, including the reduction in noise levels associated with the loading docks, trash compactors, recycling, and parking lot noise. Noise impacts from autos entering and leaving the site, rooftop mechanical equipment, and other store operations would be similar to those of the proposed project and could be addressed with mitigation.

This alternative would place 40 units of new housing along Claremont Avenue, which has relatively high traffic volumes and is a noise source. Additional Standard Conditions of Approval would be applied in this scenario to ensure that the City's interior noise standards would be met. Mitigation of this type is routine for new urban infill housingwhich would successfully reduce the traffic noise impacts to a less-than-significant level.

The addition of the housing would result in a larger project that would likely require a longer constructionperiod, with parallel increase in the potential for exposure to construction noise. The same Standard Conditions of Approval relating to construction noise impacts would have to be implemented in the same manner as for the proposed project. In summary, the noise impacts of this project would be similar to of the proposed project, augmented by the need toincorporate the additional Standard Conditions of Approval relating to interior nois e for the housing component.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts, nor would this Alternative. The Mixed Use Alternative would add a major housing component to the mix of land uses proposed for the site. Housing is acceptable in the applicable Neighborhood Center Mixed Use classification of the Oakland General Plan's Land Use and Transportation Element, and also in the C-31 Zoning District regulations of the Oakland Planning code. The addition of the housing would create a denser, bulkier, and generally taller scale of development on the site, but the level of development called for in this Alternative could be accomplished within the allowable building limits, which permit a

FAR of up to 4.0 and a maximum height of 35 feet. As with the proposed project, Conditional Use Permits, possibly variances, and related zoning approvals by the Oakland Planning Commission, which has broad discretion with respect to the design details, would be required.

As with the proposed project, this Alternative would not result in adverse impacts with respect to community integrity. This Alternative's potential for conflicts with adjacent land uses (judged to have less-than-significant impacts) would be essentially the same as for the proposed project, as the design and layout of structures along the northern boundary adjacent to existing residences, is much like the design for the proposed project.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts, nor would this Alternative. This Alternative would primarily be distinguished from the proposed project by the addition of the housing levels along the Claremont Avenue frontage. While this is an area where no structures currently exist, and this Alternative would call for taller and bulkier development than the project (3 floors instead of 2) at this location, the visual change would not be out of scale, considering the existing office building across Claremont Avenue. The site is in an urban context, with commercial and mixed-use development on all corners of the Claremont/College Avenue intersection, and, as noted above, this Alternative could be developed within the allowable FAR and height limits. There would be a visual transformation, but not a visual degradation, relative to existing conditions. The visual impacts of this alternative, like the project, would be classified as less-than-significant.

Alternative 1b – Mixed-Use Alternative with Senior Housing.

Traffic Impacts. With the smaller supermarket and the inclusion of senior housing, which has lower trip generation rates than standard housing, Alternative 1b would generate 105 fewer trips than the project during the weekday PM peak hour and 151 fewer trips during the Saturday PM peak hour (see Table 5-3). As a result, Alternative 1b would most likely cause fewer significant impacts than the proposed project. However, it would most likely continue to cause some significant unavoidable transportation-related impacts. The magnitude of these impacts would be reduced compared to the proposed project; however, Impacts TRANS-1, -2, -3, -5, -6, -7, -9, -10, -11, and -12 would not be reclassified as they would all still require mitigation that is beyond the jurisdiction of the City of Oakland. This alternative would eliminate Impact TRANS-13 at the 63rd Street/College Avenue intersection.

Air Quality. The operational emissions from Alternative 1b would be less than half as much as for the proposed project, primarily because the net increase in vehicle trips generated would be reduced by 58%. As with the proposed project, the increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10} and $PM_{2.5}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 1b (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) from sensitive receptors, and would be mitigated to a less-than-significant level.

Table 5-3 Alternative 1b – Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Alternative 1b Store	850[2]	30.00 ksf	211	203	414	166	160	326
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*26*	*25*	*51*	*32*	*31*	*63*
Pass-By Vehicles (36%)[3]			-9	-9	-18	-11	-11	-22
Net New Safeway Trips			***17***	***16***	***33***	***21***	***20***	***41***
Specialty Retail	814[4]	11.82 ksf	22	28	50	22	28	50
Senior Housing	252[5]	54 du	5	4	9	8	8	16
Total Net New Alternative Trips			***44***	***48***	***92***	***51***	***56***	***107***
Total Net New Original Project Trips			***102***	***95***	***197***	***133***	***125***	***258***
Difference			***-58***	***-47***	***-105***	***-82***	***-69***	***-151***

Notes:

1. ksf = 1,000-square feet; du = Dwelling Unit
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%, Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE *Trip Generation Handbook* (2nd Edition) average pass-by rate for supermarket
4. *ITE* Trip generation Equation Used:
   PM: T = 2.4(x) + 21.48; Enter = 44%, Exit = 56%, Saturday: Used the PM equation since Saturday peak hour data was not available
5. *ITE* Trip generation Equation Used:
   PM: T = 0.16 (x); + 17.65; Enter = 60%, Exit = 40%, Saturday: T = 0.30 (x); Enter = 50%, Exit = 50%

Source: *Trip Generation Manual* (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Greenhouse Gases. With Alternative 1b the operational emissions of GHGs would be reduced by approximately 35 percent relative to the proposed project, and would be below the City's threshold of significance (1,100 MTCO2E). Alternative 1b's GHG impacts would be less than significant. Construction period GHG emissions would be somewhat greater than for the proposed project, but would not exceed applicable standards and would be less than significant.

Noise Impacts. Like the proposed project, and Alternative 1a, this Alternative would place the new Safeway store and parking structure ten feet from the northerly property line, which forms a common boundary with a residential neighborhood, the most noise sensitive land use surrounding the site. This would result in several beneficial impacts relative to existing conditions, including the reduction in noise levels associated with the loading docks, trash compactors, recycling, and parking lot noise. Noise impacts from autos entering and leaving the site, rooftop mechanical equipment, and other store operations would be similar to those of the proposed project and could be addressed with mitigation.

This alternative would place 54 units of new housing in the southerly half of the site, along both Claremont and College Avenues, both of which carry relatively high traffic volumes and are a noise source. Additional Standard Conditions of Approval would be applied in this scenario to ensure that the City's interior noise standards would be met, which would successfully reduce the traffic noise impacts to a less-than-significant level.

The addition of the housing would result in a larger project that would likely require a longer constructionperiod, with parallel increase in the potential for exposure to construction noise. The same Standard Conditions of Approval relating to construction noise impacts would have to be implemented in the same manner as for the proposed project. In summary, the noise impacts of this project would be similar to of the proposed project, augmented by the need toincorporate the additional Standard Conditions of Approval relating to interior noise for the housing component.

Land Use Impacts. Like Alternative 1a, Alternative 1b would add a major housing component to the mix of land uses proposed for the site. As noted, housing is acceptable in the applicable General Plan and zoning regulations. Similarly, this design calls for a denser and bulkier level of development on the site, but the scale of development proposed could be accomplished within the allowable building limits.

This Alternative would not result in adverse impacts with respect to community integrity, and the potential for conflicts with adjacent land uses would be essentially the same (classified as less-than-significant impacts) as for the proposed project, because the design and layout of structures along the northern boundary adjacent to existing residences, is much like the design for the proposed project.

Visual Impacts. As with the proposed project and Alternative 1a, the visual impacts of this Alternative would be classified as less-than-significant. This alternative calls for bulkier and taller development (three floors instead of two) along segments of both the College and Claremont Avenue frontages. The development would not exceed applicable FAR and height limits, and the visual changes would not be out of scale, considering the existing office buildings across both Claremont and College Avenues.

5.5.2 Reduced Size Alternatives

Alternative 2 – 40,000-Square-Foot Reduced Size Project

Traffic Impacts: As noted, Alternative 2 calls for the elimination of the retail and restaurant components of the proposed project and a reduction in the size of the proposed Safeway store from 51,510 square feet to 40,400 square feet.

As shown in Table 5-4, Alternative 2 would generate 111 fewer trips than the project during the weekday PM peak hour and 145 fewer trips during the Saturday PM peak hour. As a result, Alternative 2 would cause fewer significant impacts than the proposed project. The alternative would eliminate Impact TRANS-10 at the Ashby Avenue/Claremont Avenue intersection. This alternative would eliminate Impact TRANS-13 at the 63rd Street/College Avenue. Impacts TRANS-1, -2, -3, -5, -6, -7, -9, -11, and -12 would not be reclassified as they would all still require mitigation that is beyond the jurisdiction of the City of Oakland. However, the magnitude of these impacts would be reduced compared to the proposed project.

Air Quality. The operational emissions from Alternative 2 would be less than the proposed project, primarily because the net increase in vehicle trips generated would be reducedby about 36 percent . As with the proposed project, the increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10} and $PM_{2.5}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 2 (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) of sensitive receptors, and would be mitigated to a less-than-significant level.

Table 5-4 Alternative 2 – Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Alternative 2 Store	850[2]	40.40 ksf	253	243	496	223	215	438
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*68*	*65*	*133*	*89*	*86*	*175*
Pass-By Vehicles (36%)[3]			-23	-23	-46	-31	-31	-62
Total Net New Alternative Trips			***45***	***42***	***87***	***58***	***55***	***112***
Total Net New Original Project Trips			***102***	***95***	***197***	***133***	***125***	***258***
Difference			***-57***	***-53***	***-111***	***-75***	***-70***	***-145***

Notes:
1. ksf = 1,000-square feet
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%
   Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE Trip Generation Handbook (2nd Edition) average pass-by rate for supermarket

Source: Trip Generation Manual (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Greenhouse Gases. Alternative 2's GHG emissions (both construction and operational) would be less than the proposed project's less-than-significant impacts, and therefore Alternative 2's GHG impacts would be less than significant.

Noise Impacts. Design schematics for this Alternative have not been developed, although it is assumed reducing the scale of the project by approximately 36 percent would allow for the creation of a larger buffer between the on-site development and the adjoining residences to the north. As with the proposed project, it is assumed that the existing sources of noise from the Safeway operations would be enclosed, relocated, or otherwise mitigated, such that the existing operational noise impacts would be eliminated or reduced to a less-than-significant level.

As with the proposed project, this Alternative would have potential noise impacts from autos entering and leaving the site, rooftop mechanical equipment, and other store operations. They would be similar to, but of lower magnitude than with proposed project and could be addressed with mitigation. The construction period for this Alternative would be shorter, reducing the length of time in which there would be a potential for exposure to disturbing construction noises.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts; nor would this Alternative. The substantial reduction in the scale of development anticipated in this alternative would allow greater design flexibility such that the potential for land use conflicts with the adjoining residential uses could be even further reduced or eliminated, assuming the design were to incorporate a larger buffer, lower structures, and appropriate mitigation.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts; nor would this Alternative. The level of visual transformation would probably be less than what would occur with the proposed project simply because the bulk and, presumably, the height of development would be reduced. It is also possible that more land would be available for landscaping, which could provide visual benefits, although this would not be the case if the reduced size Safeway store and all associated parking were proposed to be constructed at ground level.

Alternative 2a – 35,750-Square-Foot Reduced Size Project

Traffic Impacts: Alternative 2a reduces the size of the Safeway project to about the size of the existing store, and would include a 10,000-square-foot building on College Avenue that would contain 5,000 square feet of ground floor commercial and 5,000 square feet of office on the second floor; and a 750-square-foot café/deli building and plaza on the south corner of the project site. It also moves the project driveway on College Avenue from opposite 63rd Street to mid-block between 63rd Street and Claremont Avenue.

As shown in Table 5-45 Alternative 2a would generate 146 fewer trips than the project during the weekday PM peak hour and 209 fewer trips during the Saturday PM peak hour. As a result, Alternative 2a would cause fewer significant impacts than the proposed project. The alternative would eliminate the following impacts:

- Impacts TRANS-3, -7, and -12 at the Acatraz Avenue/College Avenue intersection under Existing Conditions, 2015 Conditions, and 2035 Conditions, respectively;
- Impact TRANS-10 at the Ashby Avenue/Claremont Avenue intersection; and
- Impact TRANS-13 at the 63rd Street/College Avenue intersection.

It is likely that this alternative would eliminate many of the other identified project impacts. The magnitude of all impacts would be reduced compared to the proposed project.

Air Quality. The operational emissions from Alternative 2a would be less than the proposed project, primarily because the net increase in vehicle trips generated would be reduced. As with the proposed project, the increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10}, and $PM_{2.5}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 2a (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) of sensitive receptors, and would be mitigated to a less-than-significant level.

Table 5-5 Alternative 2a – Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Alternative 2a Store	850[2]	25.00 ksf	189	181	370	138	133	271
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*4*	*3*	*7*	*4*	*4*	*8*
Pass-By Vehicles (36%)[3]			*-1*	*-1*	*-2*	*-1*	*-1*	*-2*
Net New Safeway Trips			*3*	*2*	*5*	*3*	*3*	*6*
Specialty Retail	814[4]	5.00 ksf	15	18	33	15	18	33
Office	814[5]	5.00 ksf	1	6	7	1	1	2
Restaurant	931[6]	0.75 ksf	4	2	6	5	3	8
Total Net New Alternative Trips			***23***	***28***	***51***	***24***	***25***	***49***
Total Net New Original Project Trips			***102***	***95***	***197***	***133***	***125***	***258***
Difference			***-79***	***-67***	***-146***	***-109***	***-100***	***-209***

Notes:

1. ksf = 1,000-square feet
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%
   Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE Trip Generation Handbook (2nd Edition) average pass-by rate for supermarket
4. *ITE* Trip generation Equation Used:
   PM: T = 2.4(x) + 21.48; Enter = 44%, Exit = 56%
   Saturday: Used the PM equation since Saturday peak hour data was not available
5. *ITE* Trip generation Equation Used:
   PM: T = 7.49 (x); Enter = 67%, Exit = 33%
   Saturday: T = 10.82 (x); Enter = 59%, Exit = 41%
6. *ITE* Trip generation Equation Used:
   PM: T = 7.49 (x); Enter = 67%, Exit = 33%
   Saturday: T = 10.82 (x); Enter = 59%, Exit = 41%

Source: Trip Generation Manual (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Greenhouse Gases. Alternative 2a's GHG emissions (both construction and operational) would be less than the proposed project's less-than-significant impacts, and therefore Alternative 2a's GHG impacts would be less than significant.

Noise Impacts. Design schematics for this Alternative have not been developed, although it is assumed reducing the scale of the project by approximately 42 percent would allow for the creation of a larger buffer between the on-site development and the adjoining residences to the north. As with the proposed project, it is assumed that the existing sources of noise from the Safeway operations would be enclosed, relocated, or otherwise mitigated, such that the existing operational noise impacts would be eliminated or reduced to a less-than-significant level.

As with the proposed project, this Alternative would have potential noise impacts from autos entering and leaving the site, rooftop mechanical equipment, and other store operations. They would be similar to, but of lower magnitude than with proposed project and could be addressed with mitigation. The construction period for this Alternative would be shorter, reducing the length of time in which there would be a potential for exposure to disturbing construction noises.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts; nor would this Alternative. The substantial reduction in the scale of development anticipated in this alternative would allow greater design flexibility such that the potential for land use conflicts with the adjoining residential uses could be even further reduced or eliminated, assuming the design were to incorporate a larger buffer, lower structures, and appropriate mitigation.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts; nor would this Alternative. The level of visual transformation would probably be less than what would occur with the proposed project simply because the bulk and, presumably, the height of development would be reduced. It is also possible that more land would be available for landscaping, which could provide visual benefits, although this would not be the case if the reduced size Safeway store and all associated parking were proposed to be constructed at ground level.

Alternative 2b – 25,250-Square-Foot Reduced Size Project

Traffic Impacts: Alternative 2b reduces the size of the Safeway project to about the size of the existing store and provides a 750-square-foot cafe/deli. It also moves the project driveway on College Avenue from opposite 63rd Street to mid-block between 63rd Street and Claremont Avenue.

As shown in Table 5-6, Alternative 2b would generate 189 fewer trips than the project during the weekday PM peak hour and 247 fewer trips during the Saturday PM peak hour. As a result, Alternative 2b would cause fewer significant impacts than the proposed project. The alternative would eliminate the following impacts:

- Impacts TRANS-3, -7, and -12 at the Acatraz Avenue/College Avenue intersection under Existing Conditions, 2015 Conditions, and 2035 Conditions, respectively;
- Impact TRANS-10 at the Ashby Avenue/Claremont Avenue intersection; and
- Impact TRANS-13 at the 63rd Street/College Avenue intersection.

It is likely that this alternative would eliminate many of the other identified project impacts. The magnitude of all impacts would be reduced compared to the proposed project.

Table 5-6 Alternative 2b – Automobile Trip Generation Estimates

Land Use	ITE Code	Units[1]	Weekday PM Peak Hour			Saturday PM Peak Hour		
			In	Out	Total	In	Out	Total
Alternative 2b Store	850[2]	24.50 ksf	186	179	365	136	130	266
Existing Safeway Store	850[2]	24.26 ksf	185	178	363	134	129	263
Increase in Safeway Trips			*1*	*1*	*2*	*2*	*1*	*3*
Pass-By Vehicles (36%)[3]			0	0	0	0	0	0
Net New Safeway Trips			***1***	***1***	***2***	***2***	***1***	***3***
Restaurant	931[4]	0.75 ksf	4	2	6	5	3	8
Total Net New Alternative Trips			***5***	***4***	***9***	***7***	***4***	***11***
Total Net New Original Project Trips			***102***	***95***	***197***	***133***	***125***	***258***
Difference			***-97***	***-91***	***-189***	***-126***	***-121***	***-247***

Notes:
1. ksf = 1,000-square feet
2. ITE Trip generation Equation Used:
   PM: Ln(T) = 0.61 Ln(x) + 3.95; Enter = 51%, Exit = 49%
   Saturday: T = 10.85 (x); Enter = 51%, Exit = 49%
3. ITE Trip Generation Handbook (2nd Edition) average pass-by rate for supermarket
4. ITE Trip generation Equation Used:
   PM: T = 7.49 (x); Enter = 67%, Exit = 33%
   Saturday: T = 10.82 (x); Enter = 59%, Exit = 41%

Source: Trip Generation Manual (8th Edition), ITE, 2008 and Fehr & Peers, 2010.

Air Quality. The operational emissions from Alternative 2b would be less than the proposed project, primarily because the net increase in vehicle trips generated would be reduced. As with the proposed project, the increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10}, and $PM_{2.5}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 2b (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) of sensitive receptors, and would be mitigated to a less-than-significant level.

Greenhouse Gases, Alternative 2b's GHG emissions (both construction and operational) would would be less than the proposed project's less-than-significant impacts, and therefore Alternative 2b's GHG impacts would be less than significant.

Noise Impacts. Design schematics for this Alternative have not been developed, although it is assumed reducing the scale of the project by approximately 56 percent would allow for the creation of a larger buffer between the on-site development and the adjoining residences to the north. As with the proposed project, it is assumed that the existing sources of noise from the Safeway operations would be enclosed, relocated, or otherwise mitigated, such that the existing operational noise impacts would be eliminated or reduced to a less-than-significant level.

As with the proposed project, this Alternative would have potential noise impacts from autos entering and leaving the site, rooftop mechanical equipment, and other store operations. They would be similar to, but of lower magnitude than with proposed project and could be addressed with mitigation. The construction period for this Alternative would be shorter, reducing the length of time in which there would be a potential for exposure to disturbing construction noises.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts; nor would this Alternative. The substantial reduction in the scale of development anticipated in this alternative would allow greater design flexibility such that the potential for land use conflicts with the adjoining residential uses could be even further reduced or eliminated, assuming the design were to incorporate a larger buffer, lower structures, and appropriate mitigation.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts; nor would this Alternative. The level of visual transformation would probably be less than what would occur with the proposed project simply because the bulk and, presumably, the height of development would be reduced. It is also possible that more land would be available for landscaping, which could provide visual benefits, although this would not be the case if the reduced size Safeway store and all associated parking were proposed to be constructed at ground level.

5.5.3 Alternative 3 – Full Project with No Curb Cut on College Avenue

Traffic Impacts. This alternative would generate the same number of vehicular trips as the proposed project. All vehicular access would be through Claremont Avenue. This analysis assumes that all vehicular trips would continue to access the site from the same direction as the analyzed project. Since all vehicular traffic would be rerouted to Claremont Avenue, only traffic patterns around the project site would be modified.

To evaluate the implications of this major variation in the project design a detailed traffic operations analysis of the affected intersections surrounding the project site was prepared. Since all vehicular trips would continue to access the site from the same direction as the proposed project, this analysis assumes that all other study intersections not analyzed in this section would operate similarly to the analyzed project.

Existing Plus Alternative 3 Intersection Analysis

Figure 5-3 presents traffic volumes under Existing Plus Alternative 3 conditions at the five intersections immediately surrounding the project site. These include existing traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-3 and existing lane configurations and signal timing parameters. Table 5-7 summarizes traffic operations under Existing Plus Alternative 3 conditions and compares them to Existing Plus Project conditions. Four of the five affected intersections would operate at worse conditions in comparison to Existing Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the project driveway.

As shown in the table, Alternative 3 would result in significant impacts at the following three intersections similar to the Project:

1. Alcatraz Avenue/College Avenue (Impact TRANS-2)
2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-3)
3. College Avenue/Claremont Avenue (Impact TRANS-4)

Table 5-8 summarizes traffic operations under Existing Plus Alternative 3 Mitigated conditions at the affected intersections. Similar to the project, mitigations TRANS-2 and TRANS-3 would mitigate the impacts at Alcatraz Avenue/College Avenue and Alcatraz Avenue/Claremont Avenue intersections, respectively. Since these mitigations would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, they would continue to be considered significant and unavoidable under this alternative.

Mitigation TRANS-4 would reduce average intersection delay and the magnitude of the impact at the College Avenue/Claremont Avenue intersection (#9). However, delay for the critical movements at the intersection would continue to be above the significance threshold. Therefore, unlike the proposed project, Alternative 3 would result in a significant unavoidable impact at the College Avenue/Claremont Avenue intersection under Existing Plus Alternative 3 conditions (Impact TRANS-4). The significant and unavoidable impact at this intersection can be mitigated by providing additional traffic lanes. However, this would not be feasible because it would require additional right-of-way that is not available.

2015 Plus Alternative 3 Intersection Analysis

Figure 5-4 presents traffic volumes under 2015 Plus Alternative 3 conditions at the five intersections immediately surrounding the project site. These include 2015 No Project traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-4 and existing lane configurations and signal timing parameters. Table 5-9 summarizes traffic operations under 2015 Plus Alternative 3 conditions and compares them to 2015 Plus Project conditions.

Similar to Existing conditions, four of the five affected intersections would operate at worse conditions in comparison to 2015 Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the project driveway.

As shown in the table, Alternative 3 would result in significant impacts at the following three intersections similar to the Project:

1. Alcatraz Avenue/College Avenue (Impact TRANS-6)

2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-7)
3. College Avenue/Claremont Avenue (Impact TRANS-8)

Table 5-10 summarizes traffic operations under 2015 Plus Alternative 3 Mitigated conditions at the affected intersections. Similar to the project, mitigations TRANS-2 and TRANS-3 would mitigate the impacts at Alcatraz Avenue/College Avenue and Alcatraz Avenue/ Claremont Avenue intersections, respectively. Since these mitigations would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, they would continue to be considered significant and unavoidable under this alternative.

Mitigation TRANS-4 would reduce average intersection delay and the magnitude of the impact at the College Avenue/Claremont Avenue intersection (#9). However, delay for the critical movements at the intersection would continue to be above the significance threshold. Therefore, unlike the proposed project, Alternative 3 would result in a significant unavoidable impact at the College Avenue/Claremont Avenue intersection under 2015 Plus Alternative 3 conditions (Impact TRANS-8). The significant and unavoidable impact at this intersection can be mitigated by providing additional traffic lanes. However, this would not be feasible because it would require additional right-of-way that is not available.

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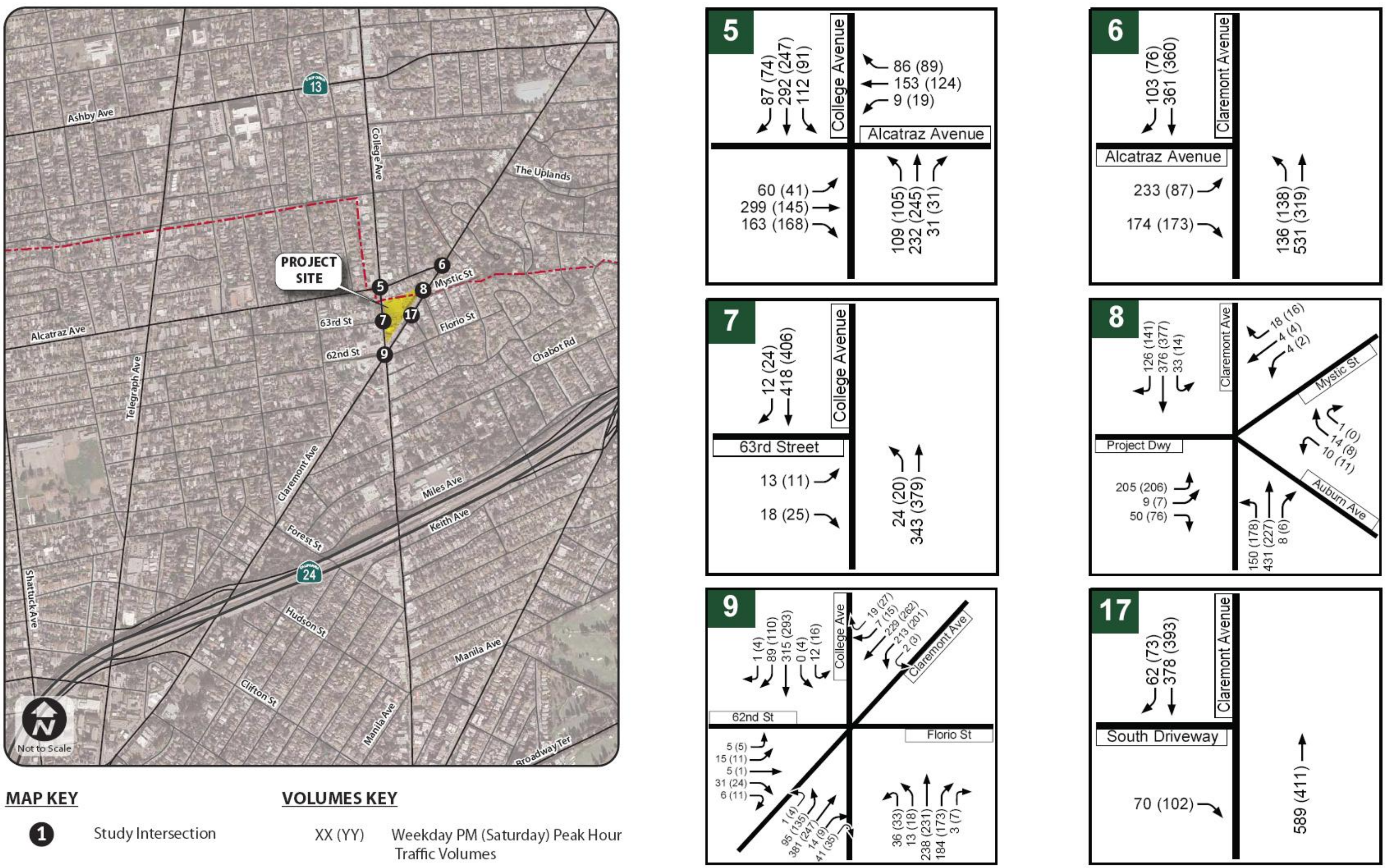


Source: Fehr & Peers

4-1-11

Existing Plus Alternative 3 Conditions—Peak Hour Traffic Volumes (Closure of Safeway Driveway on College Avenue) Figure 5-3

Table 5-7 Intersection Level of Service – Existing Plus Alternative 3 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Significant Impact?	Existing Plus Alternative 3		Significant Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**112.2 (v/c = 1.16)**	**F**	**Yes[3]**	**>120 (v/c = 1.17)**	**F**	**Yes[3]**
				SAT	36.3	D	52.5	D	No	**78.0**	**E**	**Yes[4]**
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC	PM	18.9 **(82.1)**	C **(F)**	15.3 **(67.2)**	C **(F)**	**Yes[5]**	**76.2 (>120)**	**F (F)**	**Yes[5]**
				SAT	2.6 (16.0)	A (C)	2.6 (16.4)	A (C)	No	7.4 (27.3)	A (D)	No
7.	63rd Street/College Avenue	Oakland	SSSC	PM	3.0 **(40.6)**	A **(E)**	9.7 **(60.3)**	A **(F)**	No	1.2 (19.3)	A (C)	No
				SAT	3.1 (30.2)	A (D)	35.8 **(>120)**	**E (F)**	No	1.4 (22.1)	A (C)	No
8.	Mystic Street/Auburn Avenue/Claremont Avenue	Oakland	SSSC/ Signal[6]	PM	3.5 (26.5)	A (D)	10.7	B	No	15.8	B	No
				SAT	2.5 (15.0)	A (B)	10.4	B	No	14.3	B	No
9.	College Avenue/Claremont Avenue/62nd Street	Oakland	Signal	PM	**61.5**	**E**	**70.2**	**E**	**Yes[7]**	**79.9**	**E**	**Yes[7]**
				SAT	**66.6**	**E**	**87.8**	**F**	**Yes[8]**	**93.4**	**F**	**Yes[8]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F;

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade an intersection in Berkeley from LOS D to LOS E and increase average intersection delay by more than two seconds.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. Intersection is side-street stop-controlled under Existing No Project conditions and signalized under Existing Plus Project conditions.
7. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than four seconds and increase delay for a critical movement by more than six seconds at an intersection in Oakland already operating at LOS E.
8. The proposed project would cause an impact at this intersection in Oakland because it would degrade intersection operations from LOS E to LOS F.

Source: Fehr & Peers, 2010.

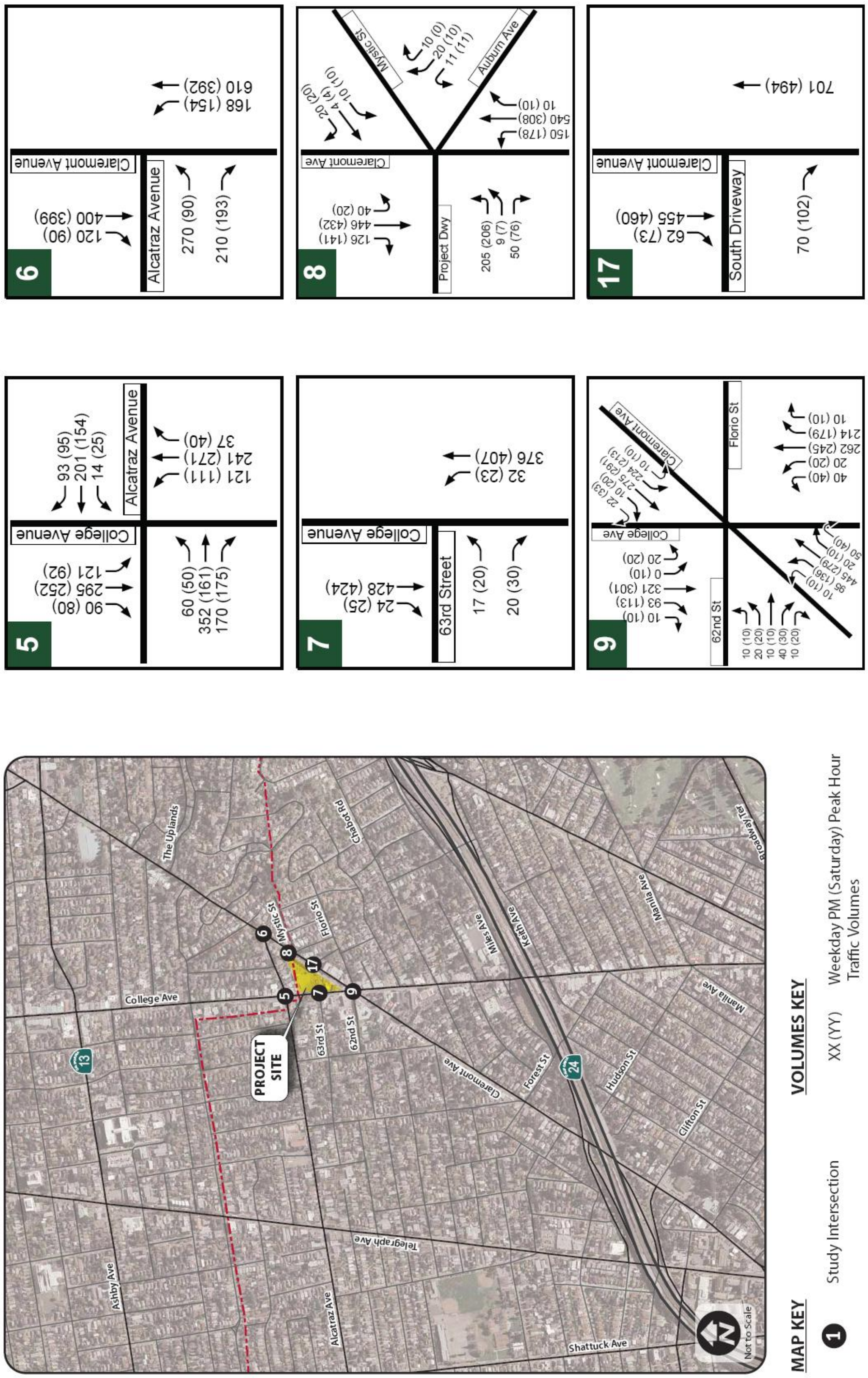
Table 5-8 Intersection Level of Service – Existing Plus Alternative 3 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Alternative 3		Existing Plus Alt 3 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**>120 (v/c = 1.17)**	**F**	44.7	D	Significant and Unavoidable[3]
				SAT	36.3	D	**78.0**	**E**	28.8	C	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	18.9 **(82.1)**	C **(F)**	**76.5 (>120)**	**F (F)**	13.6	B	Significant and Unavoidable[3]
				SAT	2.6 (16.0)	A (C)	7.4 (27.3)	A (D)	8.2	A	
9.	College Avenue/Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**61.5**	**E**	**79.9**	**E**	**62.0**	**E**	Significant and Unavoidable
				SAT	**66.6**	**E**	**93.4**	**F**	**63.7**	**E**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under Existing No Project and Existing Plus Alternative 3 conditions and signalized under Existing Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.



Source: Fehr & Peers

4-1-11

2015 Plus Alternative 3 Conditions—Peak Hour Traffic Volumes (Closure of Safeway Driveway on College Avenue) Figure 5-4

Table 5-9 Intersection Level of Service – 2015 Plus Alternative 3 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Project		Impact?	2015 Plus Alternative 3		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.26)**	**F**	**Yes[3]**	**>120 (v/c = 1.27)**	**F**	**Yes[3]**
				SAT	44.1	D	**63.9**	**E**	**Yes[4]**	**85.4**	**F**	**Yes[4]**
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC	PM	**66.4 (>120)**	**F (F)**	**50.5 (>120)**	**F (F)**	**Yes[5]**	**>120 (>120)**	**F (F)**	**Yes[5]**
				SAT	3.1 (19.1)	A (C)	3.1 (19.8)	A (C)	No	10.4 (42.8)	B (E)	No
7.	63rd St/College Ave	Oakland	SSSC	PM	4.1 **(66.5)**	A **(F)**	15.8 **(>120)**	C **(F)**	No	1.5 (22.2)	A (C)	No
				SAT	6.7 **(108.1)**	A **(F)**	**54.3 (>120)**	**F (F)**	No	2.0 (27.5)	A (D)	No
8.	Mystic Street/Auburn Ave/Claremont Ave	Oakland	SSSC/ Signal[6]	PM	3.5 (29.1)	A (D)	11.7	B	No	18.7	B	No
				SAT	2.7 (17.6)	A (C)	10.3	B	No	15.1	B	No
9.	College Ave/ Claremont Ave/62nd St	Oakland	Signal	PM	**102.5**	**F**	**124.6**	**F**	**Yes[7]**	**135.2**	**F**	**Yes[7]**
				SAT	**101.6**	**F**	**133.9**	**F**	**Yes[7]**	**138.3**	**F**	**Yes[7]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade an intersection in Berkeley from LOS D to LOS E or LOS F and increase average intersection delay by more than two seconds.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. Intersection is side-street stop-controlled under 2015 No Project conditions and signalized under 2015 Plus Project conditions.
7. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than two seconds and increase delay for a critical movement by more than four seconds at an intersection in Oakland already operating at LOS F.

Source: Fehr & Peers, 2010.

Table 5-10 Intersection Level of Service – 2015 Plus Alternative 3 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Alternative 3		2015 Plus Alt 3 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.27)**	**F**	50.6	D	Significant and Unavoidable[3]
				SAT	44.1	D	**85.4**	**F**	31.2	C	
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC/ Signal[4]	PM	**66.4 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	16.9	B	Significant and Unavoidable[3]
				SAT	3.1 (19.1)	A (C)	10.4 (42.8)	B (E)	8.9	A	
9.	College Ave /Claremont Ave / 62nd St	Oakland	Signal	PM	**102.5**	**F**	**135.2**	**F**	**100.4**	**F**	Significant and Unavoidable
				SAT	**101.6**	**F**	**138.3**	**F**	**96.2**	**F**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under Existing No Project and Existing Plus Alternative 3 conditions and signalized under Existing Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.

2035 Plus Alternative 3 Intersection Analysis

Figure 5-5 presents traffic volumes under 2035 Plus Alternative 3 conditions at the five intersections immediately surrounding the project site. These include 2035 No Project traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-5 and existing lane configurations and signal timing parameters. Table 5-11 summarizes traffic operations under 2035 Plus Alternative 3 conditions and compares them to 2035 Plus Project conditions. Four of the five affected intersections would operate at worse conditions in comparison to 2035 Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the project driveway.

As shown in the table, Alternative 3 would result in significant impacts at the following three intersections similar to the project:

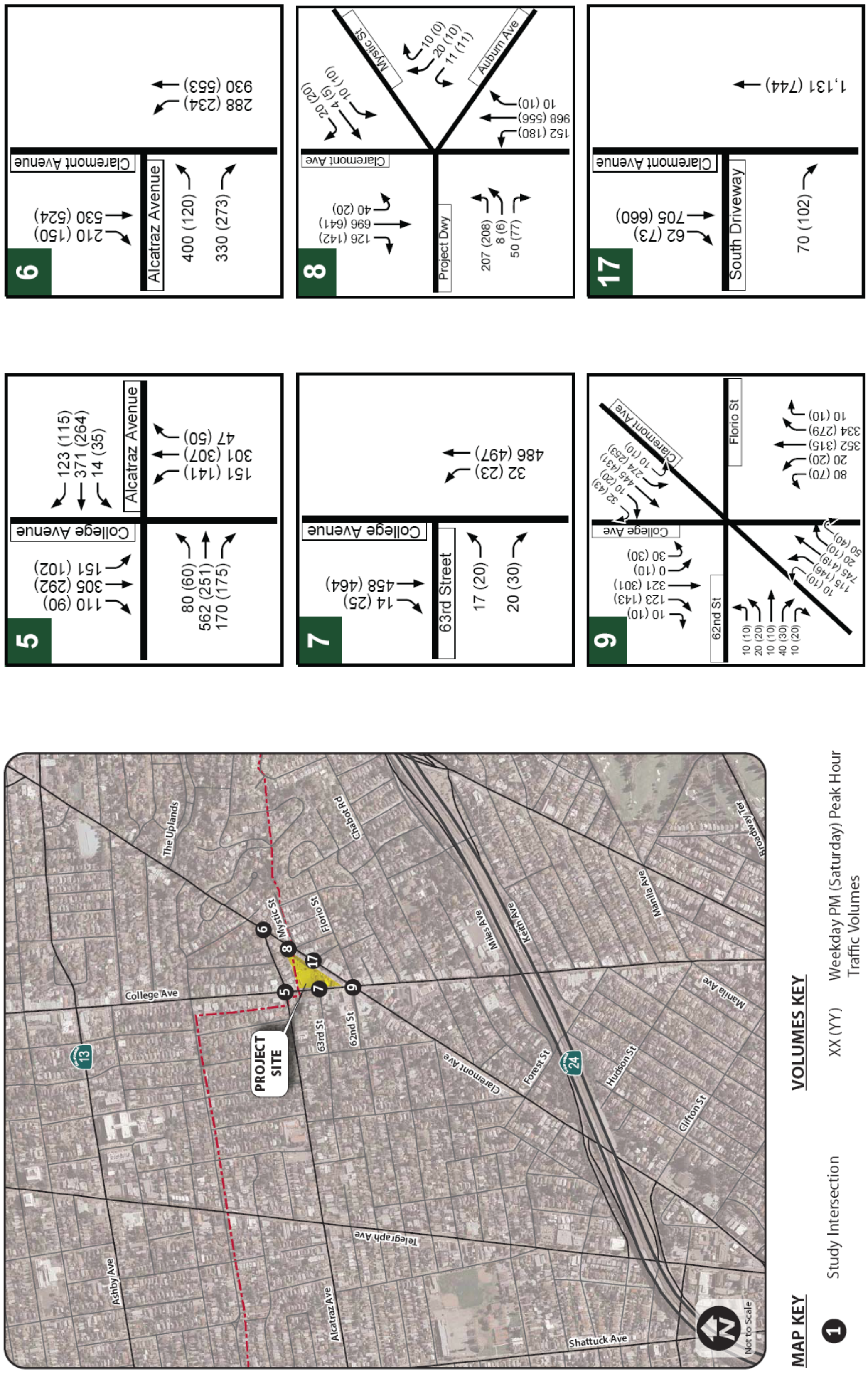
1. Alcatraz Avenue/College Avenue (Impact TRANS-11)
2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-12)
3. College Avenue/Claremont Avenue (Impact TRANS-14)

However, unlike the project, Alternative 3 would eliminate Impact TRANS-13 at the 63rd Street/College Avenue (#7) because it would eliminate the traffic volume entering and exiting the Safeway driveway at this intersection.

Table 5-12 summarizes traffic operations under 2035 Plus Alternative 3 Mitigated conditions at the affected intersections. Similar to the project, mitigation TRANS-2 would mitigate Impact TRANS-11 at the Alcatraz Avenue/College Avenue intersection to less than significant. Since mitigation TRANS-2 would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, this impact would continue to be considered significant and unavoidable under Alternative 3.

Mitigation TRANS-3, which consists of signalizing the intersection, would not fully mitigate the impact at Alcatraz Avenue/Claremont Avenue intersection. In addition to signalization, the impact can be reduced to less-than-significant by striping the eastbound Alcatraz Avenue approach to provide separate left-turn and right-turn lanes. This improvement may require elimination of on-street parking on segments of Alcatraz Avenue. No other secondary impacts would result from implementing this improvement.

Mitigation TRANS-4 would reduce average intersection delay and the magnitude of the impact at the College Avenue/Claremont Avenue intersection (#9). However, delay for the critical movements at the intersection would continue to be above the significance threshold. Therefore, unlike the proposed project, Alternative 3 would result in a significant unavoidable impact at the College Avenue/Claremont Avenue intersection under 2035 Plus Alternative 3 conditions (Impact TRANS-14). The significant and unavoidable impact at this intersection can be mitigated by providing additional traffic lanes. However, this would not be feasible because it would require additional right-of-way that is not available.



Source: Fehr & Peers

4-14-11

2035 Plus Alternative 3 Conditions – Peak Hour Traffic Volumes (Closure of Safeway Driveway on College Avenue) **Figure 5-5**

Table 5-11 Intersection Level of Service – 2035 Plus Alternative 3 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Project		Impact?	2035 Plus Alternative 3		Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/College Ave	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**>120 (v/c = 1.57)**	**F**	**Yes[3]**	**>120 (v/c = 1.61)**	**F**	**Yes[3]**
				SAT	**64.2**	**E**	**89.0**	**F**	**Yes[4]**	**101.0**	**F**	**Yes[4]**
6.	Alcatraz Ave/Claremont Ave	Berkeley	SSSC	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	**Yes[5]**	**>120 (>120)**	**F (F)**	**Yes[5]**
				SAT	21.1 **(>120)**	C **(F)**	17.2 **(100.5)**	C **(F)**	**Yes[5]**	**89.1 (>120)**	**F (F)**	**Yes[5]**
7.	63rd St/College Ave	Oakland	SSSC	PM	6.0 **(>120)**	A **(F)**	10.8 **(103.8)**	B **(F)**	No	1.7 (28.4)	A(D)	No
				SAT	12.5 **(>120)**	B **(F)**	**>120 (>120)**	**F (F)**	**Yes[6]**	2.5 (40.5))	A (D)	No
8.	Mystic St/Auburn Ave/Claremont Ave	Oakland	SSSC/ Signal[7]	PM	6.8 **(106.7)**	A **(F)**	12.4	B	No	38.5	D	No
				SAT	2.9 (30.7)	A (D)	9.6	A	No	16.9	B	No
9.	College Ave/Claremont Ave/62nd St	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.87)**	**F**	**Yes[8]**	**>120 (v/c = 1.80)**	**F**	**Yes[8]**
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.56)**	**F**	**Yes[8]**	**>120 (v/c = 1.49)**	**F**	**Yes[8]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade an intersection in Berkeley from LOS E to LOS F and increase average intersection delay by more than three seconds.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. The proposed project would cause an impact at this unsignalized intersection in Oakland because it would increase intersection traffic volume by more than ten vehicles and the intersection would meet the peak hour signal warrant.
7. Intersection is side-street stop-controlled under 2015 No Project conditions and signalized under 2015 Plus Project conditions.
8. The proposed project would cause an impact at this intersection because it would increase v/c ratio by more 0.03 at an intersection in Oakland already operating at LOS F.

Source: Fehr & Peers, 2010.

Table 5-12 Intersection Level of Service – 2035 Plus Alternative 3 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Alternative 3		2035 Plus Alternative 3 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**>120 (v/c = 1.61)**	**F**	**94.8**	**F**	Significant and Unavoidable[3]
				SAT	**64.2**	**E**	**101.0**	**F**	37.0	D	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	**57.5**	**E**	Significant and Unavoidable[3]
				SAT	21.1 **(>120)**	C **(F)**	**89.1 (>120)**	**F (F)**	13.0	B	
9.	College Avenue/ Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.80)**	**F**	**>120 (v/c = 1.55)**	**F**	Significant and Unavoidable
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.49)**	**F**	**>120 (v/c = 1.34)**	**F**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure is implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under 2035 No Project and 2035 Plus Alternative 3 conditions and signalized under 2035 Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.

Cut-Through Traffic on Alcatraz Avenue

Currently, Alcatraz Avenue between College and Claremont Avenues is a mostly residential street with a peak hour traffic volume of about 480 vehicles during the weekday PM peak hour and about 250 vehicles during the Saturday peak hour. The proposed project, with a driveway on College Avenue, is not expected to add additional traffic to this segment of Alcatraz Avenue. However, the elimination of the existing driveway on College Avenue as proposed under Alternative 3 would result in vehicles traveling between the site and north and west to divert to this segment of Alcatraz Avenue. It is estimated that eliminating the Safeway driveway on College Avenue would increase peak hour traffic volumes on Alcatraz Avenue by about 200 vehicles (corresponding to 42 percent increase over existing volumes) during the weekday PM peak hour and about 240 vehicles (almost doubling the existing volumes) during the Saturday peak hour.

This segment of Alcatraz Avenue is in the City of Berkeley and outside the jurisdiction of City of Oakland. Considering the residential setting of the street, City of Berkeley may consider strategies to reduce the increased through traffic on Alcatraz Avenue. These strategies may consist of installing traffic calming devices such as speed humps, half-closures, or full-closures, and/or all-day or peak hour prohibitions on turns between Alcatraz Avenue and College Avenue, and/or Claremont Avenue.

If Alcatraz Avenue is closed to through traffic, then project generated traffic to and from College Avenue to the north and Alcatraz Avenue to the west would need to travel through the College Avenue/ Claremont Avenue intersection. Alternative 3 would have significant and avoidable impacts at the College Avenue/Claremont Avenue intersection under Existing, 2015, and 2035 conditions. A potential closure of Alcatraz Avenue would further exacerbate traffic congestion at this intersection and increase the magnitude of the already significant and unavoidable impact at this intersection.

Transit Travel Time

Table 5-13 shows peak-hour travel times along the major corridors served by AC Transit in the project under Existing Plus Alternative 3 conditions. In comparison to the Existing Plus Project conditions, Alternative 3 would increase travel times along both College and Claremont Avenues during both weekday and Saturday PM peak hours. Alternative 3 would eliminate the existing Safeway driveway on College Avenue and reduce the delay experienced by buses due to automobiles waiting to turn from College Avenue into the project driveway. However, Alternative 3 would result in additional turning traffic at other intersections along both College and Claremont Avenues, which would further block through traffic along both corridors and increase travel times.

In comparison to the project, the proposed mitigation measures would result in generally increased travel times along both College and Claremont Avenues. However, travel times under Existing Plus Alternative 3 Mitigated conditions would be less than one-minute longer than under Existing Plus Project Mitigated conditions. The estimated increase under Alternative 3 would continue to be within the variability in travel time experienced by buses on these corridors.

Table 5-13 Travel Times Along AC Transit Corridors (Alternative 3 Conditions)

Corridor	Direction	Distance (miles)	Peak Hour	Existing		Existing Plus Alternative 3		Existing Plus Alternative 3 Mitigated	
				Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)
College Avenue	Northbound (Manila Avenue to Ashby Avenue)	1.18	PM	6:06	12	7:16	10	5:34	13
			SAT	5:11	14	6:41	11	5:21	13
	Southbound (Ashby Avenue to Manila Avenue)	1.18	PM	7:44	9	9:39	7	4:58	14
			SAT	5:43	12	8:10	9	4:34	16
Claremont Avenue	Northbound (College Avenue to Ashby Avenue)	0.70	PM	2:45	15	3:05	14	3:12	13
			SAT	2:10	19	2:25	18	2:27	17
	Southbound (Ashby Avenue to College Avenue)	0.70	PM	2:32	17	3:06	14	3:01	14
			SAT	2:40	16	3:33	12	2:52	15

Note: Corridor travel times were calculated using intersection delay and free-flow segment speeds from Synchro 7.0.
Source: Fehr and Peers, 2010.

Queuing

Similar to the project analysis, queuing impacts were identified where trips generated by Alternative 3 would add 25 or more feet to the existing 95th percentile queue if the existing 95th percentile queue was already over the available storage length or where project trips would extend the queue over the available storage length. The findings are summarized below and in Appendix K.

Existing Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn – Alternative 3 would increase queue from 485 feet to 495 feet in the weekday PM peak hour and from 205 to 235 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would reduce the weekday PM peak hour queue to 480 feet and the Saturday PM peak hour queue would remain unchanged at 235 feet.

Northbound through/left/right-turn – Alternative 3 would decrease queue from 260 feet to 190 feet in the weekday PM peak hour and from 265 feet to 200 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would increase the queues to 205 feet in the weekday PM peak hour and 195 feet in the Saturday PM peak hour.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn – Alternative 3 would increase queue from 480 feet to 575 feet in the weekday PM peak hour and from 445 feet to 565 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to 530 feet during the weekday PM peak hour and 535 feet during the Saturday PM peak hour.

Southbound through/left/right-turn –Alternative 3 would decrease queue from 510 feet to 480 feet in the weekday PM peak hour and from 585 feet to 575 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would decrease the queue to 400 feet in the weekday PM peak hour and 515 feet in the Saturday PM peak hour.

2015 Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn - Alternative 3 would increase queue from 555 feet to 570 feet in the weekday PM peak hour and from 245 feet to 305 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 535 feet during the weekday PM peak hour and 280 feet during the Saturday PM peak hour.

Northbound through/left/right-turn - Alternative 3 would decrease queue from 330 feet to 210 feet in the weekday PM peak hour and from 365 feet to 230 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would change the queue to 265 feet in the weekday PM peak hour and 230 feet in the Saturday PM peak hour.

Southbound left – the southbound left-turn lane would be created as part of the proposed mitigation measures. Alternative 3 would result in a queue of 120 feet during the weekday PM peak hour, exceeding the 100 feet of storage.

6 Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn - Alternative 3 would increase the queue from 575 feet to 995 feet during the weekday PM peak hour; storage length is 560 feet. The queue would decrease due to the proposed signalization of the upstream intersection on Claremont Avenue at Safeway Driveway, which would meter through traffic on Claremont Avenue. The proposed mitigation measures would reduce the queue to 300 feet.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn - Alternative 3 would increase queue from 600 feet to 690 feet in the weekday PM peak hour and from 490 feet to 610 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to 645 feet during the weekday PM peak hour and 575 feet during the Saturday PM peak hour.

Southbound through/left/right-turn - Alternative 3 would reduce queue from 600 feet to 585 feet in the weekday PM peak hour and from 680 feet to 675 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would decrease the queue to 485 feet in the weekday PM peak hour and 615 feet in the Saturday PM peak hour, which are lower than Existing No Project conditions.

2035 Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn - Alternative 3 would increase queue from 795 feet to 820 feet in the weekday PM peak hour and from 375 feet to 405 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 740 feet during the weekday PM peak hour and 385 feet during the Saturday PM peak hour.

Northbound through/left/right-turn - Alternative 3 would decrease queue from 485 feet to 340 feet in the weekday PM peak hour and from 480 feet to 315 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would further decrease the queue to 285 feet in the weekday PM peak hour and 235 feet in the Saturday PM peak hour.

Southbound left – the southbound left-turn lane would be created as part of the proposed mitigation measures. Alternative 3 would result in a queue of 185 feet during the weekday PM peak hour and 110 feet during the Saturday PM peak hour, exceeding the 100 feet of storage.

6 Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn – The weekday PM peak hour queue would exceed beyond the available 560-foot storage length regardless of the project. The proposed mitigation measures would reduce the queue to 625 feet.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn - Alternative 3 would increase queue from 915 feet to 985 feet in the weekday PM peak hour and from 730 feet to 820 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would result in queues of 675 feet during the weekday PM peak hour and 700 feet during the Saturday PM peak hour.

Southbound through/left/right-turn - Alternative 3 would increase queue from 635 feet to 650 feet in the weekday PM peak hour and reduce queue from 765 feet to 600 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would result in queues of 675 feet in the weekday PM peak hour and 700 feet in the Saturday PM peak hour.Summary of Traffic Impacts

In comparison to the proposed project, Alternative 3 would result in improved pedestrian conditions along the project frontage on College Avenue. Most of the significant impacts identified for the project would continue to be significant under Alternative 3 with the following exceptions:

- Impact TRANS-12 at the Alcatraz Avenue/Claremont Avenue (#6) intersection would not be fully mitigated by Mitigation TRANS-3. Additional improvements at the intersection would be needed to reduce the impact to less-than-significant under Alternative 3.
- Impact TRANS-13 at the 63rd Street/College Avenue (#7) intersection would be eliminated.
- Impacts TRANS-4, TRANS-8, TRANS-14 at the College Avenue/Claremont Avenue (#9) intersection, which can be mitigated under the proposed project would be significant and unavoidable.
- Impacts TRANS-17A and -17B relating to pedestrian crossings on College Avenue at 63rd Street and the Safeway Driveway, which can be mitigated under the proposed project, would be eliminated under this alternative.

In addition, Alternative 3 would also increase the amount of traffic on Alcatraz Avenue between College and Claremont Avenue, which is a primary residential street.

Air Quality. The operational emissions from Alternative 3 would be essentially the same as for the proposed project. The increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10} and $PM_{2.5\_}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 3 (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) of sensitive receptors, and would be mitigated to a less-than-significant level.

Greenhouse Gases. With the same square footage under this alternative, the GHG emissions from Alternative 3 would be essentially the same as for the proposed project and would be less than significant. Construction period GHG emissions would be essentially the same as for the proposed project and would be less than significant.

Noise Impacts. The noise impacts from this re-configuration of the project would be the same as for the proposed project. It is noted that with this Alternative there would be more traffic using the Claremont Avenue entrance to the project. However, the noise analysis indicated that traffic on the ramp would be fairly well shielded by a new wall to be constructed along the property boundary, and that noise from slow-moving cars on the ramp would be reduced on the order 15 dB, so that the maximum noise from cars would be in compliance with the nighttime noise limit of 65 dBA, and would not result in a significant impact. The re-configuration under Alternative 3 would not change this conclusion.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts. From a land use perspective, this Alternative is virtually identical to the proposed project, and like the project, it would not have any Significant and Unavoidable land use impacts.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts; nor would this Alternative. Its visual impacts would be essentially identical to those of the proposed project.

5.5.4 Alternative 4 – Full Project with Inbound Only Driveway on College Avenue

Traffic Impacts. This alternative would generate the same number of vehicular trips as the proposed project. Vehicles would be able to enter the project using the driveway on College Avenue but they would not be able to exit to College Avenue. All outbound vehicular access would be through Claremont Avenue. This analysis assumes that all vehicular trips would continue to access the site from the same direction as the analyzed project. Since outbound vehicular traffic would be rerouted to Claremont Avenue, only traffic patterns around the project site would be modified.

To evaluate the implications of this major variation in the project design a detailed traffic operations analysis of the affected intersections surrounding the project site was prepared. Since all vehicular trips would continue to access the site from the same direction as the proposed project, this analysis assumes that all other study intersections not analyzed in this section would operate similarly to the analyzed project.

Existing Plus Alternative 4 Intersection Analysis

Figure 5-6 presents traffic volumes under Existing Plus Alternative 4 conditions at the five intersections immediately surrounding the project site. These include existing traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

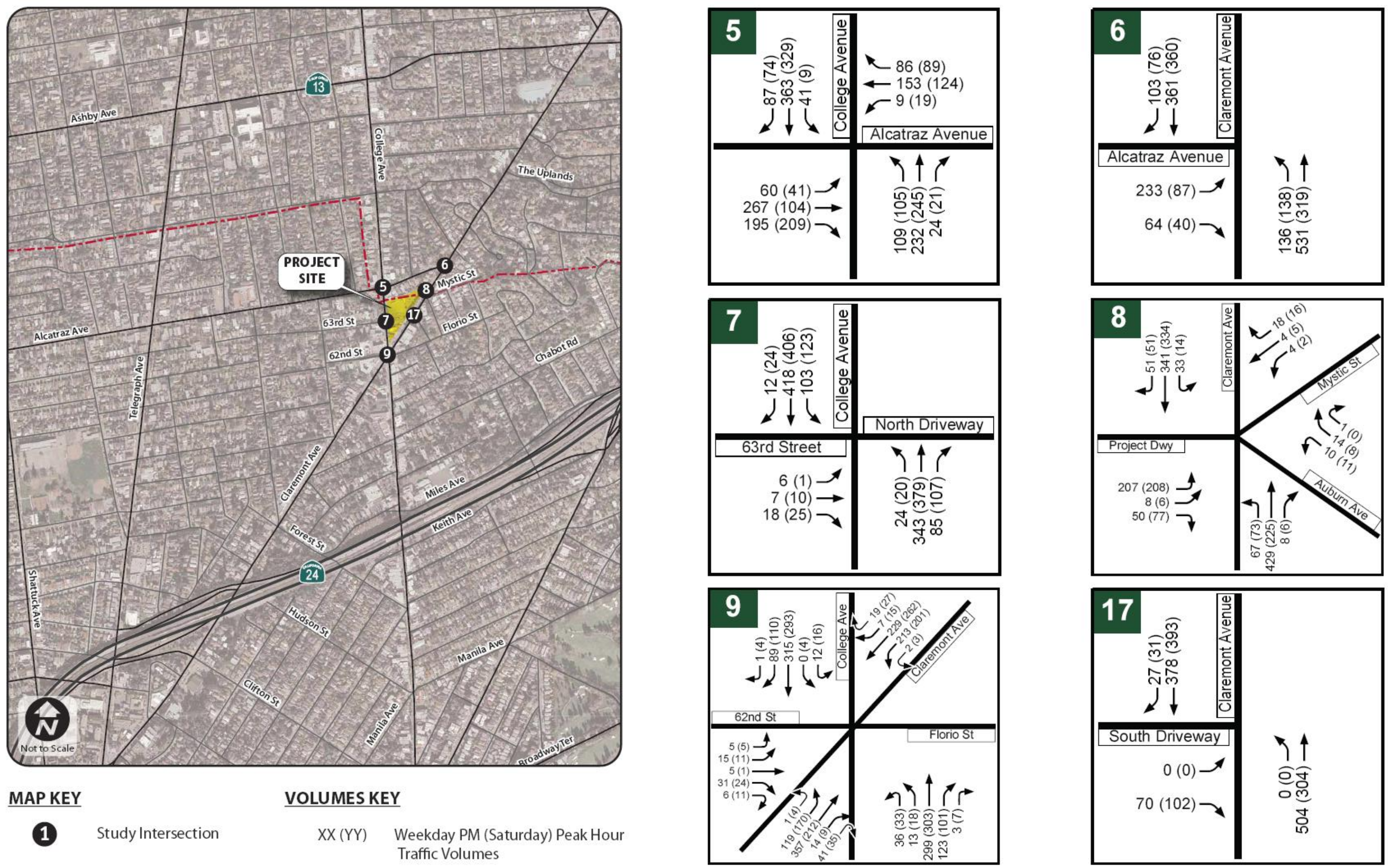
Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-5 and existing lane configurations and signal timing parameters. Table 5-14 summarizes traffic operations under Existing Plus Alternative 4 conditions and compares them to Existing Plus Project conditions. The affected intersections along Claremont Avenue would operate at worse conditions in comparison to Existing Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the outbound movements at the project driveway.

As shown in the table, Alternative 4 would result in significant impacts at the following three intersections similar to the Project:

1. Alcatraz Avenue/College Avenue (Impact TRANS-2)
2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-3)
3. College Avenue/Claremont Avenue (Impact TRANS-4)

Table 5-15 summarizes traffic operations under Existing Plus Alternative 4 Mitigated conditions at the affected intersections. Similar to the project, mitigations TRANS-3 and TRANS-4 would mitigate the impacts at Alcatraz Avenue/College Avenue, Alcatraz Avenue/Claremont Avenue, and College Avenue/Claremont Avenue intersections, respectively. Since Mitigation Measure TRANS-2 AND TRANS-3 would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, they would continue to be considered significant and unavoidable under this alternative.

Text continues on page 5-48.



Source: Fehr & Peers

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Existing Plus Alternative 4 Conditions—Peak Hour Traffic Volumes (Inbound Only Access at Safeway Driveway on College Avenue) Figure 5-6

Table 5-14 Intersection Level of Service – Existing Plus Alternative 4 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Project		Significant Impact?	Existing Plus Alternative 4		Significant Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**112.2 (v/c = 1.16)**	**F**	**Yes[3]**	**107.4 (v/c = 1.11)**	**F**	**Yes[3]**
				SAT	36.3	D	52.5	D	No	**46.3**	**D**	**No**
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC	PM	18.9 **(82.1)**	C **(F)**	15.3 **(67.2)**	C **(F)**	**Yes[4]**	**47.1(>120)**	**E (F)**	**Yes[4]**
				SAT	2.6 (16.0)	A (C)	2.6 (16.4)	A (C)	No	4.7 (26.6)	A (D)	No
7.	63rd St/College Ave	Oakland	SSSC	PM	3.0 **(40.6)**	A **(E)**	9.7 **(60.3)**	A **(F)**	No	2.3 **(38.2)**	A **(E)**	No
				SAT	3.1 (30.2)	A (D)	**35.8 (>120)**	**E (F)**	No	2.6 **(41.6)**	A **(E)**	No
8.	Mystic St/Auburn Ave/Claremont Ave	Oakland	SSSC/ Signal[5]	PM	3.5 (26.5)	A (D)	10.7	B	No	16.2	B	No
				SAT	2.5 (15.0)	A (B)	10.4	B	No	17.1	B	No
9.	College Ave/ Claremont Ave/ 62nd St	Oakland	Signal	PM	**61.5**	**E**	**70.2**	**E**	**Yes[6]**	**69.1**	**E**	**Yes[6]**
				SAT	**66.6**	**E**	**87.8**	**F**	**Yes[7]**	**82.2**	**F**	**Yes[7]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F;

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
5. Intersection is side-street stop-controlled under Existing No Project conditions and signalized under Existing Plus Project conditions.
6. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than four seconds and increase delay for a critical movement by more than six seconds at an intersection in Oakland already operating at LOS E.
7. The proposed project would cause an impact at this intersection in Oakland because it would degrade intersection operations from LOS E to LOS F.

Source: Fehr & Peers, 2010.

Table 5-15 Intersection Level of Service – Existing Plus Alternative 4 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	Existing No Project		Existing Plus Alternative 4		Existing Plus Alt 4 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**98.1 (v/c = 1.10)**	**F**	**>107.4 (v/c = 1.11)**	**F**	41.9	D	Significant and Unavoidable[3]
				SAT	36.3	D	**46.3**	**E**	26.1	C	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	18.9 **(82.1)**	C **(F)**	**47.1(>120)**	**E (F)**	11.1	B	Significant and Unavoidable[3]
				SAT	2.6 (16.0)	A (C)	4.7 (26.6)	A (D)	4.8	A	
9.	College Avenue/ Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**61.5**	**E**	**69.1**	**E**	**56.4**	**E**	Less than Significant
				SAT	**66.6**	**E**	**82.2**	**F**	**56.4**	**E**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under Existing No Project and Existing Plus Alternative 3 conditions and signalized under Existing Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.

2015 Plus Alternative 4 Intersection Analysis

Figure 5-7 presents traffic volumes under 2015 Plus Alternative 4 conditions at the five intersections immediately surrounding the project site. These include 2015 No Project traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-6 and existing lane configurations and signal timing parameters. Table 5-16 summarizes traffic operations under 2015 Plus Alternative 4 conditions and compares them to 2015 Plus Project conditions.

Similar to Existing conditions, affected intersections along Claremont Avenue would operate at worse conditions in comparison to 2015 Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the outbound movements at the project driveway.

As shown in the table, Alternative 4 would result in significant impacts at the following three intersections similar to the Project:

1. Alcatraz Avenue/College Avenue (Impact TRANS-6)
2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-7)
3. College Avenue/Claremont Avenue (Impact TRANS-8)

Table 5-16 summarizes traffic operations under 2015 Plus Alternative 4 Mitigated conditions at the affected intersections. Similar to the project, mitigations TRANS-2, TRANS-3, and TRANS-4 would mitigate the impacts at Alcatraz Avenue/College Avenue, Alcatraz Avenue/Claremont Avenue, and College Avenue/Claremont Avenue intersections, respectively. Since mitigations TRANS-2 and TRANS-3 would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, they would continue to be considered significant and unavoidable under this alternative.

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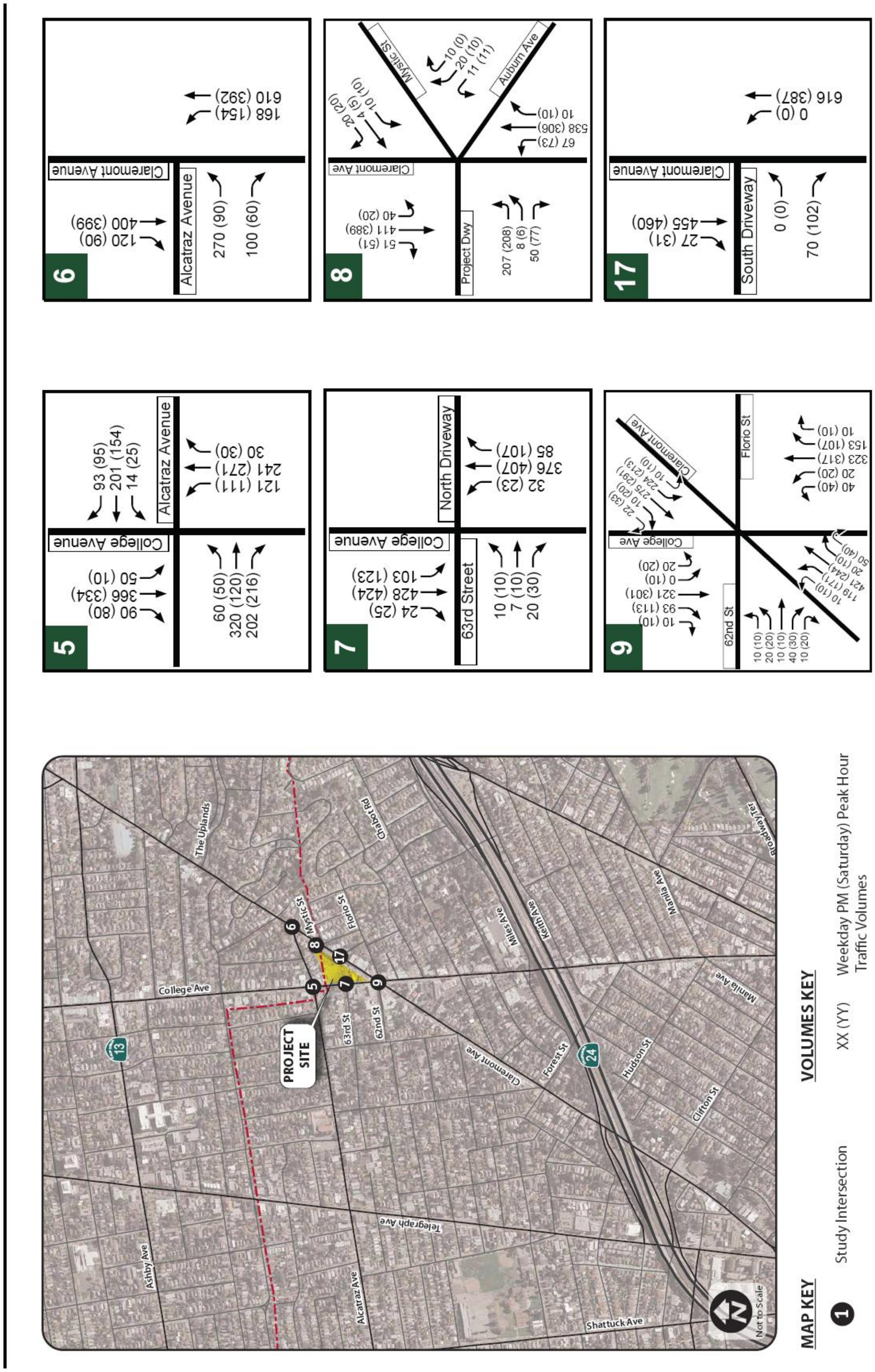

Source: Fehr & Peers

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2015 Plus Alternative 4 Conditions—Peak Hour Traffic Volumes (Inbound Only Access at Safeway Driveway on College Avenue) Figure 5-7

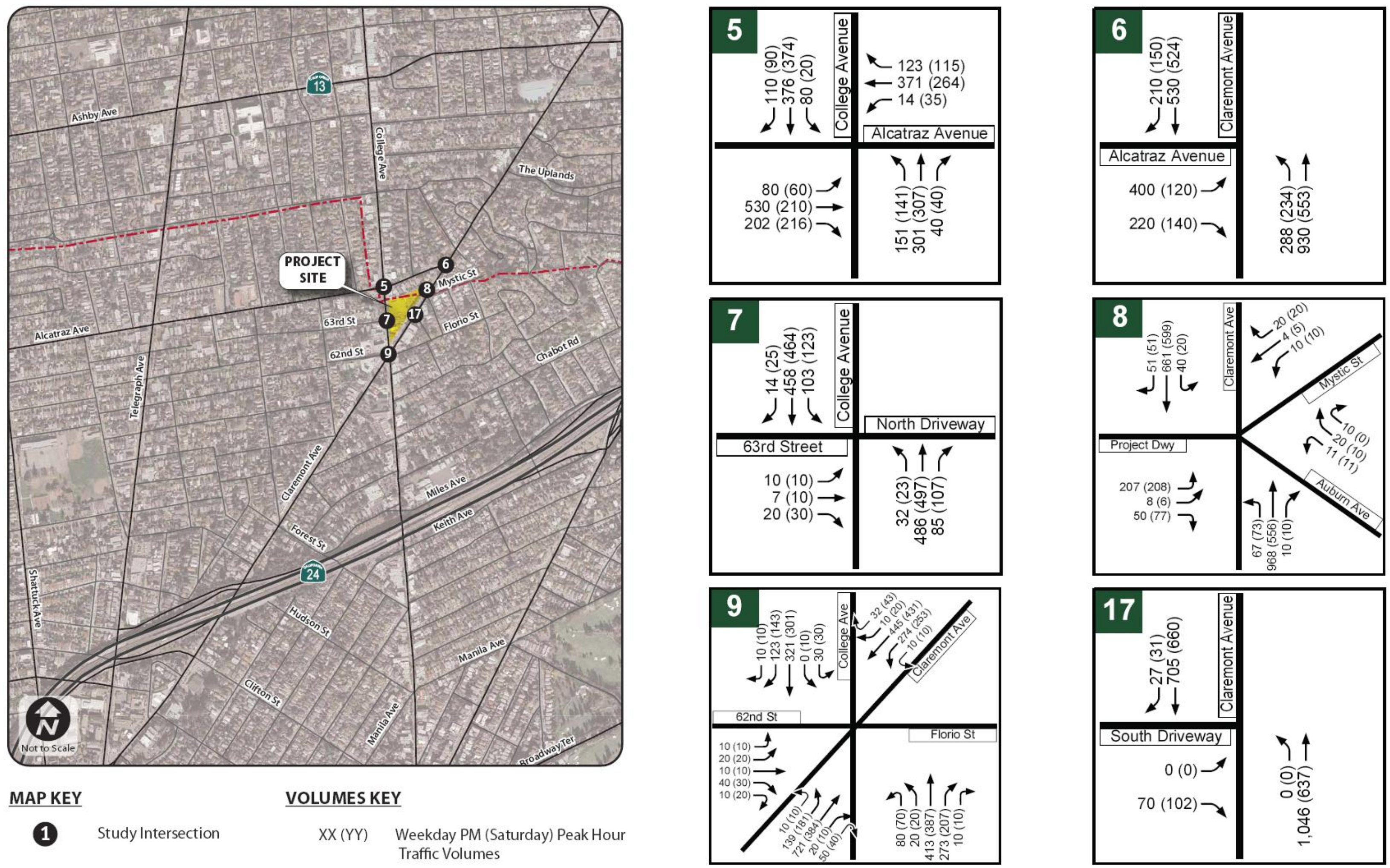
Table 5-16 Intersection Level of Service – 2015 Plus Alternative 4 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Project		Significant Impact?	2015 Plus Alternative 4		Significant Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.26)**	**F**	**Yes[3]**	**>120 (v/c = 1.21)**	**F**	**Yes[3]**
				SAT	44.1	D	**63.9**	**E**	**Yes[4]**	52.5	D	No
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC	PM	**66.4 (>120)**	**F (F)**	**50.5 (>120)**	**F (F)**	**Yes[5]**	**>120 (>120)**	**F (F)**	**Yes[5]**
				SAT	3.1 (19.1)	A (C)	3.1 (19.8)	A (C)	No	5.9 **(35.3)**	A **(E)**	No
7.	63rd St/College Ave	Oakland	SSSC	PM	4.1 **(66.5)**	A **(F)**	15.8 **(>120)**	C **(F)**	No	3.4 **(65.2)**	A **(F)**	No
				SAT	6.7 **(108.1)**	A **(F)**	**54.3 (>120)**	**F (F)**	No	5.5 **(99.9)**	A **(F)**	No
8.	Mystic St/Auburn Ave/Claremont Ave	Oakland	SSSC/ Signal[6]	PM	3.5 (29.1)	A (D)	11.7	B	No	17.7	B	No
				SAT	2.7 (17.6)	A (C)	10.3	B	No	16.8	B	No
9.	College Ave/ Claremont Ave/ 62nd St	Oakland	Signal	PM	**102.5**	**F**	**124.6**	**F**	**Yes[7]**	**120.4**	**F**	**Yes[7]**
				SAT	**101.6**	**F**	**133.9**	**F**	**Yes[7]**	**126.2**	**F**	**Yes[7]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade an intersection in Berkeley from LOS D to LOS E or LOS F and increase average intersection delay by more than two seconds.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. Intersection is side-street stop-controlled under 2015 No Project conditions and signalized under 2015 Plus Project conditions.
7. The proposed project would cause an impact at this intersection because it would increase intersection average delay by more than two seconds and increase delay for a critical movement by more than four seconds at an intersection in Oakland already operating at LOS F.

Source: Fehr & Peers, 2010.



Source: Fehr & Peers

4-5-11

2035 Plus Alternative 4 Conditions—Peak Hour Traffic Volumes (Inbound Only Access at Safeway Driveway on College Avenue) Figure 5-8

Table 5-17 Intersection Level of Service – 2015 Plus Alternative 4 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2015 No Project		2015 Plus Alternative 4		2015 Plus Alt 4 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**119.6 (v/c = 1.20)**	**F**	**>120 (v/c = 1.21)**	**F**	**65.3**	**E**	Significant and Unavoidable[3]
				SAT	44.1	D	52.5	D	28.6	C	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	**66.4 (>120)**	**F (F)**	**113.1 (>120)**	**F (F)**	11.0	B	Significant and Unavoidable[3]
				SAT	3.1 (19.1)	A (C)	5.9 **(35.3)**	A **(E)**	5.1	A	
9.	College Avenue/Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**102.5**	**F**	**120.4**	**F**	**89.4**	**F**	Less than Significant
				SAT	**101.6**	**F**	**126.2**	**F**	**86.2**	**F**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under Existing No Project and Existing Plus Alternative 3 conditions and signalized under Existing Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.

Table 5-18 Intersection Level of Service – 2035 Plus Alternative 4 Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Project		Significant Impact?	2035 Plus Alternative 4		Significant Impact?
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS		Delay (seconds)[2]	LOS	
5.	Alcatraz Ave/ College Ave	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**>120 (v/c = 1.57)**	**F**	**Yes[3]**	**>120 (v/c = 1.54)**	**F**	**Yes[3]**
				SAT	**64.2**	**E**	**89.0**	**F**	**Yes[4]**	**70.6**	**E**	**Yes[4]**
6.	Alcatraz Ave/ Claremont Ave	Berkeley	SSSC	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	**Yes[5]**	**>120 (>120)**	**F (F)**	**Yes[5]**
				SAT	21.1 **(>120)**	C **(F)**	17.2 **(105)**	C **(F)**	**Yes[5]**	**51.4 (>120)**	**F (F)**	No
7.	63rd St/College Ave	Oakland	SSSC	PM	6.0 **(>120)**	A **(F)**	10.8 **(103.8)**	B **(F)**	No	2.5 **(46.3)**	A **(E)**	No
				SAT	12.5 **(>120)**	A **(F)**	**>120 (>120)**	**F (F)**	**Yes[6]**	13.0 **(>120)**	B **(F)**	No
8.	Mystic St/Auburn Ave/Claremont Ave	Oakland	SSSC/ Signal[7]	PM	6.8 **(106.7)**	A **(F)**	12.4	B	No	17.7	B	No
				SAT	2.9 (30.7)	A (D)	9.6	A	No	15.2	B	No
9.	College Ave/ Claremont Ave/ 62nd St	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.87)**	**F**	**Yes[8]**	**>120 (v/c = 1.80)**	**F**	**Yes[8]**
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.56)**	**F**	**Yes[8]**	**>120 (v/c = 1.49)**	**F**	**Yes[8]**

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. The proposed project would cause an impact at this intersection because it would increase volume-to-capacity ratio (v/c) by more than 0.01 at an intersection in Berkeley already operating at LOS F.
4. The proposed project would cause an impact at this intersection because it would degrade an intersection in Berkeley from LOS E to LOS F and increase average intersection delay by more than three seconds.
5. The proposed project would cause an impact at this unsignalized intersection in Berkeley because it would result in the stop-controlled eastbound approach to operate at LOS F and the intersection would meet the peak hour signal warrant.
6. The proposed project would cause an impact at this unsignalized intersection in Oakland because it would increase intersection traffic volume by more than ten vehicles and the intersection would meet the peak hour signal warrant.
7. Intersection is side-street stop-controlled under 2015 No Project conditions and signalized under 2015 Plus Project conditions.
8. The proposed project would cause an impact at this intersection because it would increase v/c ratio by more 0.03 at an intersection in Oakland already operating at LOS F.

Source: Fehr & Peers, 2010.

2035 Plus Alternative 4 Intersection Analysis

Figure 5-8 presents traffic volumes under 2035 Plus Alternative 4 conditions at the five intersections immediately surrounding the project site. These include 2035 No Project traffic volumes plus net added traffic volumes generated by the project and existing traffic generated by Safeway that would be rerouted from College Avenue to Claremont Avenue.

Intersection LOS calculations were completed with the traffic volumes presented on Figure 5-7 and existing lane configurations and signal timing parameters. Table 5-17 summarizes traffic operations under 2035 Plus Alternative 4 conditions and compares them to 2035 Plus Project conditions. The affected intersections along Claremont Avenue would operate at worse conditions in comparison to 2035 Plus Project conditions because of the traffic diverting from College Avenue to Claremont Avenue. However, traffic operations at the 63rd Street/College Avenue intersection (#7) would improve due to the elimination of the outbound movements at the project driveway.

As shown in the table, Alternative 4 would result in significant impacts at the following three intersections similar to the project:

1. Alcatraz Avenue/College Avenue (Impact TRANS-11)
2. Alcatraz Avenue/Claremont Avenue (Impact TRANS-12)
3. College Avenue/Claremont Avenue (Impact TRANS-14)

However, unlike the project, Alternative 4 would eliminate Impact TRANS-13 at the 63rd Street/College Avenue (#7) intersection because it would eliminate the traffic volume exiting the Safeway driveway at this intersection.

Table 5-19 summarizes traffic operations under 2035 Plus Alternative 4 Mitigated conditions at the affected intersections. Similar to the project, mitigations TRANS-2, TRANS-3, and TRANS-4 would mitigate the impacts at Alcatraz Avenue/College Avenue, Alcatraz Avenue/Claremont Avenue, and College Avenue/Claremont Avenue intersections, respectively. Since mitigations TRANS-2 and TRANS-3 would need to be approved and implemented by City of Berkeley, and the City of Oakland, as lead agency, does not have jurisdiction, they would continue to be considered significant and unavoidable under this alternative.

Cut-Through Traffic on Alcatraz Avenue

Currently, Alcatraz Avenue between College and Claremont Avenues is a mostly residential street with a peak hour traffic volume of about 480 vehicles during the weekday PM peak hour and about 250 vehicles during the Saturday peak hour. The proposed project, with a driveway on College Avenue, is not expected to add additional traffic to this segment of Alcatraz Avenue. However, the elimination of the outbound movements on the driveway on College Avenue as proposed under Alternative 4 would result in vehicles traveling from the site to north and west to divert to this segment of Alcatraz Avenue. It is estimated that eliminating the Safeway driveway on College Avenue would increase peak hour traffic volumes on Alcatraz Avenue by about 100 vehicles (corresponding to 21 percent increase over existing volumes)

Table 5-19 Intersection Level of Service – 2035 Plus Alternative 4 Mitigated Conditions

#	Intersection	Jurisdiction	Traffic Control[1]	Peak Hour	2035 No Project		2035 Plus Alternative 4		2035 Plus Alternative 4 Mitigated		Significance After Mitigation
					Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	Delay (seconds)[2]	LOS	
5.	Alcatraz Avenue/ College Avenue	Berkeley	Signal	PM	**>120 (v/c = 1.51)**	**F**	**>120 (v/c = 1.54)**	**F**	**112.2**	**F**	Significant and Unavoidable[3]
				SAT	**64.2**	**E**	**70.6**	**E**	38.7	D	
6.	Alcatraz Avenue/ Claremont Avenue	Berkeley	SSSC/ Signal[4]	PM	**>120 (>120)**	**F (F)**	**>120 (>120)**	**F (F)**	39.8	D	Significant and Unavoidable[3]
				SAT	21.1 **(>120)**	C **(F)**	**51.4 (>120)**	**F (F)**	8.3	A	
9.	College Avenue/Claremont Avenue/ 62nd Street	Oakland	Signal	PM	**>120 (v/c = 1.67)**	**F**	**>120 (v/c = 1.80)**	**F**	**>120 (v/c = 1.46)**	**F**	Less than Significant
				SAT	**>120 (v/c = 1.39)**	**F**	**>120 (v/c = 1.49)**	**F**	**>120 (v/c = 1.34)**	**F**	

Notes: **Bold** indicates intersection operating at unacceptable LOS E or LOS F

1. Signal = signalized intersection, SSSC = side-street stop controlled intersection
2. For side-street stop controlled intersections, delay is reported as: intersection average (worst minor street approach); for signalized intersection, the average intersection delay is reported; for signalized intersections operating with high delay, volume-to-capacity (v/c) ratio is also reported. LOS for both unsignalized and signalized intersections based on 2000 HCM.
3. Impact is significant and unavoidable because the intersection is not within Oakland's jurisdiction and it is not certain the measure could be implemented. If the mitigation measure were implemented, the impact would be less than significant.
4. Intersection is side-street stop-controlled under 2035 No Project and 2035 Plus Alternative 3 conditions and signalized under 2035 Plus Alternative 3 Mitigated conditions.

Source: Fehr & Peers, 2010.

during the weekday PM peak hour and about 120 vehicles (48 percent increase) during the Saturday peak hour.

This segment of Alcatraz Avenue is in the City of Berkeley and outside the jurisdiction of City of Oakland. Considering the residential setting of the street, City of Berkeley may consider strategies to reduce the increased through traffic on Alcatraz Avenue. These strategies may consist of installing traffic calming devices such as speed humps, half-closures, or full-closures, and/or all-day or peak hour prohibitions on turns from Alcatraz Avenue to College Avenue, and/or from Claremont Avenue to Alcatraz Avenue.

If Alcatraz Avenue is closed to through traffic, then project generated traffic travelling to northbound College Avenue or westbound Alcatraz Avenue would need to travel through the College Avenue/ Claremont Avenue intersection. A potential closure of Alcatraz Avenue would further exacerbate traffic congestion at this intersection, and result in a significant and unavoidable impact at this intersection.

Transit Travel Time

Table 5-20 shows peak-hour travel times along the major corridors served by AC Transit in the project under Existing Plus Alternative 4 conditions. In comparison to the Existing Plus Project conditions, Alternative 4 would increase travel times along both College and Claremont Avenues during both weekday and Saturday PM peak hours. Alternative 4 would eliminate the outbound movements from the

Table 5-20 Travel Times Along AC Transit Corridors (Alternative 4 Conditions)

Corridor	Direction	Distance (miles)	Peak Hour	Existing		Existing Plus Alternative 4		Existing Plus Alternative 4 Mitigated	
				Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)	Travel Time (min:sec)	Average Speed (mph)
College Avenue	Northbound (Manila Avenue to Ashby Avenue)	1.18	PM	6:06	12	6:32	11	5:01	14
			SAT	5:11	14	5:56	12	4:43	15
	Southbound (Ashby Avenue to Manila Avenue)	1.18	PM	7:44	9	8:03	8	5:33	12
			SAT	5:43	12	6:28	11	4:47	15
Claremont Avenue	Northbound (College Avenue to Ashby Avenue)	0.70	PM	2:45	15	2:59	14	3:09	13
			SAT	2:10	19	2:20	18	2:27	17
	Southbound (Ashby Avenue to College Avenue)	0.70	PM	2:32	17	2:55	15	2:55	15
			SAT	2:40	16	3:22	13	2:54	15

Note: Corridor travel times were calculated using intersection delay and free-flow segment speeds from Synchro 7.0.
Source: Fehr and Peers, 2010.

Safeway driveway on College Avenue and reduce the delay experienced by buses due to automobiles waiting to turn from College Avenue into the project driveway. However, Alternative 4 would result in additional turning traffic at other intersections along both College and Claremont Avenues, which would further block through traffic along both corridors and increase travel times.

In comparison to the project, the proposed mitigation measures for Alternative 4 would result in similar travel times along both College and Claremont Avenues.

Queuing

Similar to the project analysis, queuing impacts were identified where trips generated by Alternative 3 would add 25 or more feet to the existing 95th percentile queue if the existing 95th percentile queue was already over the available storage length or where project trips would extend the queue over the available storage length. The findings are summarized below and in Appendix K.

Existing Conditions

5. Alcatraz Avenue/College Avenue:

   Eastbound through/left/right-turn – Alternative 4 would increase queue from 485 feet to 505 feet in the weekday PM peak hour and from 205 feet to 215 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a weekday PM peak period queue of 485 feet and Saturday PM peak period queue of 240.

9 Claremont Avenue/College Avenue:

   Northbound through/right-turn – Alternative 4 would increase queue from 480 feet to 530 feet in the weekday PM peak hour and from 445 feet to 515 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to 480 feet during the weekday PM peak hour and 480 feet during the Saturday PM peak hour.

   Southbound through/left/right-turn – Alternative 4 would decrease queue from 510 feet to 480 feet in the weekday PM peak hour and from 585 feet to 575 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would further decrease the queue to 400 feet in the weekday PM peak hour and 515 feet in the Saturday PM peak hour, less than Existing No Project conditions.

2015 Conditions

5. Alcatraz Avenue/College Avenue:

   Eastbound through/left/right-turn - Alternative 4 would increase queue from 555 feet to 575 feet in the weekday PM peak hour and from 245 feet to 290 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 550 feet during the weekday PM peak hour and 290 feet during the Saturday PM peak hour.

   Northbound through/left/right-turn - Alternative 4 would decrease queue from 330 feet to 215 feet in the weekday PM peak hour and from 365 feet to 230 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would change the queue to 220 feet in the weekday PM peak hour and 205 feet in the Saturday PM peak hour.

6 Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn - Alternative 4 would increase the queue from 575 feet to 745 feet during the weekday PM peak hour; storage length is 560 feet. The queue would decrease due to the proposed signalization of the upstream intersection on Claremont Avenue at Safeway Driveway, which would meter through traffic on Claremont Avenue. The proposed mitigation measures would further reduce the queue to 235 feet.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn - Alternative 4 would increase queue from 600 feet to 650 feet in the weekday PM peak hour and from 490 feet to 555 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would decrease the queue to 610 feet during the weekday PM peak hour and 520 feet during the Saturday PM peak hour.

Southbound through/left/right-turn - Alternative 4 would decrease queue from 600 feet to 585 feet in the weekday PM peak hour and from 680 feet to 675 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would further decrease the queue to 505 feet in the weekday PM peak hour and 610 feet in the Saturday PM peak hour.

2035 Conditions

5. Alcatraz Avenue/College Avenue:

Eastbound through/left/right-turn - Alternative 4 would increase queue from 795 feet to 820 feet in the weekday PM peak hour and from 375 feet to 400 feet in the Saturday PM peak hour; storage length is 225 feet. The proposed mitigation measures would result in a queue of 755 feet during the weekday PM peak hour and 390 feet during the Saturday PM peak hour.

Northbound through/left/right-turn - Alternative 4 would decrease queue from 485 feet to 380 feet in the weekday PM peak hour and from 480 feet to 355 feet in the Saturday PM peak hour; storage length is 275 feet. The proposed mitigation measures would further decrease the queue to 340 feet in the weekday PM peak hour and 265 feet in the Saturday PM peak hour.

6 Alcatraz Avenue/Claremont Avenue:

Eastbound left/right-turn – The weekday PM peak hour queue would exceed beyond the available 560-foot storage length regardless of the project. The proposed mitigation measures would reduce the queue to 530 feet.

Northbound through/left-turn – Alternative 4 would increase the weekday PM peak period queue from 25 feet to 45 feet. The proposed mitigation measures would further increase the queue to 465 feet.

9 Claremont Avenue/College Avenue:

Northbound through/right-turn - Alternative 4 would increase queue from 915 feet to 955 feet in the weekday PM peak hour and from 730 feet to 785 feet in the Saturday PM peak hour; storage length is 400 feet. The proposed mitigation measures would result in queues of 920 feet during the weekday PM peak hour and 755 feet during the Saturday PM peak hour.

Southbound through/left/right-turn - Alternative 4 would increase queue from 635 feet to 650 feet in the weekday PM peak hour and reduce queue from 765 feet to 600 feet in the Saturday PM peak hour; storage length is 250 feet. The proposed mitigation measures would result in queues of 690 feet in the weekday PM peak hour and 700 feet in the Saturday PM peak hour.

Summary of Traffic Impacts

In comparison to the proposed project, Alternative 4 would result in improved pedestrian conditions along the project frontage on College Avenue.

- Impacts TRANS-17A and -17B relating to pedestrian crossings on College Avenue at 63rd Street and the Safeway Driveway, which can be mitigated under the proposed project, would be reduced under this alternative.

Most of the significant impacts identified for the project would continue to be significant under Alternative 4, with the following exception.

- Impact TRANS-13 at the 63rd Street/College Avenue (#7) intersection would be eliminated.

Air Quality. The operational emissions from Alternative 4 would be essentially the same as for the proposed project. The increases in emissions of all criteria pollutants (ROG, NO_x, PM_{10} and $PM_{2.5\_}$) would well below the applicable BAAQMD thresholds of significance, and would not result in any significant unavoidable adverse impacts.

Alternative 4 (like the project) would result in the emissions of toxic air contaminants during construction (from diesel powered trucks and construction equipment) within 150 meters (approximately 500 feet) of sensitive receptors,, and would be mitigated to a less-than-significant level.

Greenhouse Gases. With the same square footage under this alternative, the GHG emissions from Alternative 4 would be the same as for the proposed project and would be less than significant. Construction period GHG emissions would be essentially the same as for the proposed project and would be less than significant.

Noise Impacts. The noise impacts from this re-configuration of the project would be the same as for the proposed project. It is noted that with this Alternative there would be more traffic using the Claremont Avenue entrance to the project. However, the noise analysis indicated that traffic on the ramp would be fairly well shielded by a new wall to be constructed along the property boundary, and that noise from slow-moving cars on the ramp would be reduced on the order 15 dB, so that the maximum noise from cars would be in compliance with the nighttime noise limit of 65 dBA, and would not result in a significant impact. The re-configuration under Alternative 4 would not change this conclusion.

Land Use Impacts. The proposed project would not have any Significant and Unavoidable land use impacts. From a land use perspective, this Alternative is virtually identical to the proposed project, and like the project, it would not have any Significant and Unavoidable land use impacts.

Visual Impacts. The proposed project would not have any Significant and Unavoidable visual impacts; nor would this Alternative. Its visual impacts would be essentially identical to those of the proposed project.

Comparison of Project and Alternatives 3 and 4

Table 5-21 compares the impacts, mitigations and other traffic operations issues under the project and Alternatives 3 and 4.

Table 5-21 Project and Access Alternatives Comparison

Impact	Location	Project (Driveway on College Avenue)	Alternative 3 (No Driveway on College Avenue)	Alternative 4 (Inbound Only Access at Driveway on College Ave)
Existing Conditions				
TRANS-2	Alcatraz Avenue/ College Avenue	Mitigate by providing northbound and southbound left-turn lanes, upgrade signal equipment. Considered SU because in Berkeley.	Same as Project + more delay.	Same as Project with less delay.
TRANS-3	Alcatraz Avenue/ Claremont Avenue	Mitigate by signalizing. Considered SU because in Berkeley.	Same as Project + more delay.	Same as Project.
TRANS-4	College Avenue/ Claremont Avenue	Mitigate by upgrading signal equipment.	Cannot be Mitigated/SU.	Same as Project.
2015 Conditions				
TRANS-6	Alcatraz Avenue/ College Avenue	Same as TRANS-2	Same as Project + more delay.	Same as Project with less delay.
TRANS-7	Alcatraz Avenue/ Claremont Avenue	Same as TRANS-3	Same as Project + more delay.	Same as Project.
TRANS-8	College Avenue/ Claremont Avenue	Same as TRANS-4	Cannot be Mitigated/SU.	Same as Project.
2035 Conditions				
TRANS-11	Alcatraz Avenue/ College Avenue	Same as TRANS-2	Same as Project + more delay.	Same as Project with less delay.
TRANS-12	Alcatraz Avenue/ Claremont Avenue	Same as TRANS-3	Same as Project + Need 2nd Eastbound Lane.	Same as Project + more delay.
TRANS-13	63rd Street/ College Avenue	Mitigate by signalizing. Considered SU.	No Impact.	No Impact.
TRANS-14	College Avenue/ Claremont Avenue	Same as TRANS-4	Cannot be Mitigated/SU.	Same as Project + more delay.
Other Impacts				

Impact	Location	Project (Driveway on College Avenue)	Alternative 3 (No Driveway on College Avenue)	Alternative 4 (Inbound Only Access at Driveway on College Ave)
TRANS-17	Pedestrian Issues	Provide bulbouts on the west side of College Ave and improve crosswalk across Project Driveway.	No Impact.	Provide bulbouts on the west side of College Ave.
Non-Impacts				
Existing Traffic Volume on Alcatraz Ave between College Ave and Claremont Ave		480 during weekday PM/ 250 during SAT PM.	680 during weekday PM/ 490 during SAT PM.	580 during weekday PM/ 370 during SAT PM.
Bus Travel Times along College Ave (Existing Plus Project with Mitigations) - Weekday / SAT (min:sec)				
Northbound Southbound		5:00 / 4:40 5:00 / 4:40	5:30 / 5:20 5:00 / 4:30	5:00 /4:40 5:30 /4:40
Queues (with mitigations)				
Southbound Left-turn on College Avenue at Alcatraz Avenue		No spill backs.	Spill out of pocket in Existing, 2015, and 2035.	No spill backs.
Northbound on College Avenue at Alcatraz Avenue		Spill back past 63rd Street in 2015, 2035.	Spill back past 63rd Street in 2035, but shorter than Project.	Spill back past 63rd Street in 2035, but shorter than Project and Alternative 3.
Southbound on College Avenue at Claremont Avenue		Spill back past 63rd Street in Existing, 2015 and 2035.	Spill back past 63rd Street in Existing, 2015 and 2035, but slightly shorter than Project.	Spill back past 63rd Street in Existing, 2015 and 2035, but slightly shorter than Project and about the same as Alternative 3.
Northbound on Claremont Avenue at Alcatraz Avenue		Spill back past Project Driveway on Claremont in 2035.	Same as Project + longer queues.	Same as Project + longer queues, but shorter queues than Alternative 3.
Eastbound on Alcatraz Avenue at Claremont Avenue		No spill backs.	Spill back past College Avenue in 2035.	No spill backs.
Southbound on Claremont Avenue at Project Driveway		No spill backs.	Spill back past Alcatraz Ave in 2035.	No spill backs.

Source: Fehr & Peers, 2011.

5.5.5 Alternative 5 – No Project Alternative

Traffic Impacts. There would be no changes in traffic generation or traffic patterns under the No Project Alternative. Traffic would generally remain as described under the Existing Conditions scenario, increasing modestly under the 2015 and 2035 scenarios.

Air Quality. The No Project Alternative would not involve any new construction or expansion of the existing Safeway store, and would not result in the generation of new vehicular emissions. There would be no air quality impacts from this Alternative.

Greenhouse Gases. The No Project Alternative would not result in any new construction, nor would it generate new vehicular trips. Accordingly, it would not be a new source of GHGs and would not result in GHG impacts under CEQA.

Noise Impacts. The existing noise impacts on adjoining residences from ongoing Safeway operations would continue into the future under the No Project Alternative. These include impacts from loading dock noise, the trash compactor operations, on-site recycling, and traffic related sounds from the Safeway parking lot.

Construction period noise impacts would not occur under the No Project Alternative.

Land Use Impacts. With the No Project Alternative, the on-going noise impacts (which are also a type of Land Use conflict) from the operation of the existing Safeway store would not be addressed. Accordingly, the existing land use impacts would continue into the future.

Visual Impacts. The No Project Alternative would not involve any new construction on the site and there would be no visual changes relative to existing conditions.

5.6 Environmentally Superior Alternative

The CEQA Guidelines require that the EIR identify an Environmentally Superior Alternative (CEQA Guidelines, Section 15126.6), which is the CEQA Alternative that reduces or avoids the environmental impacts of the project to the greatest extent.

Key to identifying the Environmentally Superior Alternative is identifying the alternative that best reduces or eliminates the significant unavoidable impact(s) of the project. The extent to which an alternative reduces or avoids less-than-significant impacts indentified in the EIR is also considered, balanced with the priority of aiming to reduce the significant unavoidable impact(s). Table 5-22 presents a summary of the impacts of the alternatives compared to the proposed project in tabular format.

For the proposed project, eleven SU impacts have been identified related to the project’s traffic impacts. Ten of the transportation impacts (TRANS-1, 2, 3, 5, 6, 7, 9,10, 11 and 12) are classified SU, even though it would be feasible to mitigate them to a less-than-significant level, because the City of Oakland does not have jurisdiction over the affected intersections, and with it, the ability to require implementation of the appropriate mitigation. Because the only SU impacts are traffic, the consideration of the traffic impacts of the Alternative is central to this chapter. One of the transportation impacts (TRANS-13) is classified SU because the identified mitigation may be infeasible.

There would be no change in traffic generation or traffic patterns under the No Project Alternative (Alternative 5). Traffic would generally remain as described under the Existing Conditions scenario, increasing modestly under the 2015 and 2035 scenarios. The No Project Alternative would avoid the significant unavoidable impacts of the project but would not achieve any of the basic project objectives. Based on its avoidance of the project's significant traffic impacts, the No Project Alternative would be considered to be the environmentally superior alternative. In accordance with CEQA Guidelines section 15126.6(e)(2), if the environmentally superior alternative is the no project alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

As shown in Table 5-6, Alternative 2b, the 25,250-Square-Foot Reduced Size Project would generate 189 fewer trips than the project during the weekday PM peak hour and 247 fewer trips during the Saturday PM peak hour. As a result, Alternative 2b would cause fewer significant impacts than the proposed project. The alternative would eliminate Impact TRANS-10 at the Ashby Avenue/Claremont Avenue intersection and Impact TRANS-13 at the 63rd Street/College Avenue intersection. It is likely that this alterantive would eliminate most of the other identified project impacts. The magnitude of all impacts would be reduced compared to the proposed project. For these reasons, Alternative 2b would be considered to be the environmentally superior alternative.

Although Alternative 2b would result in fewer signifiant impacts than the proposed project, it would not meet several of the primary project objectives. These objectives include, among others, to: replace the existing 1960s suburban style development with a modern, urban design that de-emphasizes the prominence of surface-level parking consistent with the site's General Plan and zoning designations; construct a new Safeway store sufficient in size to offer a more comprehensive range of commercial services and products to Safeway's customers, including an on-site, "from scratch" bakery, a pharmacy, expanded floral offerings, an expanded deli (including warm food table, and prepared catering food items), a "service" meat and seafood service (as compared to the pre-packaged items currently available), and a greatly expanded produce section; create a more functional and efficient shopping area configuration to eliminate current "pinch points" in Safeway customers' path of travel and enhance the overall shopping experience of customers; create a mixed-use retail development project that promotes pedestrian activity and comparison shopping at the College/Claremont corner; and provide more street-front retail opportunities similar in scope and scale to the retail frontage on College Avenue.

Although Alternative 2, the 40,000-Square-Foot Reduced Size Project, would not avoid the project's significant impacts to the same extent as Alternative 2b, it would meet the project objectives to a greater degree than Alternative 2b. Therefore, after Alternative 2b, Alternative 2 would be considered to be the next environmentally superior alternative. Alternative 2 would generate 111 fewer trips than the project during the weekday PM peak hour and 145 fewer trips during the Saturday PM peak hour. As a result, Alternative 2 would cause fewer significant impacts than the proposed project. The alternative would eliminate Impact TRANS-10 at the Ashby Avenue/Claremont Avenue intersection, as well as TRANS-13 at the 63rd Street/College Avenue intersection. Impacts TRANS-1, -2, -3, -5, 6, -7, -9, -11, and -12 would remain significant and unavoidable because they would all continue to require mitigation that is beyond the jurisdiction of the City of Oakland. Like Alternative 2b, Alternative 2 would potentially allow for more extensive buffering between the northern part of the site and the adjoining residential area, further reducing the potential noise, land use and visual impacts (all classified as less-than-significant) relative to the proposed project.

TABLE 5-22
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES SIGNIFICANT IMPACTS

	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
4.2 Visual Quality									
Impact AES-3: Project construction activity and operations, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, would result in cumulative impacts related to visual character, views, aesthetics, shadow, or light and glare. (Less than Significant)	LSC	LSC	LSC	LSC	LSC	LSC	LSC	LSC	N ↓
4.3 Transportation, Circulation and Parking									
Impact TRANS-1: The proposed project would contribute to LOS E operations and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under Existing Conditions. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU	SU	N ↓
Impact TRANS-2: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under Existing Conditions. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU ↑	SU ↓	N ↓
Impact TRANS-3: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under Existing Conditions. (Significant)	SU	SU	SU ↓	SU ↓	LS ↓	LS ↓	SU ↑	SU	N ↓

Note:
* Some or all of the starred impacts may be reduced to a less-than-significant level under these alternatives. However, because detailed LOS analyses were not performed for these alternatives, the impacts remain classified as SU, although less severe than under the proposed projects.

TABLE 5-22
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES SIGNIFICANT IMPACTS

	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
Impact TRANS-4: The proposed project would contribute to LOS E operations, increase the average intersection vehicle delay by more than four seconds, and increase delay for the critical movements of northbound College Avenue and northeastbound Claremont Avenue by more than six seconds, during the weekday PM peak hour; and degrade intersection operations from LOS E to LOS F during the Saturday PM peak hour at the College Avenue/ Claremont Avenue (#9) intersection under Existing Conditions. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	SU ↑	LSM	N ↓
Impact TRANS-5: The proposed project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the Ashby Avenue/College Avenue (#1) intersection under 2015 Conditions. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU	SU	N ↓
Impact TRANS-6: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2015 Conditions. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU ↑	SU ↓	N ↓
Impact TRANS-7: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2015 Conditions.	SU	SU	SU ↓	SU ↓	LS ↓	LS ↓	SU ↑	SU	N ↓

Note:
* Some or all of the starred impacts may be reduced to a less-than-significant level under these alternatives. However, because detailed LOS analyses were not performed for these alternatives, the impacts remain classified as SU, although less severe than under the proposed projects.

TABLE 5-22
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES SIGNIFICANT IMPACTS

	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
(Significant)									
Impact TRANS-8: The proposed project would contribute to LOS F operations, increase the average intersection vehicle delay by more than two seconds, and increase delay for a critical movement by more than four seconds, during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2015 Conditions. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	SU ↑	LSM	N ↓
Impact TRANS-9: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours at the Ashby Avenue/College Avenue (#1) intersection under 2035 Conditions. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU	SU	N ↓
Impact TRANS-10: The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the weekday PM peak hour at the Ashby Avenue/Claremont Avenue (#2) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)	SU	SU	SU ↓	LS ↓	LS ↓	LS ↓	SU	SU	N ↓
Impact TRANS-11: The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds during the Saturday PM peak hour at the Alcatraz Avenue/College Avenue (#5) intersection under 2035 Conditions. This is a significant impact based on City of Berkeley's significance criteria. (Significant)	SU	SU	SU ↓	SU ↓	SU ↓*	SU ↓*	SU ↑	SU ↓	N ↓

Note:
* Some or all of the starred impacts may be reduced to a less-than-significant level under these alternatives. However, because detailed LOS analyses were not performed for these alternatives, the impacts remain classified as SU, although less severe than under the proposed projects.

TABLE 5-22
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES SIGNIFICANT IMPACTS

	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
Impact TRANS-12: The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the Alcatraz Avenue/Claremont Avenue (#6) intersection which would meet the peak hour signal warrant under 2035 Conditions. (Significant)	SU	SU	SU ↓	SU ↓	LS ↓	LS ↓	SU ↑	SU ↑	N ↓
Impact TRANS-13: The proposed project would add more than 10 trips to the 63rd Street/College Avenue (#7) intersection which would meet the peak hour signal warrant under 2035 Conditions. (Significant)	SU	SU	LS ↓	LS ↓	LS ↓	N ↓	N ↓	N ↓	N ↓
Impact TRANS-14: The proposed project would contribute to LOS F operations and increase the intersection v/c ratio by more than 0.03 during both weekday and Saturday PM peak hours at the College Avenue/Claremont Avenue (#9) intersection under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	SU ↑	LSM ↑	N ↓
Impact TRANS-15: The proposed project would contribute to LOS F operations, increase the average intersection delay by more than two seconds, and increase delay for a critical movement by more than four seconds, during the weekday PM peak hours at the Forest Street/Claremont Avenue (#10) intersection under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	LSM	LSM	N ↓
Impact TRANS-16: The proposed project would contribute to LOS E operations, increase the average intersection delay by more than four seconds during the weekday PM peak hours at the Hudson Street/Manila Avenue/College Avenue (#15) intersection under	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	LSM	LSM	N ↓

Note:
* Some or all of the starred impacts may be reduced to a less-than-significant level under these alternatives. However, because detailed LOS analyses were not performed for these alternatives, the impacts remain classified as SU, although less severe than under the proposed projects.

TABLE 5-22
COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES SIGNIFICANT IMPACTS

	Proposed Project	Alternative 1a:Mixed-Use Alternative with Regular Apartments	Alternative 1b:Mixed-Use Alternative with Senior Housing	Alternative 2: 40,000-Square-Foot Reduced Size Project	Alternative 2a – 35,750-Square-Foot Reduced Size Project	Alternative 2b – 25,250-Square-Foot Reduced Size Project	Alternative 3 – Full Project with No Curb Cut on College Avenue	Alternative 4 – Full Project with Inbound Only Driveway on College Avenue	Alternative 5 – No Project Alternative
2035 Conditions. This is a significant impact based on City of Oakland's significance criteria. (Significant)									
Impact TRANS-17A: Pedestrian crossings on College Avenue at 63rd Street and Safeway Driveway. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	LSM ↓	LSM ↓	N ↓
Impact TRANS-17B: Pedestrian crossings on the Safeway Driveway on College Avenue. (Significant)	LSM	LSM	LS ↓	LS ↓	LS ↓	N ↓	N ↓	N ↓	N ↓
4.4 Air Quality									
Impact AIR-1: Activities associated with demolition, site preparation, and construction would generate short-term emissions of criteria pollutants. (Less than Significant)	LSC	LSC	LSC ↓	LSC ↓	LSC ↓	LSC ↓	LSC	LSC	N
Impact AIR-2: Activities associated with demolition, site preparation, and construction would generate short-term emissions of fugitive dust. (Significant)	LSC	LSC	LSC ↓	LSC ↓	LSC ↓	LSC ↓	LSC	LSC	N
Impact AIR-3: Construction activities would expose nearby sensitive receptors to substantial levels of PM2.5 and toxic air contaminants (TACs), which may lead to adverse health effects. (Significant)	LSM	LSM	LSM ↓	LSM ↓	LSM ↓	LSM ↓	LSM	LSM	N
4.6 Noise									
Impact NOI-1: Construction activities associated with the proposed project would temporarily generate noise levels that could conflict with standards established in the City noise ordinance. (Less than Significant)	LSC	LSC ↑	LSC ↑	LSC ↓	LSC ↓	LSC ↓	LSC	LSC	N

Note:

* Some or all of the starred impacts may be reduced to a less-than-significant level under these alternatives. However, because detailed LOS analyses were not performed for these alternatives, the impacts remain classified as SU, although less severe than under the proposed projects.

CHAPTER 6
Impact Overview and Growth-Inducing Impacts

6.1 Significant Unavoidable and Cumulative Environmental Impacts

A significant and unavoidable impact would result if a project reaches or exceeds the defined threshold of significance and no feasible mitigation measure is available to reduce the significant impact to a less-than-significant level. The proposed project would result in the following significant and unavoidable (SU) environmental effects and/or cumulative impacts, as identified in Chapter 4 of this EIR:

Traffic and Transportation:

1. **Impact TRANS-1:** The proposed project would contribute to LOS E operations and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour, and contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the *Ashby Avenue/College Avenue (#1) intersection* under Existing Conditions.
2. **Impact TRANS-2:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under Existing Conditions.
3. **Impact TRANS-3:** The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection* which would meet the peak hour signal warrant under Existing Conditions.
4. **Impact TRANS-5:** The proposed project would degrade intersection operations from LOS E to LOS F and increase the average intersection vehicle delay by more than three seconds during the weekday PM peak hour and contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the Saturday peak hour at the *Ashby Avenue/College Avenue (#1) intersection* under 2015 Conditions.
5. **Impact TRANS-6:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS D to LOS E and increase intersection average delay by more than two seconds during the Saturday PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under 2015 Conditions.
6. **Impact TRANS-7:** The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection* which would meet the peak hour signal warrant under 2015 Conditions.

7. **Impact TRANS-9:** The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during both weekday and Saturday PM peak hours at the *Ashby Avenue/College Avenue (#1) intersection* under 2035 Conditions.
8. **Impact TRANS-10:** The proposed project would contribute to LOS F operation and increase the v/c ratio by more than 0.01 during the weekday PM peak hour at the *Ashby Avenue/Claremont Avenue (#2) intersection* under 2035 Conditions.
9. **Impact TRANS-11:** The proposed project would contribute to LOS F operations and increase the v/c ratio by more than 0.01 during the PM peak hour and degrade intersection operations from LOS E to LOS F and increase intersection average delay by more than three seconds during the Saturday PM peak hour at the *Alcatraz Avenue/College Avenue (#5) intersection* under 2035 Conditions.
10. **Impact TRANS-12:** The proposed project would contribute to LOS F operation at the side-street stop-controlled eastbound approach at the *Alcatraz Avenue/Claremont Avenue (#6) intersection* which would meet the peak hour signal warrant under 2035 Conditions.
11. **Impact Trans-**13: The proposed project would add more than 10 trips to the *63rd Street/College Avenue (#7) intersection* which would meet the peak hour signal warrant under 2035 Conditions. This is a significant impact based on City of Oakland's significance criteria.

6.2 Growth-Inducing Impacts

Section 15126.2(d) of the CEQA Guidelines requires that an EIR should discuss "…the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Growth can be induced in a number of ways, including through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through precedent-setting action.

Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped. Typically, projects on infill sites that are surrounded by existing urban uses are not considered growth-inducing because it usually does not facilitate development intensification on adjacent sites.

Because the proposed project would be redeveloping a grocery store use and adding local-serving retail and restaurant uses, it is not expected to have growth-inducing effects. The project site is in a developed area fully served by public utilities. There are no significant areas that are undeveloped adjacent to the project site. Additionally, the proposed project would not remove any obstacles that would help facilitate growth that could significantly affect the physical environment.

Indirect population growth associated with the proposed project could occur in association with job creation. The economic stimulus generated by construction of the proposed project could result in the creation of new construction-related jobs. It is estimated that the future operations at the completed project would employ an additional approximately 100 to 120 people. However, the jobs created during both the construction and operation phases of the project would not be substantial in the context of job growth in Oakland and the region over the next 10 to 20 years. The proposed project's employment would represent about a small amount of the total 2005 employment in Oakland and of the City's future total employment as projected by ABAG's projections for Oakland in 2030. Consequently, the proposed project would not result in a substantial population increase or induce unanticipated new growth.

The proposed project does not include housing; therefore, it would not directly induce an increase in residential population. Indirectly, as described above, it could bring some new residents into the downtown area, fulfilling Oakland's 10k in Downtown plan.

The proposed project would occur on an infill site in an existing urbanized neighborhood in Oakland. It would not result in the extension of utilities or roads into exurban areas, and would not directly or indirectly lead to the development of greenfield sites in the East Bay.

6.3 Significant Irreversible Environmental Effects

An EIR must identify any significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA dictates that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified (CEQA Guidelines §15126.2(c)). The CEQA Guidelines identify three distinct categories of significant irreversible changes: (1) changes in land use that would commit future generations; (2) irreversible changes from environmental accidents and (3) consumption of non-renewable resources.

Changes in Land Use Which Would Commit Future Generations

The proposed project would allow for the improvement of approximately 2.1 acres of land in North Oakland. The proposed project is consistent with the land use designated by the City of Oakland's General Plan. Because the proposed project would occur on an infill site on land within an urban area surrounded by similar or compatible uses, it would not commit future generations to a significant change in land use.

Irreversible Changes from Environmental Accidents

No significant irreversible environmental damage, such as what could occur as a result of an accidental spill or explosion of hazardous materials, is anticipated due to implementation of the proposed project. Furthermore, compliance with federal, state and local regulations, the City of Oakland's Standard Conditions of Approval, would reduce to a less-than-significant level the possibility that hazardous substances within the project site would cause significant environmental damage.

Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes conversion of agricultural lands, loss of access to mining reserves, and use of non-renewable energy sources. The project site is located within an urban area of Oakland; no agricultural land would be converted to non-agricultural uses. The project site does not contain known mineral resources and does not serve as a mining reserve.

Construction of proposed project would require the use of energy, including energy produced from non-renewable resources. Energy consumption would also occur during the operational period of the proposed project due to the use of automobiles, lighting, and appliances. However, the proposed project would incorporate energy-conserving features, as required by the uniform Building Code and California Energy Code Title 24. The proposed project would also incorporate sustainable construction features where feasible or as otherwise required by law, resulting in a more energy efficient development and reduced consumption using local materials and labor.

6.4 Effects Found Not To Be Significant

Meetings with representatives of the City of Oakland departments involved in the planning and review of development projects, and consultants for the City were held to determine the preliminary scope of the proposed project. In addition to those meetings, a Notice of Preparation (NOP) and Initial Study (IS) was circulated on October 30, 2009. Written comments received on the NOP/IS were considered in the preparation of the final scope for this document and in the evaluation of the proposed project.

The NOP prepared for the proposed project indicated there would likely be no environmental effects on or to aesthetics; agricultural resources; biological resources; cultural resources, geology and soils; hazards and hazardous materials; hydrology and water quality; land use and planning; mineral resources; population and housing; public services; recreation; and utilities and service systems.

References – Impact Overview and Growth-Inducing Impacts

City of Oakland, *Envision Oakland, City of Oakland General Plan, Land Use and Transportation Element (LUTE)*, as amended through March 24, 1998.

City of Oakland, *Open Space, Conservation and Recreation (OSCAR), An Element of the Oakland General Plan*, adopted June 1996.

CHAPTER 7
Report Preparers

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SAFEWAY SHOPPING CENTER – COLLEGE AND CLAREMONT AVENUES

Draft Environmental Impact Report
File No. ER09-0006
State Clearinghouse # 2009112008
2009102100

APPENDICES

City of Oakland, California
350 Frank H. Ogawa Plaza
Suite 300
Oakland, CA 94612

Technical Appendix

Safeway on College Avenue Transportation Analysis

April 2011

WC07-2483

FEHR PEERS

Table of Contents

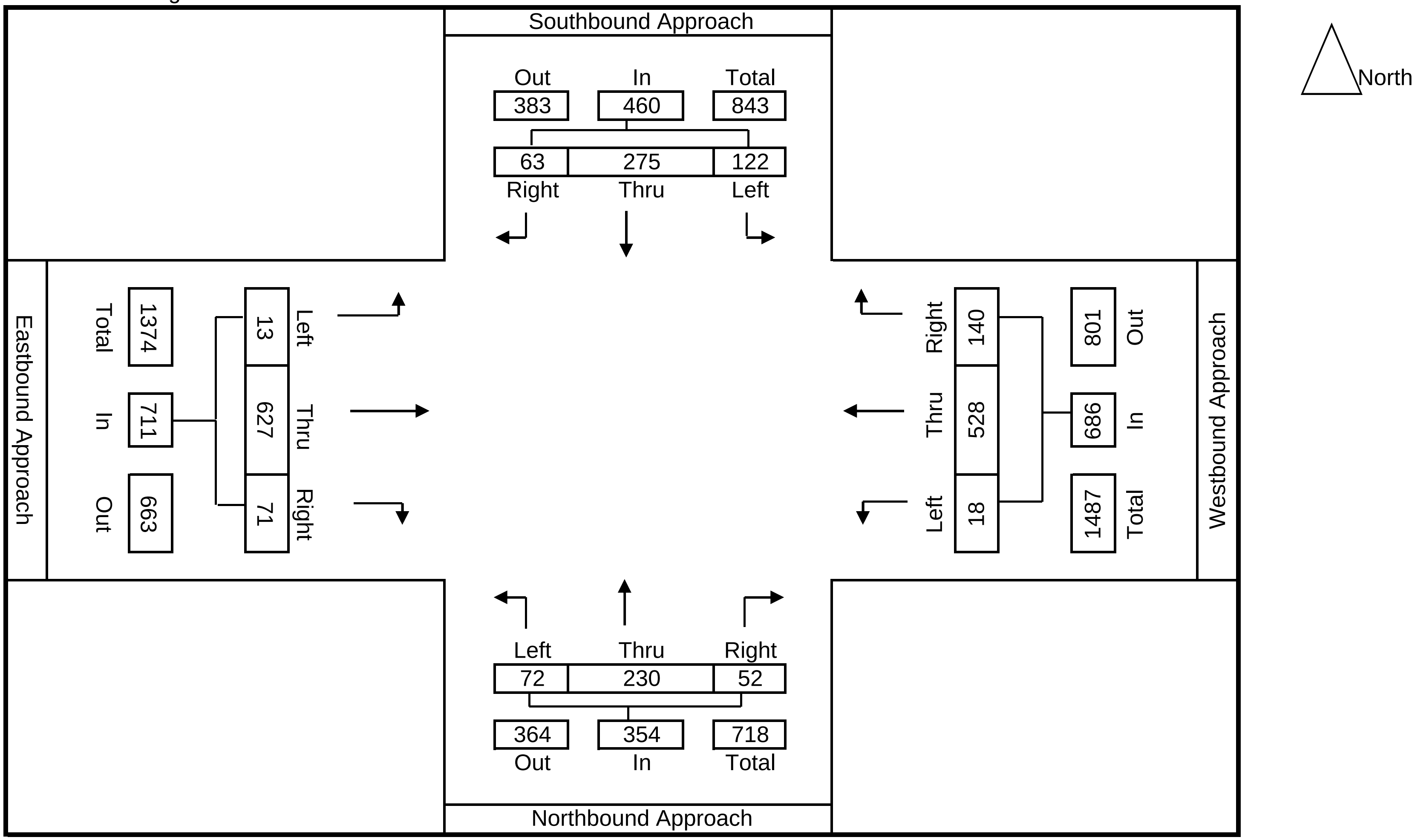
Appendix A
Intersection Count Data

FEHR PEERS

ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Ashby Ave
PM Peak Hr Begins at: 515 PM PM

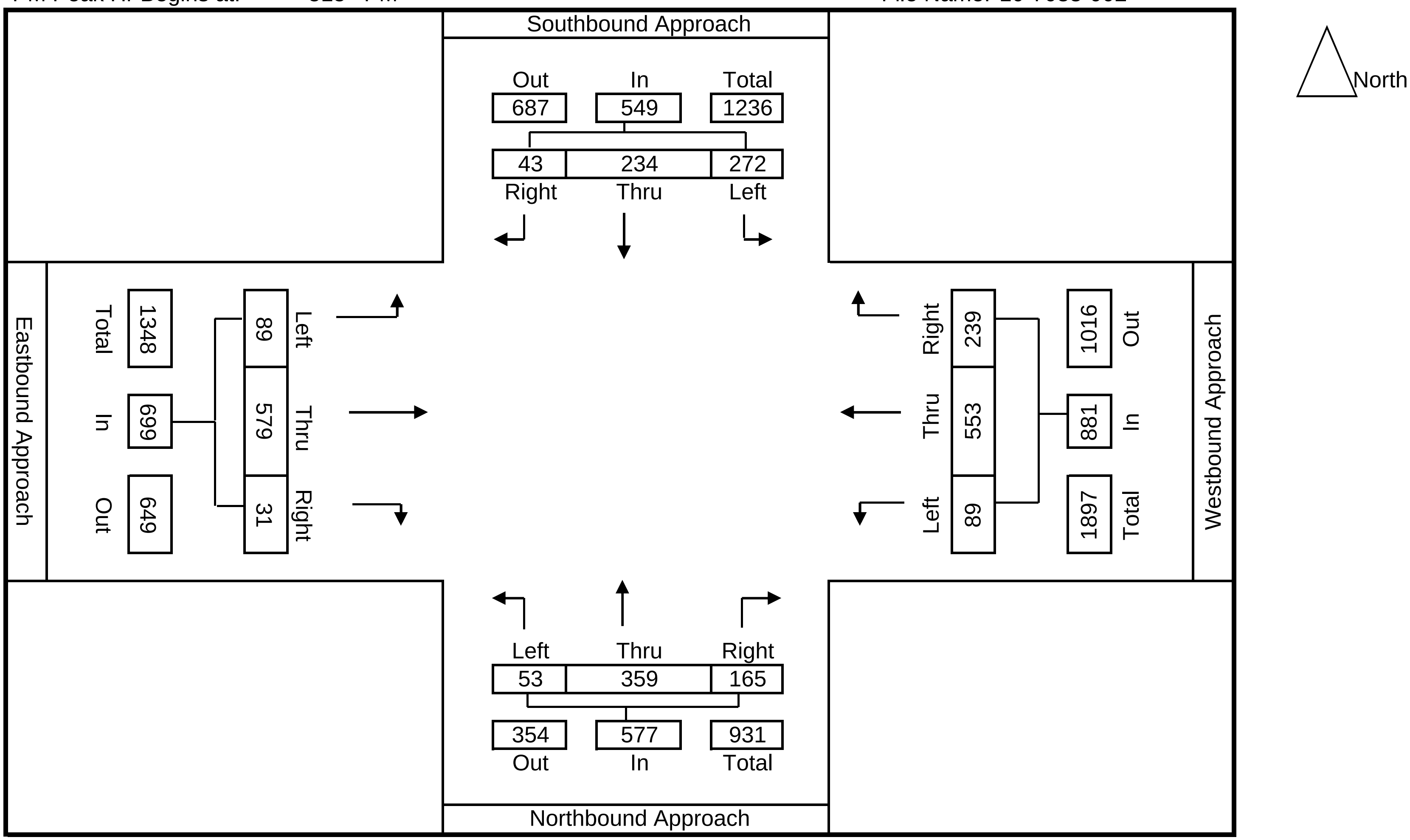
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-001



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Ashby Ave
PM Peak Hr Begins at: 515 PM

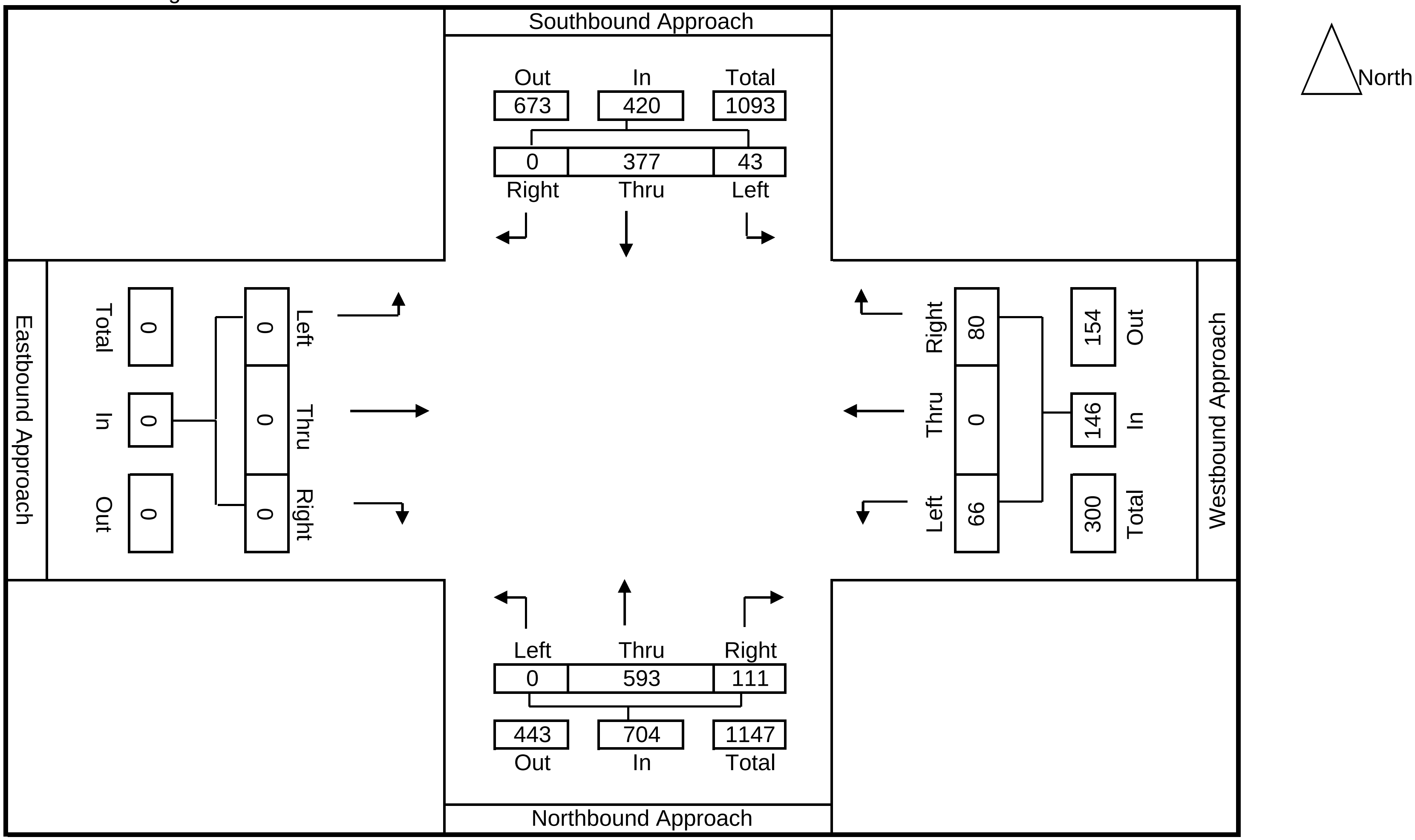
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-002



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: The Uplands
PM Peak Hr Begins at: 515 PM

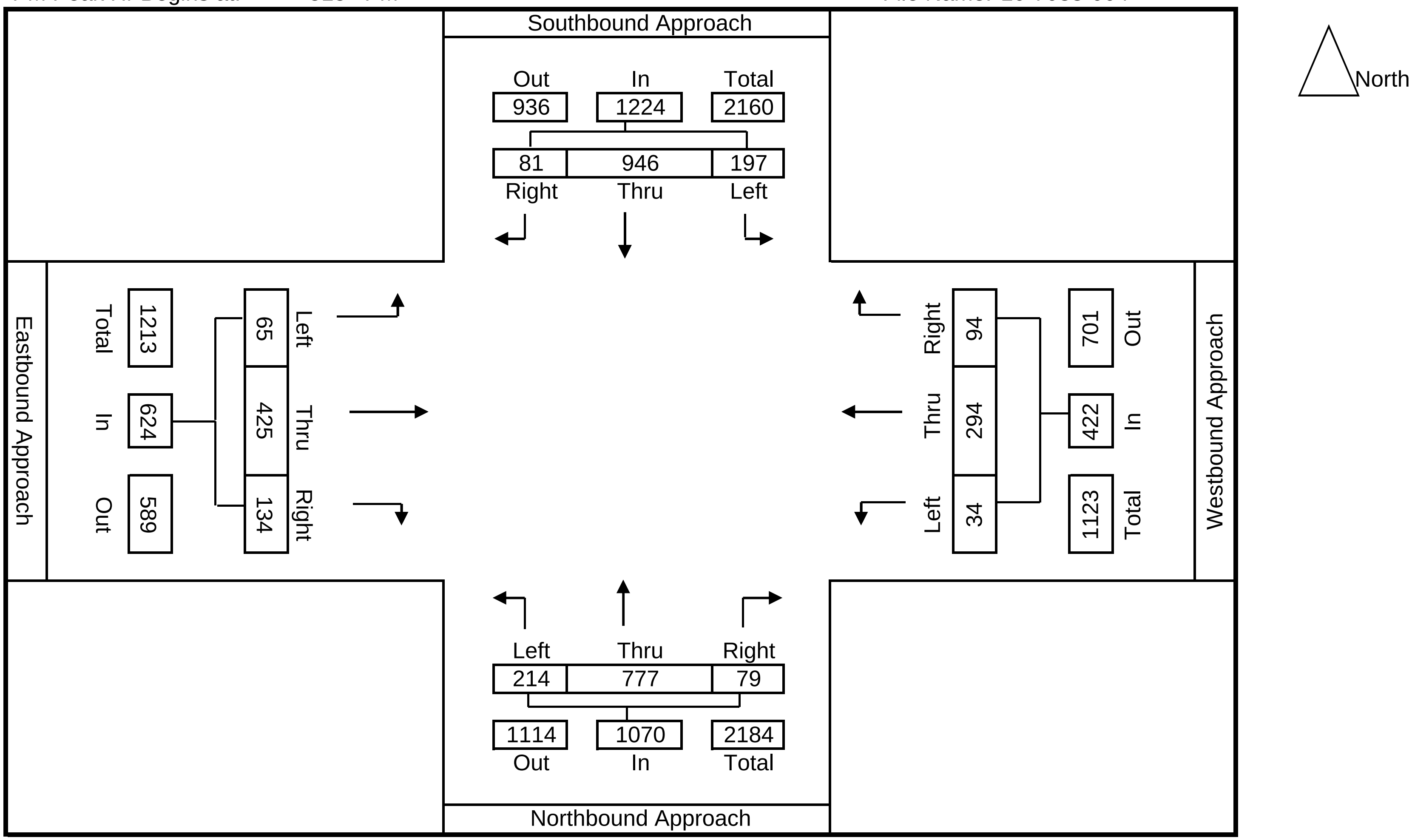
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-003



ALL TRAFFIC DATA, INC

North/South Street: Telegraph Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

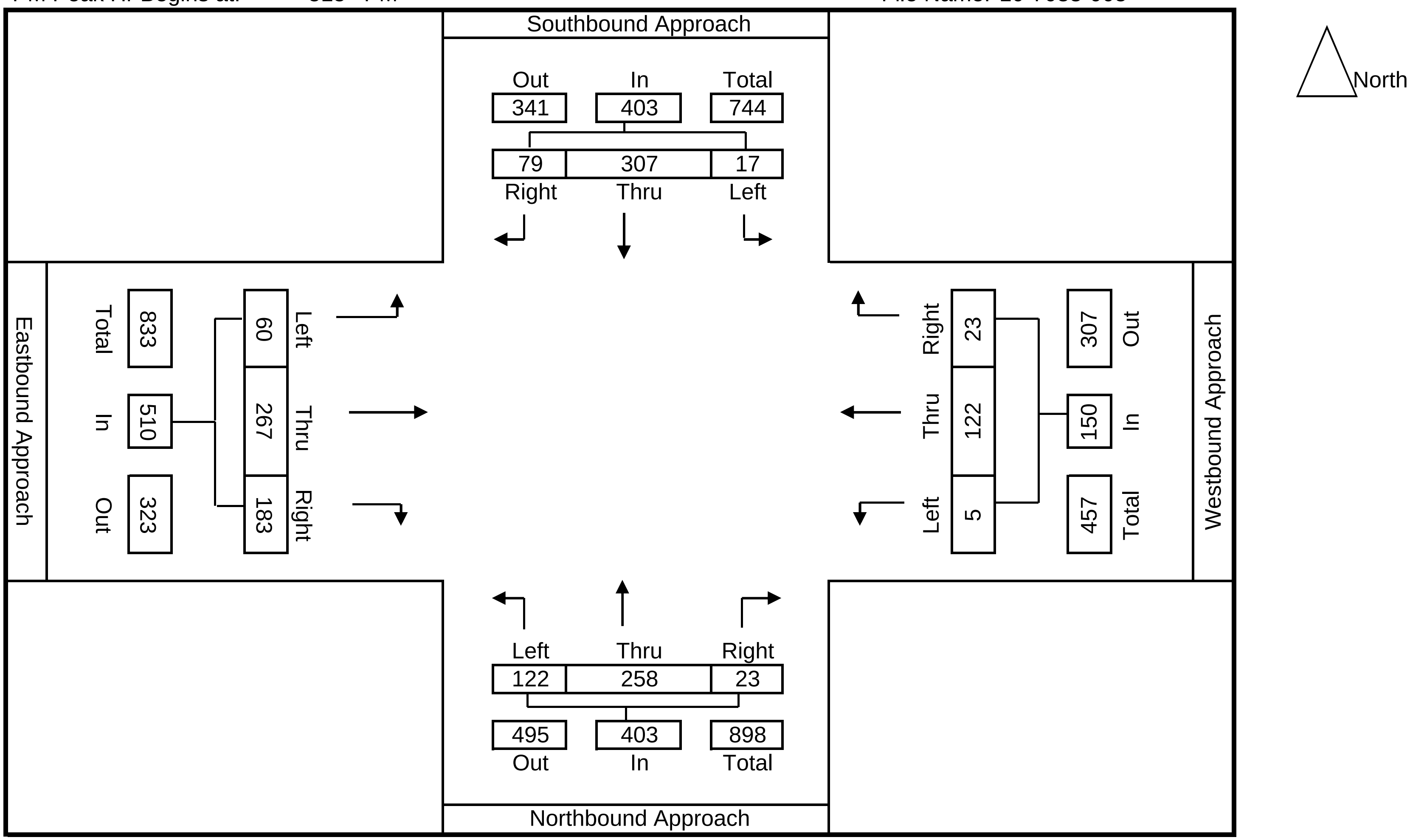
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-004



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

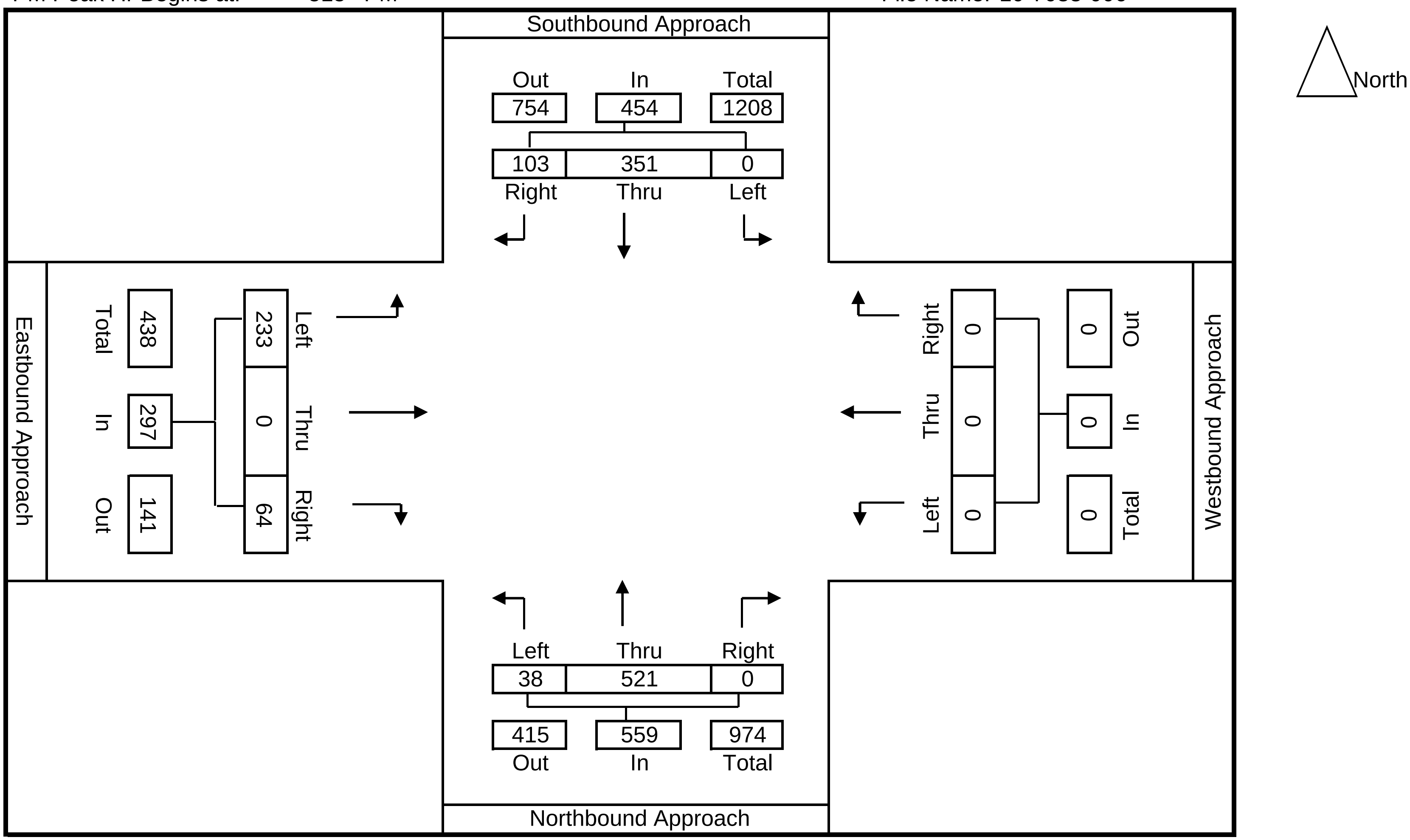
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-005



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

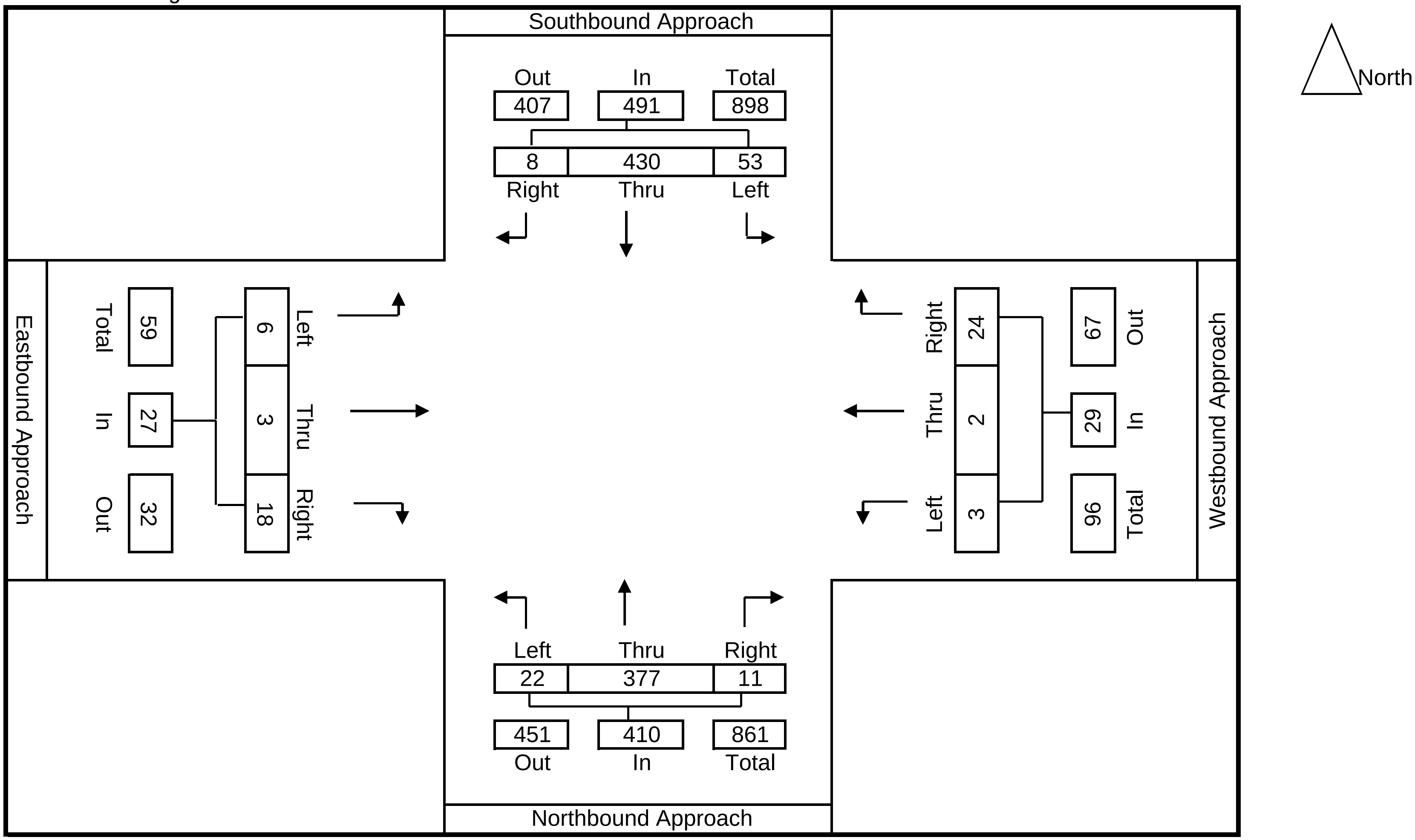
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-006



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: 63rd St
PM Peak Hr Begins at: 515 PM

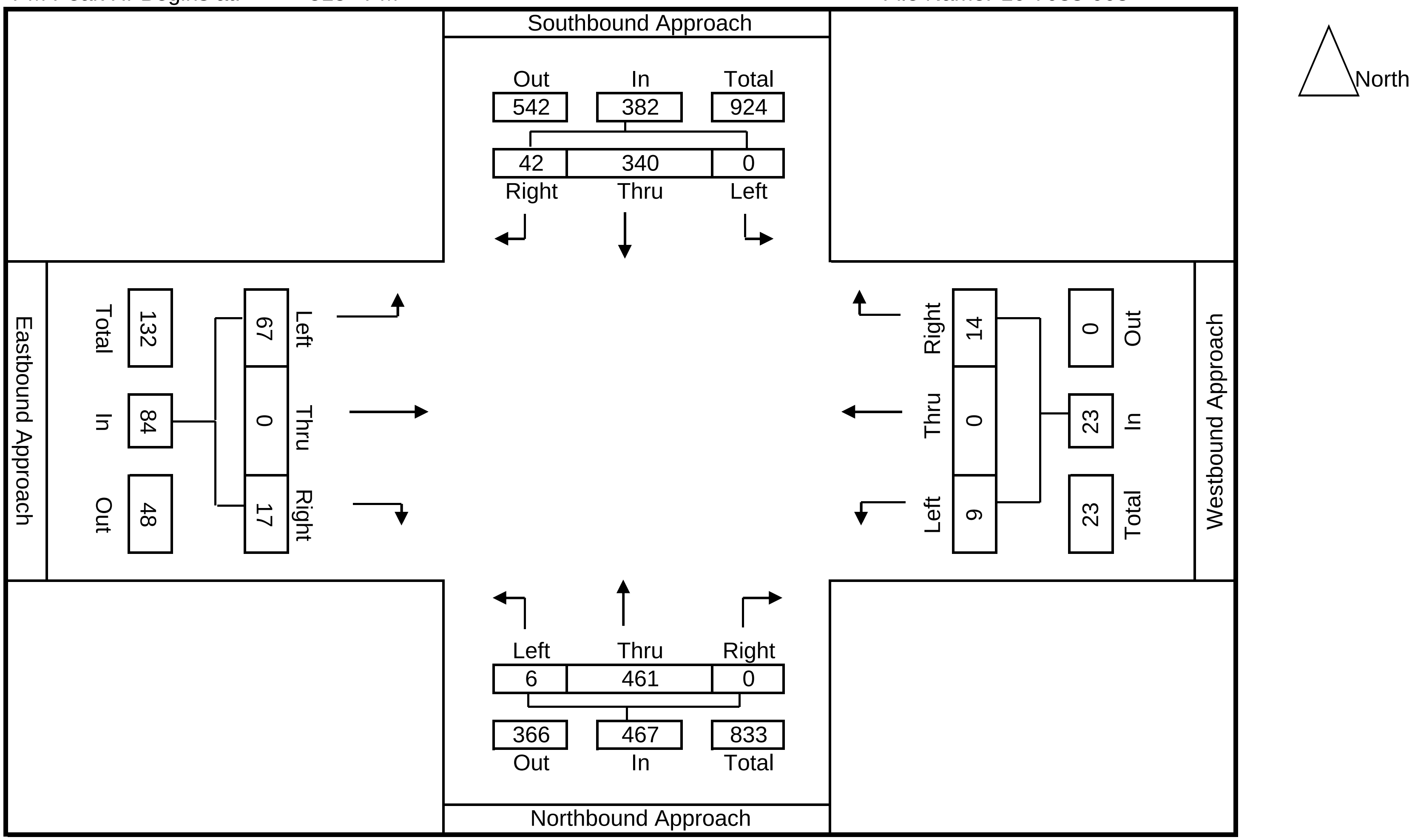
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-007



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Auburn Ave
PM Peak Hr Begins at: 515 PM

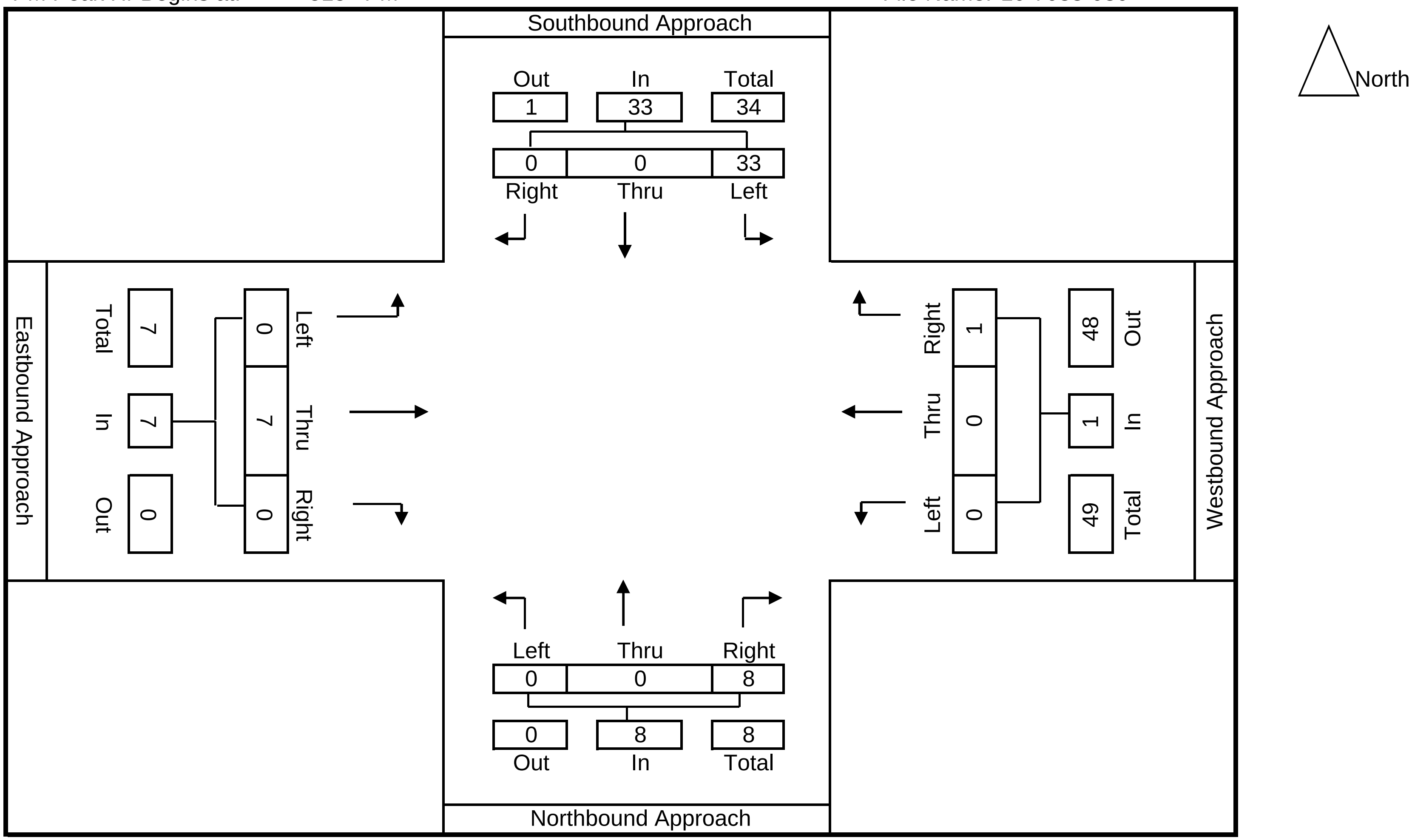
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-008



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th Leg of loc 8)
East/West Street: Mystic St (entering only)
PM Peak Hr Begins at: 515 PM

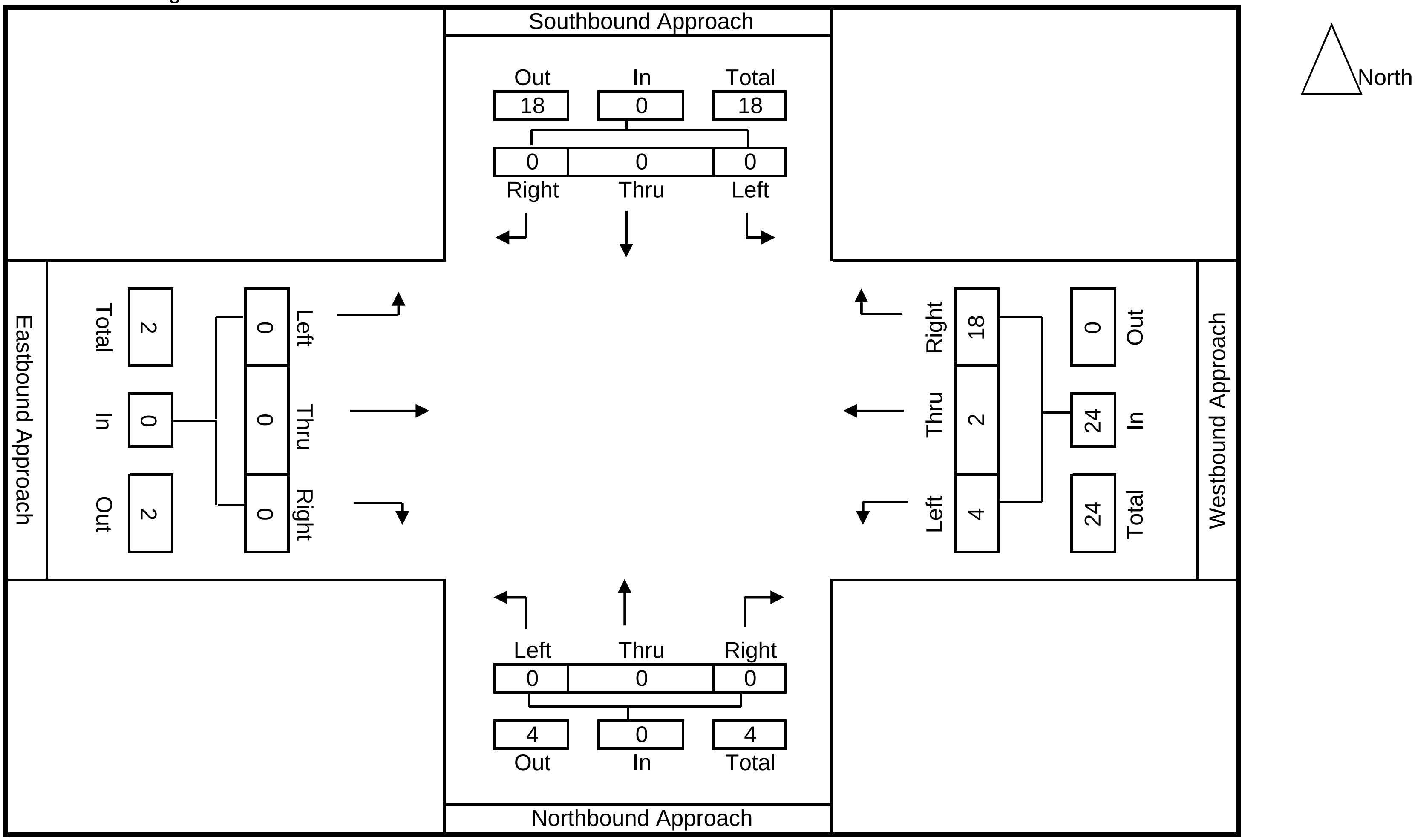
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-080



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th leg of loc 8)
East/West Street: Mystic St (exiting only)
PM Peak Hr Begins at: 515 PM

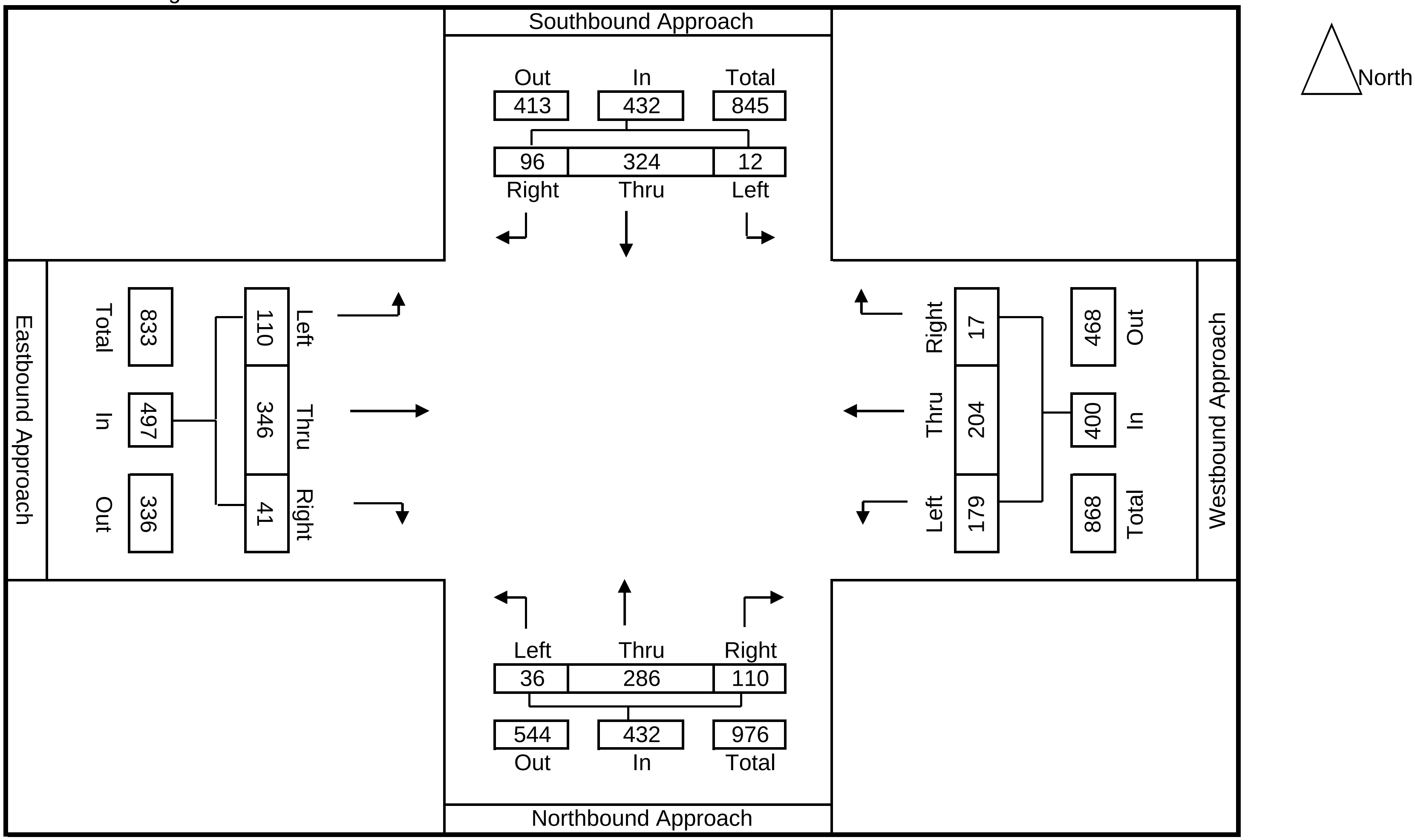
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-081



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Claremont Ave-62nd St
PM Peak Hr Begins at: 515 PM

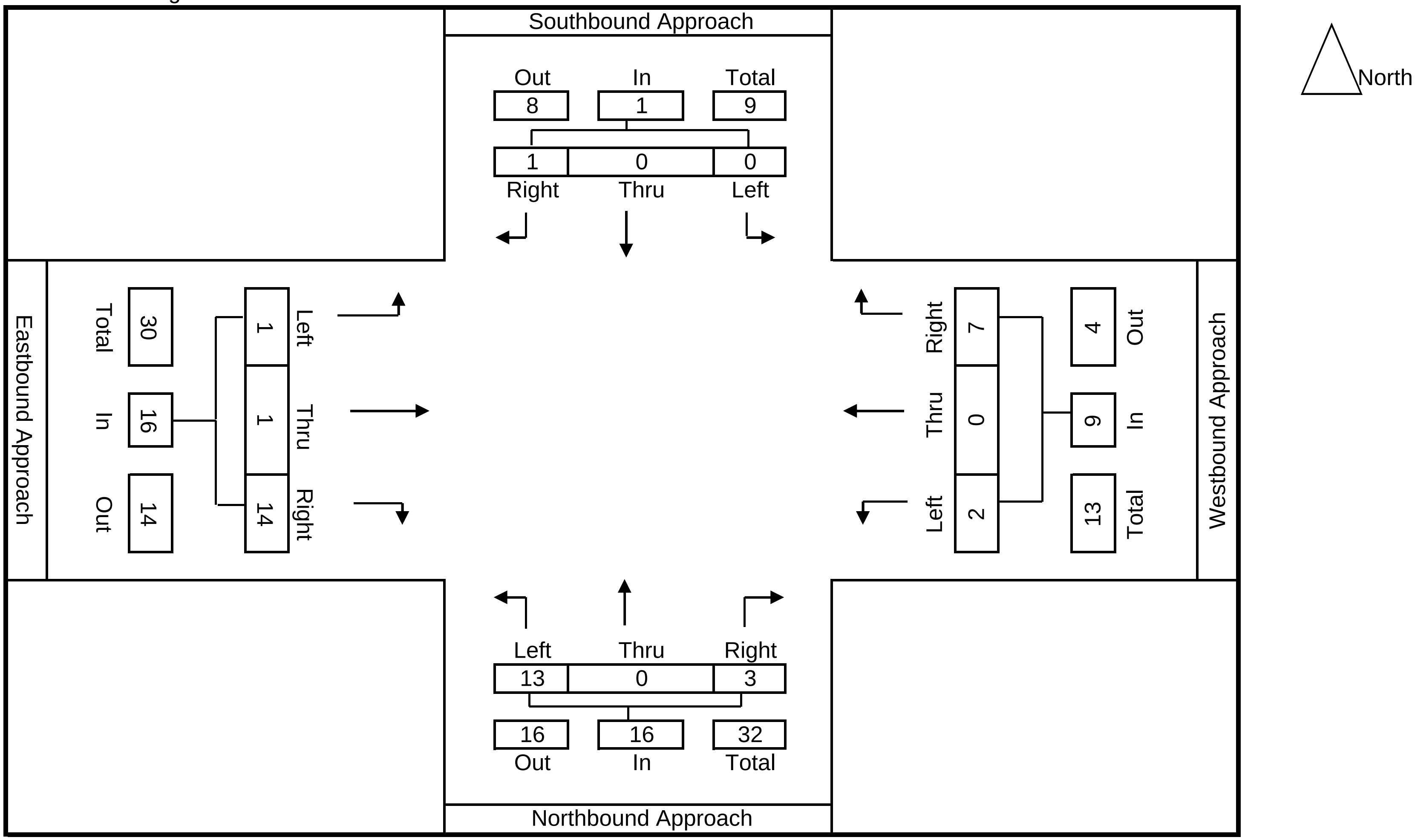
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-009



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 9)
East/West Street: 62nd St/Florio St (entering only)
PM Peak Hr Begins at: 515 PM

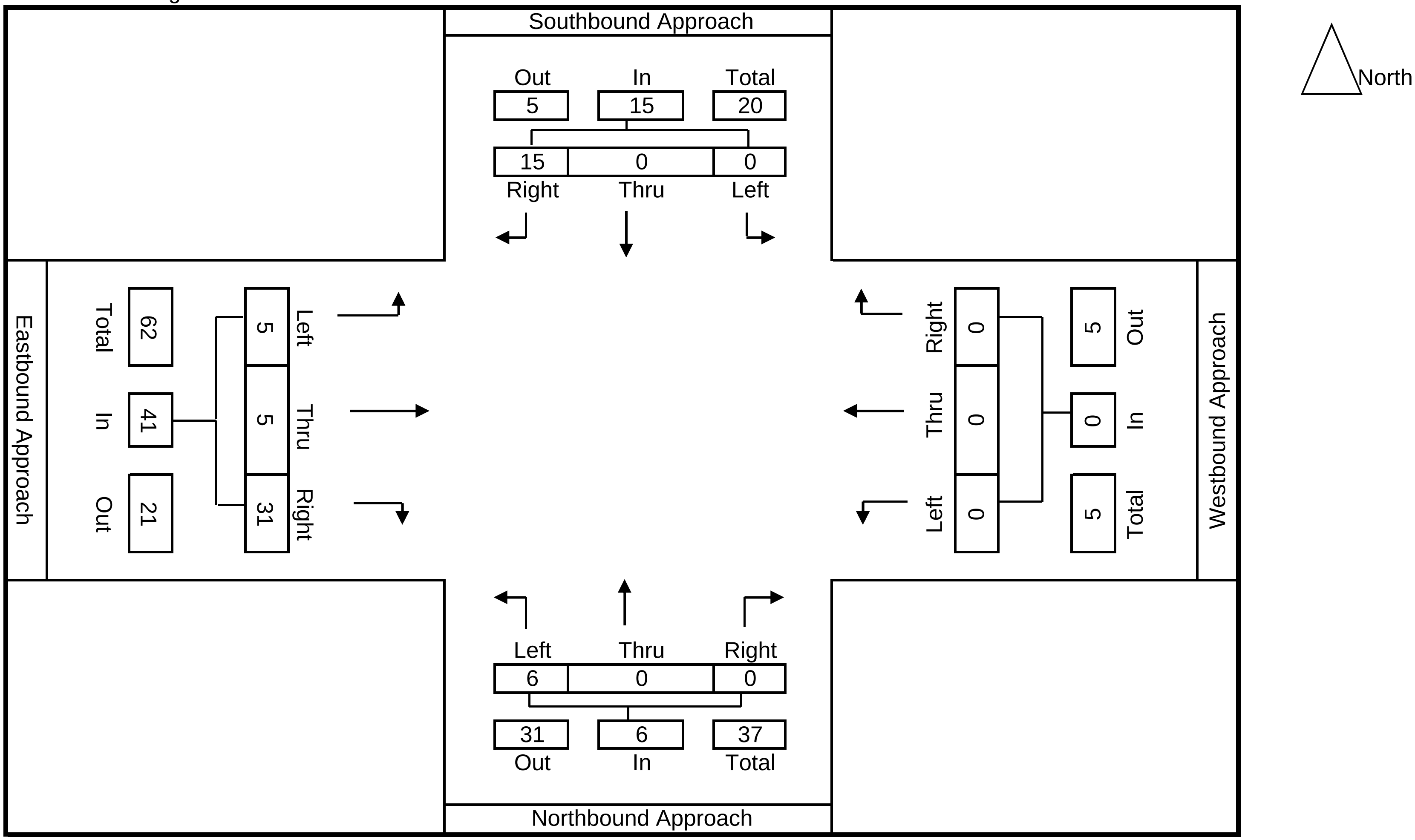
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-090



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 9)
East/West Street: 62nd St/Florio St (exiting only)
PM Peak Hr Begins at: 515 PM

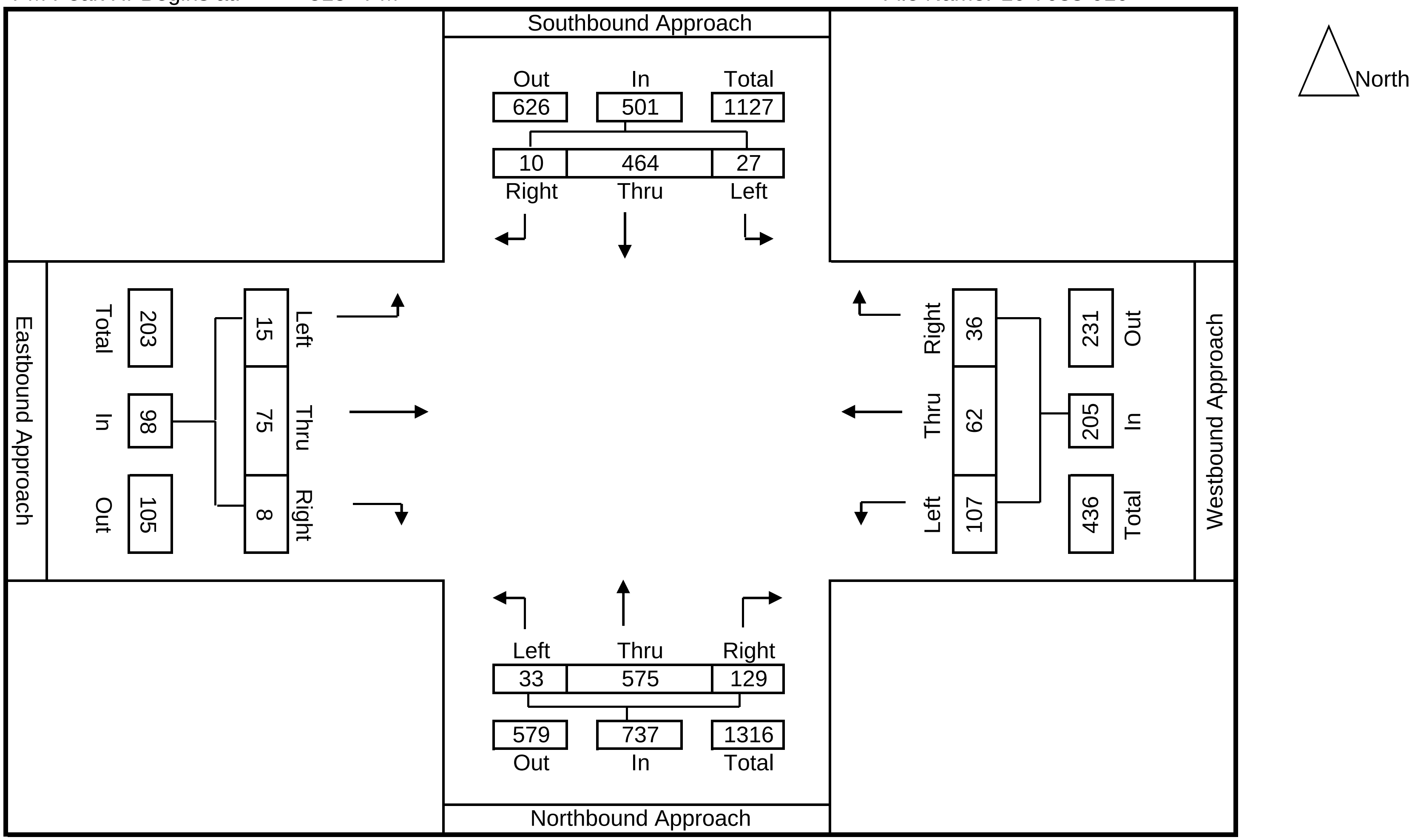
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-091



ALL TRAFFIC DATA, INC

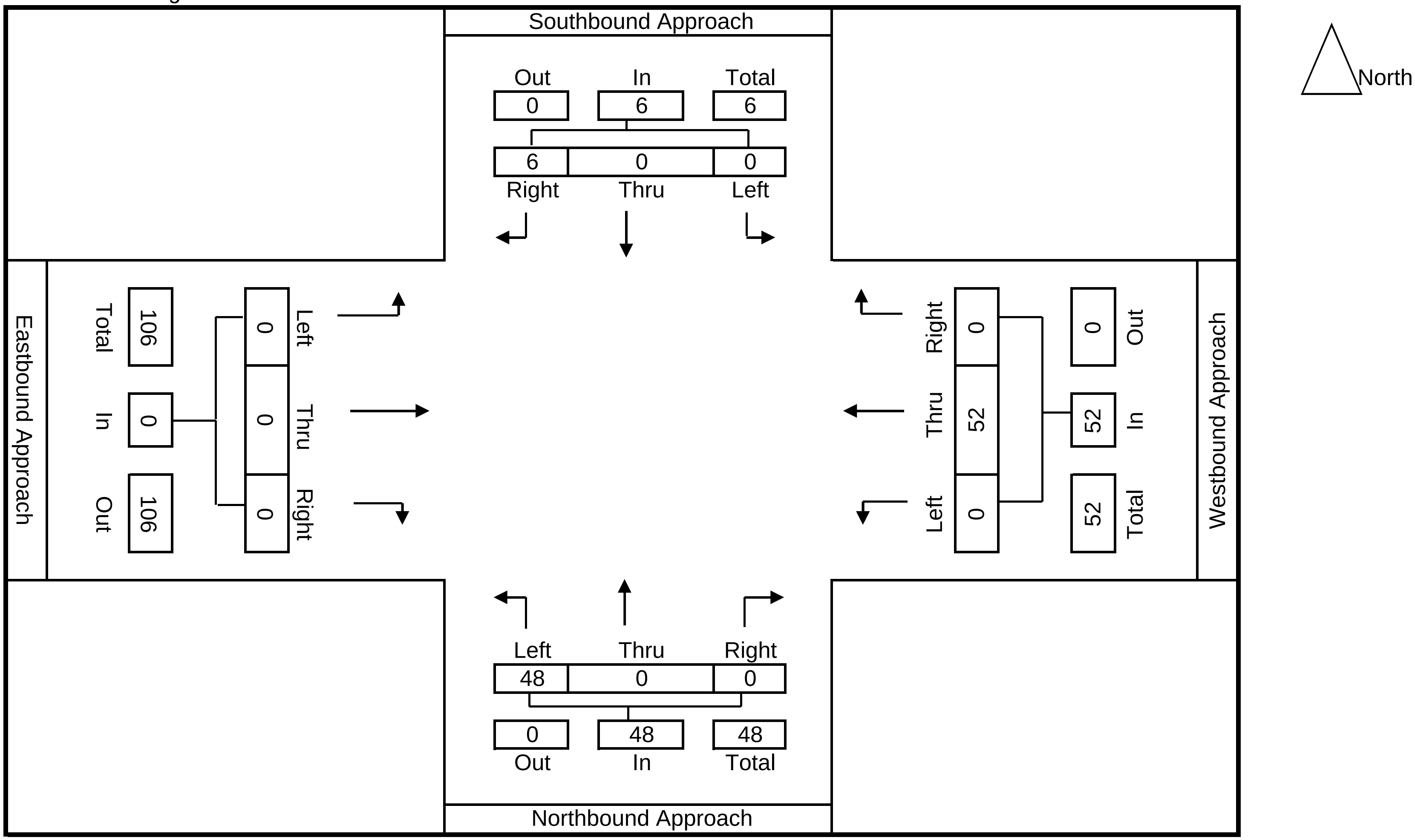
North/South Street: Claremont Ave
East/West Street: Forest St
PM Peak Hr Begins at: 515 PM

Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-010



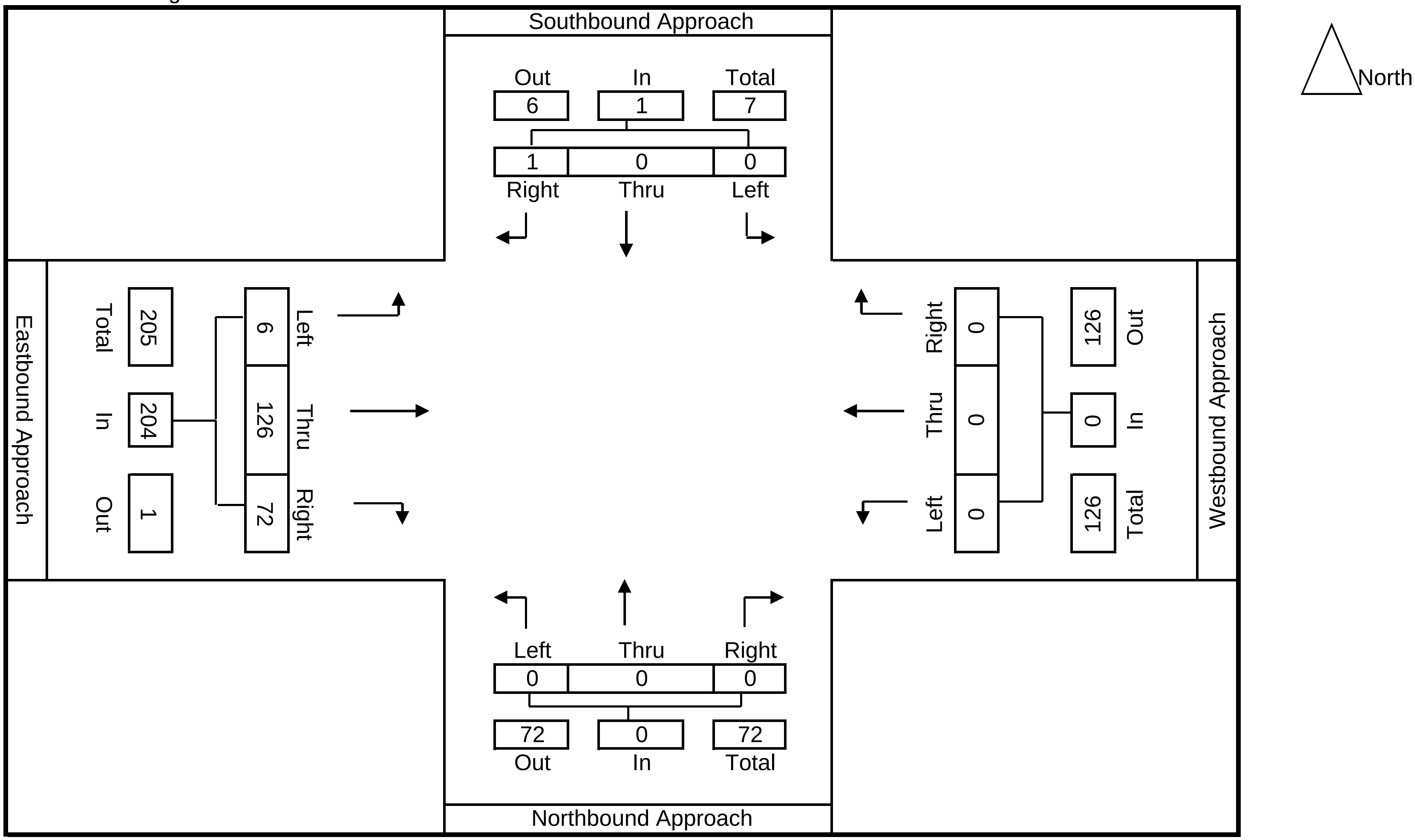
ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th leg of loc 10) Date: 3/16/2010
East/West Street: Colby St (entering only) City: City of Oakland
PM Peak Hr Begins at: 515 PM File Name: 10-7088-100



ALL TRAFFIC DATA, INC

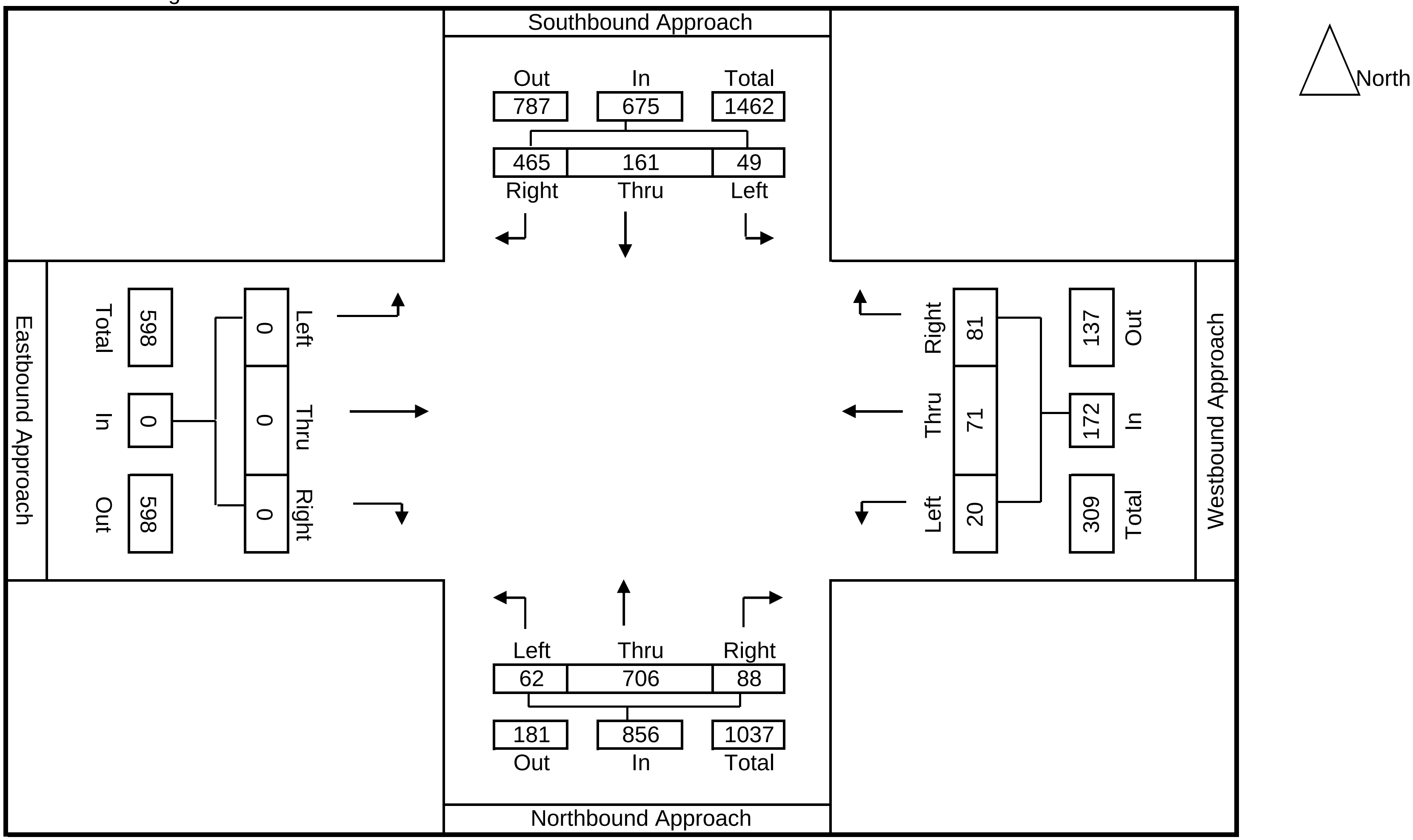
North/South Street: Claremont Ave (5th leg of loc 10) — Date: 3/16/2010
East/West Street: Colby St (exiting only) — City: City of Oakland
PM Peak Hr Begins at: 515 PM — File Name: 10-7088-101



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Hudson St-SR24 WB On Ramps
PM Peak Hr Begins at: 515 PM

Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-011

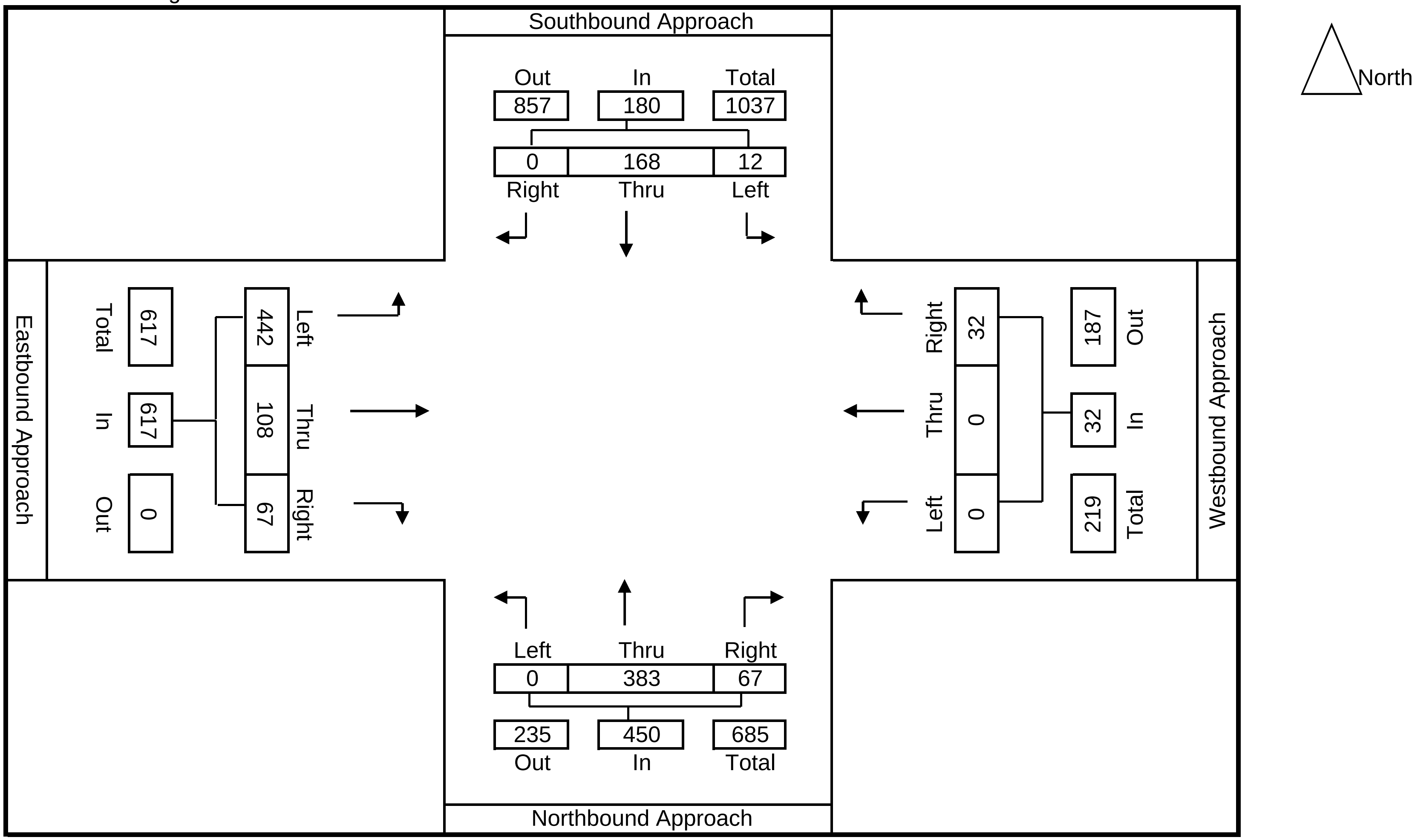


ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave — Date: 3/16/2010

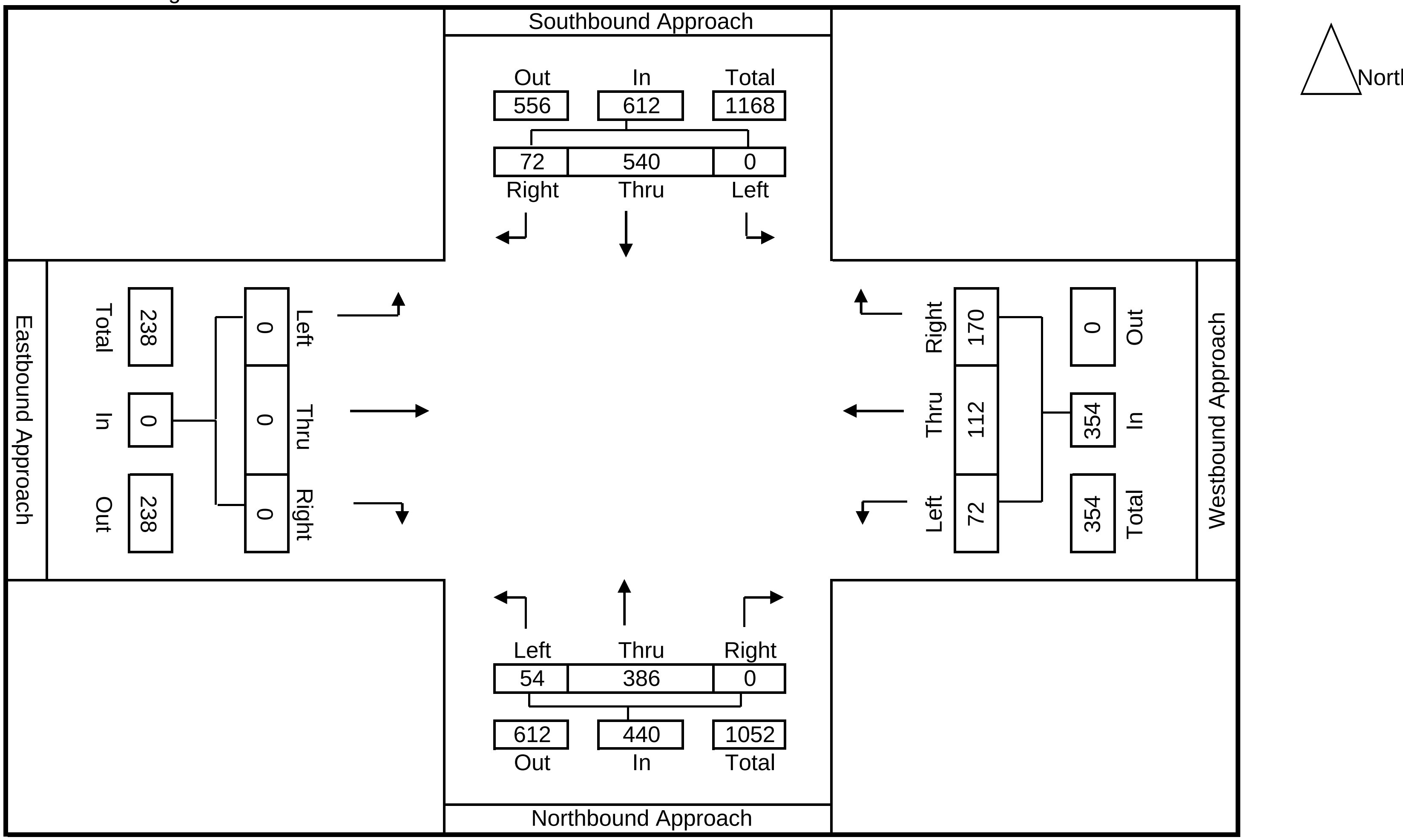
East/West Street: Clifton St-SR24 EB Off Ramps — City: City of Oakland

PM Peak Hr Begins at: 515 PM — File Name: 10-7088-012



ALL TRAFFIC DATA, INC

North/South Street:	College Ave	Date:	3/16/2010
East/West Street:	Miles Ave	City:	City of Oakland
PM Peak Hr Begins at:	515 PM	File Name:	10-7088-013



ALL TRAFFIC DATA, INC

North/South Street: College Ave

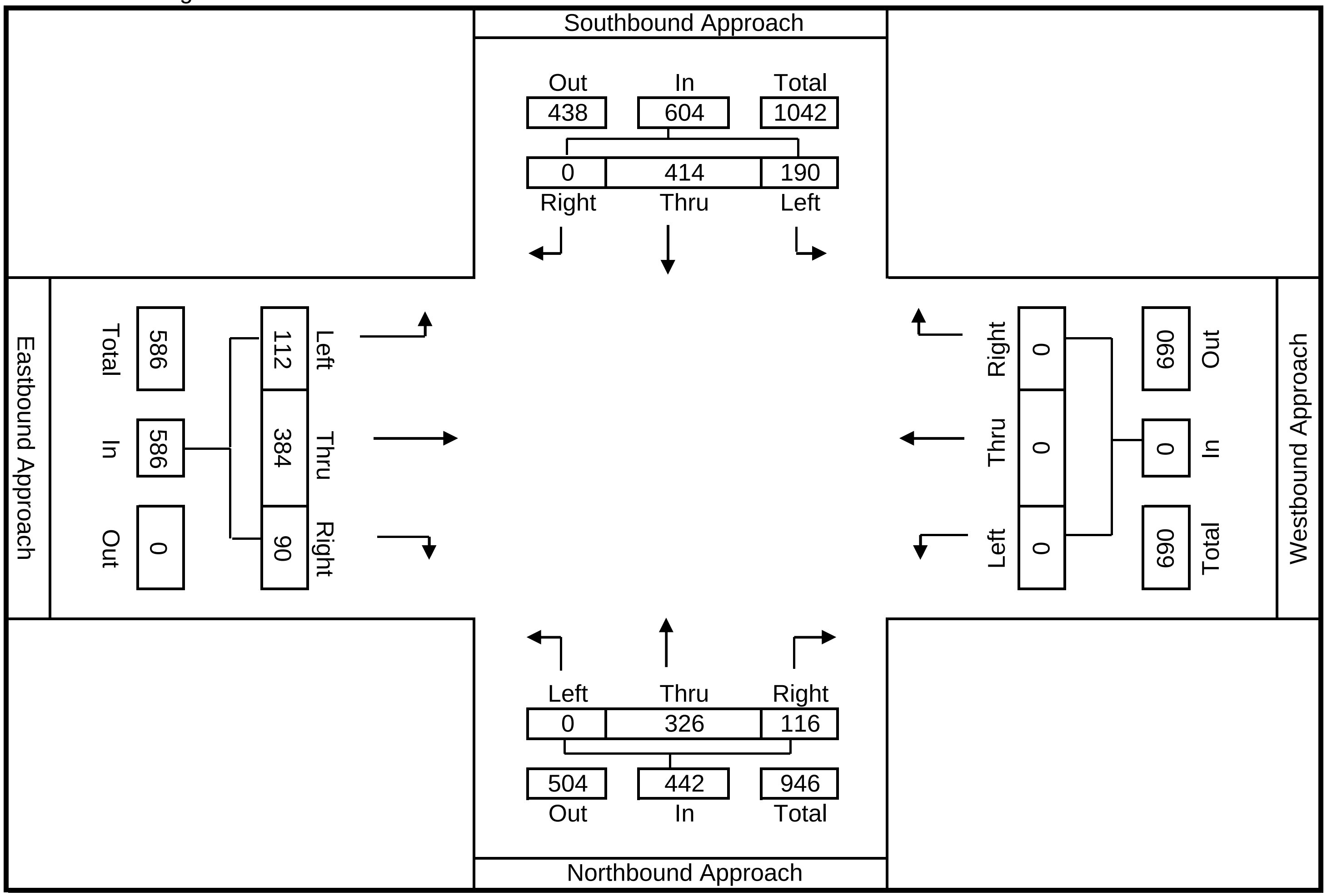
East/West Street: Shafter Ave-Keith Ave

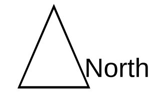
PM Peak Hr Begins at: 515 PM

Date: 3/16/2010

City: City of Oakland

File Name: 10-7088-014

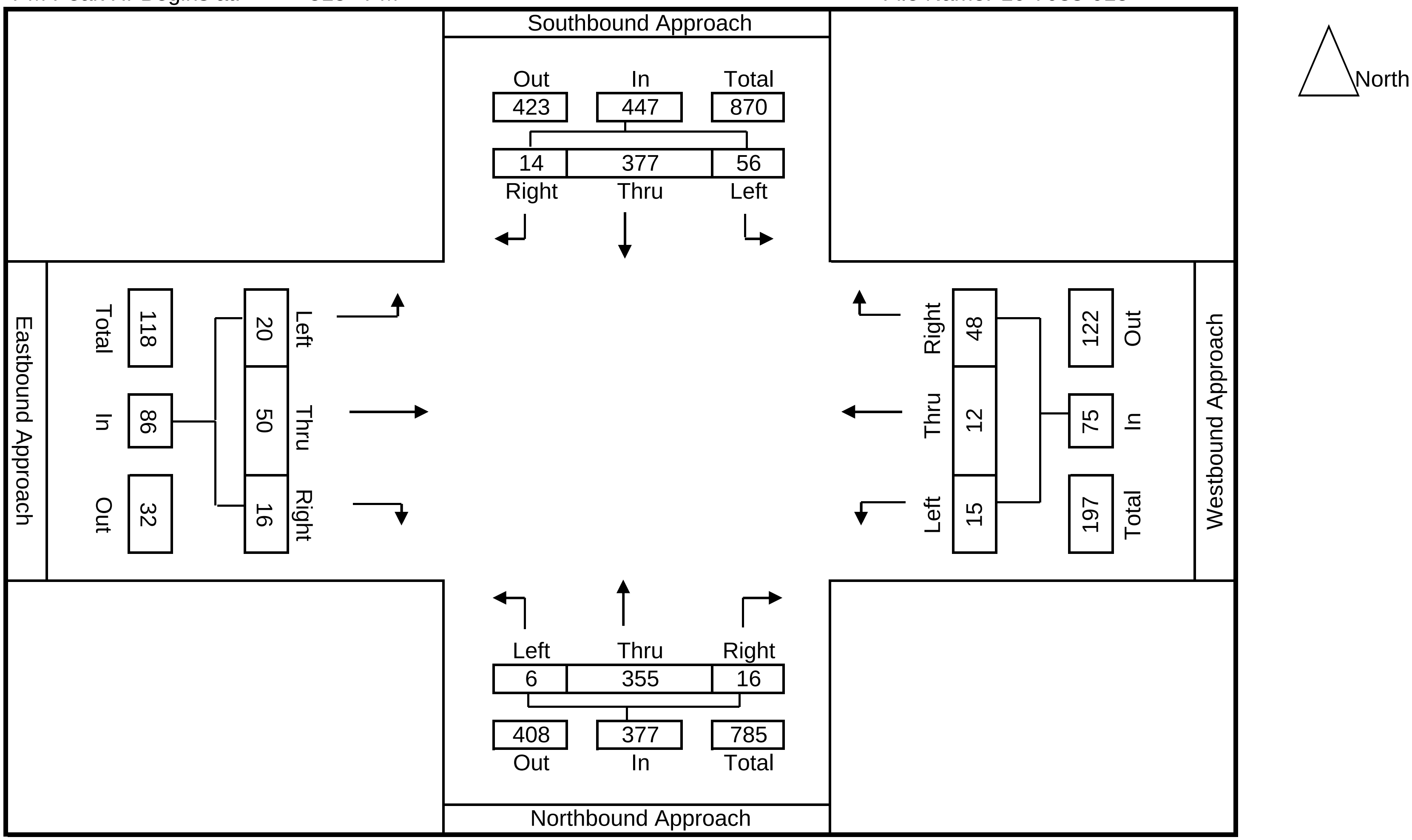




ALL TRAFFIC DATA, INC

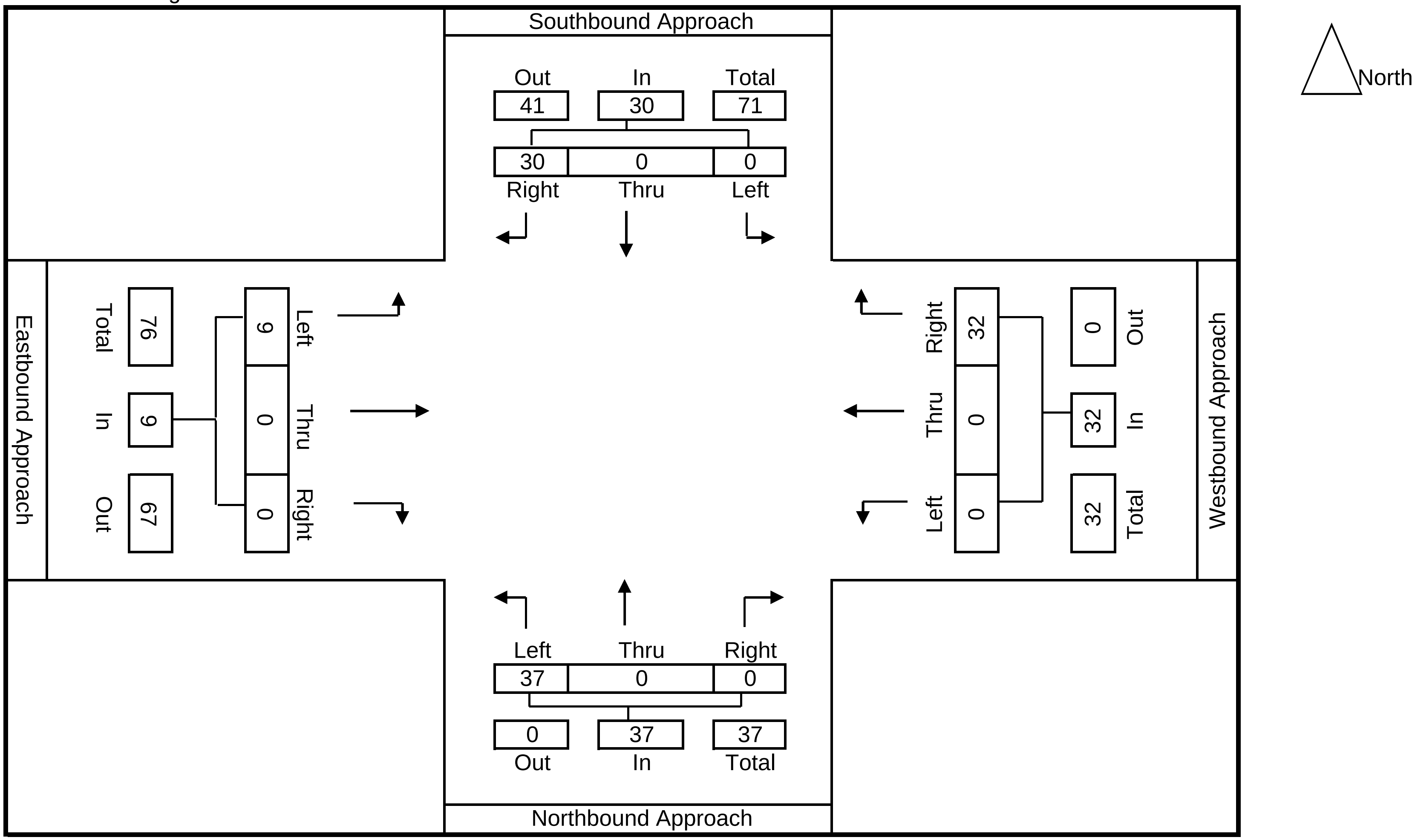
North/South Street: College Ave
East/West Street: Manila Ave
PM Peak Hr Begins at: 515 PM

Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-015



ALL TRAFFIC DATA, INC

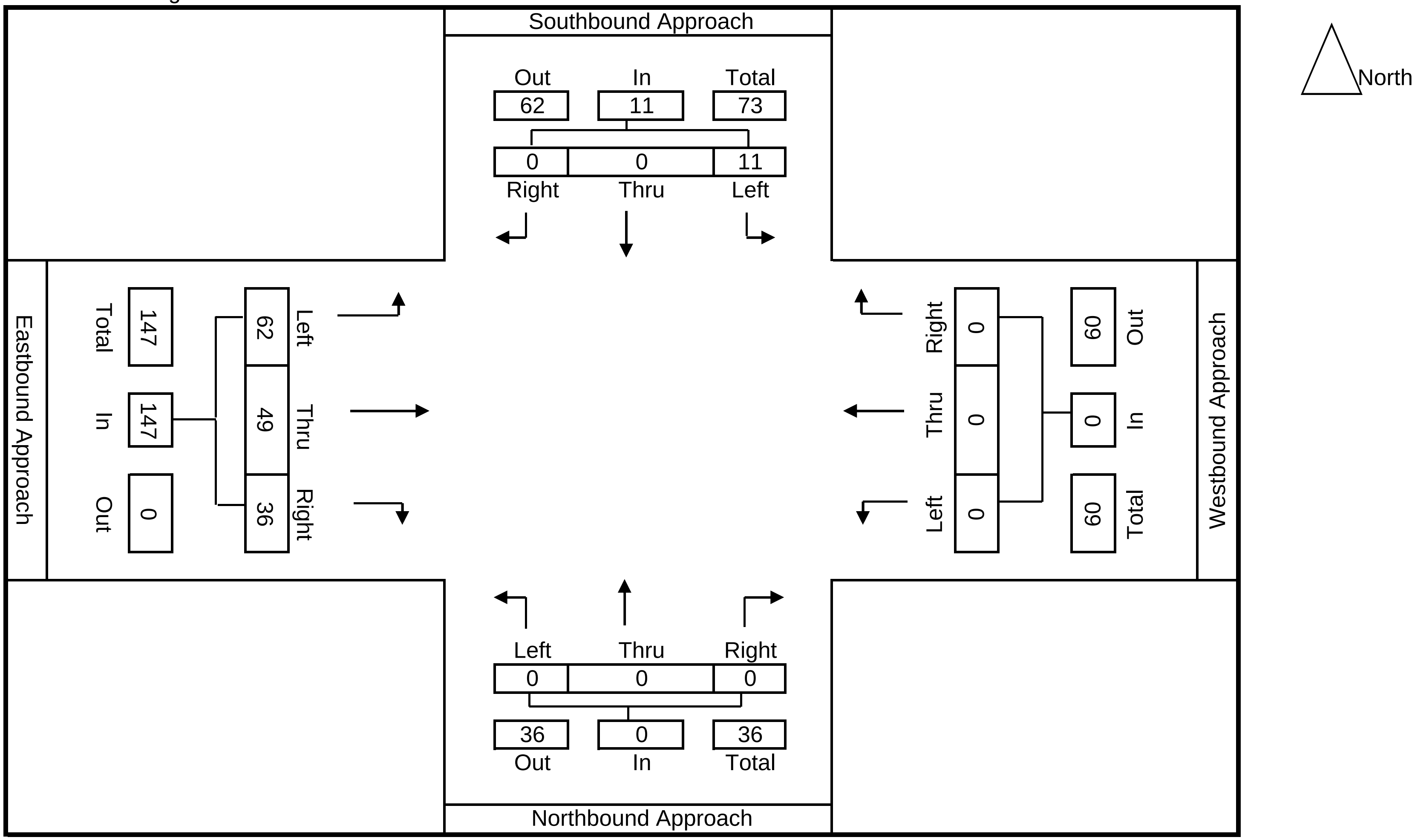
North/South Street: College Ave (5th leg of loc 15) — Date: 3/16/2010
East/West Street: Hudson St (entering only) — City: City of Oakland
PM Peak Hr Begins at: 515 PM — File Name: 10-7088-150



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 15)
East/West Street: Hudson St (exiting only)
PM Peak Hr Begins at: 515 PM

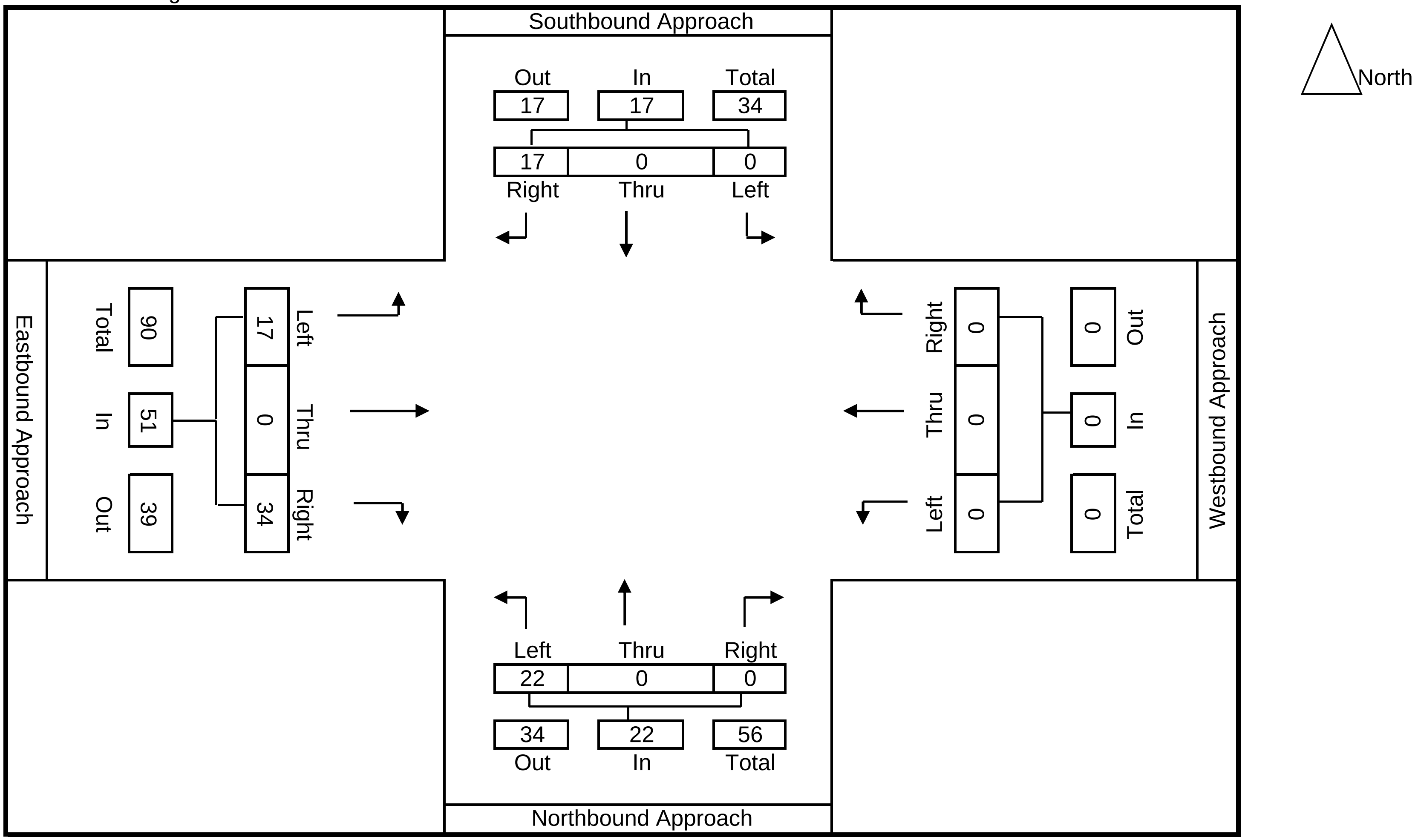
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-151



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Dwy 18
PM Peak Hr Begins at: 515 PM

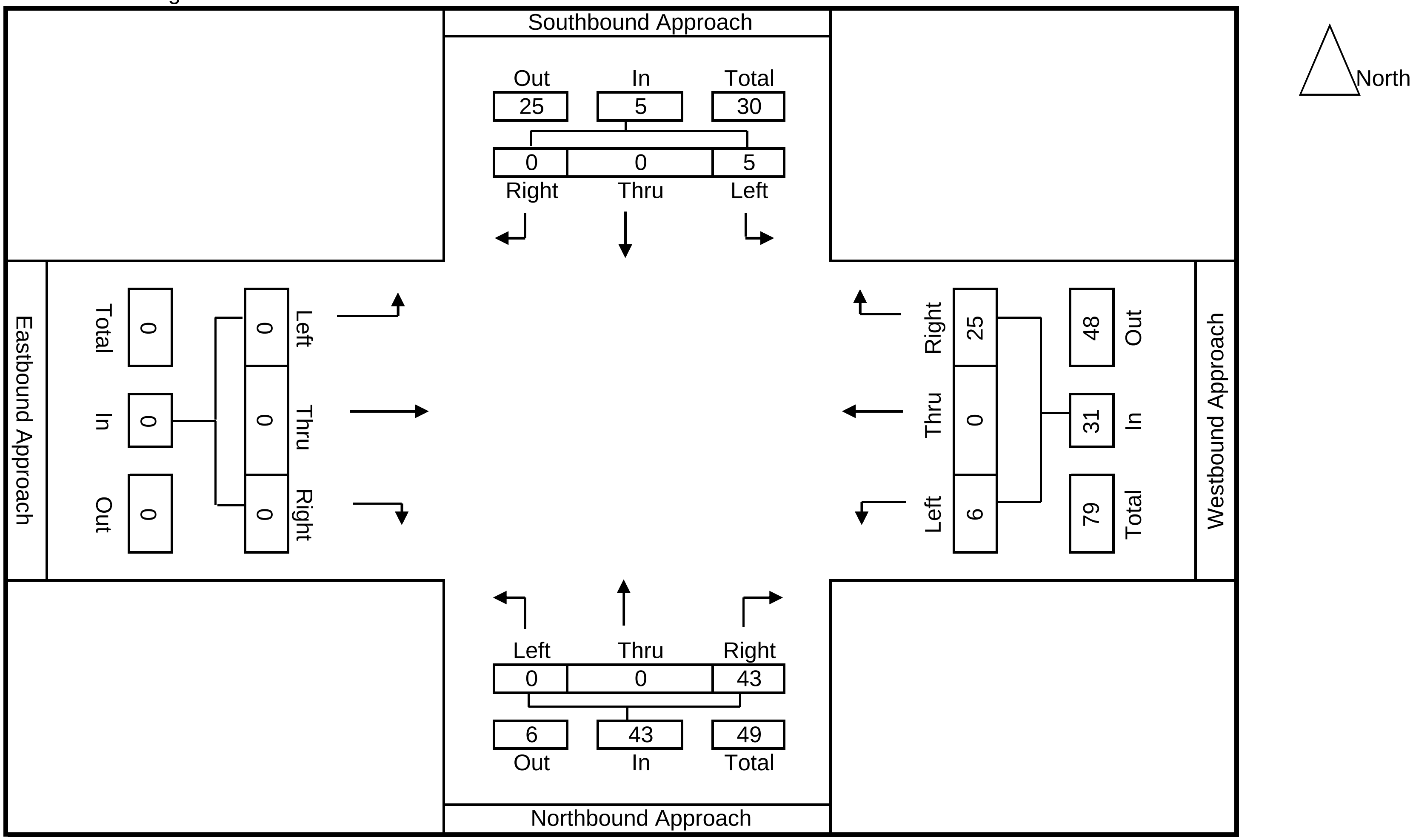
Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-018



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Dwy 17
PM Peak Hr Begins at: 515 PM

Date: 3/16/2010
City: City of Oakland
File Name: 10-7088-017



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-001
N/S Street: College Ave
E/W Street: Ashby Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	22	18	58	44
5:30 PM	23	29	84	68
5:45 PM	13	17	59	43
6:00 PM	23	38	68	69
TOTALS	**81**	**102**	**269**	**224**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	1	1	8	16
5:30 PM	2	0	5	12
5:45 PM	2	0	11	14
6:00 PM	3	0	8	17
TOTALS	**8**	**1**	**32**	**59**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-002
N/S Street: Claremont Ave
E/W Street: Ashby Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	4	3	0	12
5:30 PM	3	3	3	14
5:45 PM	1	7	1	20
6:00 PM	2	0	1	3
TOTALS	**10**	**13**	**5**	**49**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	1	3	2
5:30 PM	0	0	0	1
5:45 PM	0	2	1	1
6:00 PM	0	1	1	2
TOTALS	**2**	**4**	**5**	**6**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-003
N/S Street: Claremont Ave
E/W Street: The Uplands
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	7	12	13	0
5:30 PM	8	9	10	0
5:45 PM	9	6	2	0
6:00 PM	8	9	15	0
TOTALS	**32**	**36**	**40**	**0**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	4	1	0
5:30 PM	1	6	2	0
5:45 PM	4	9	2	0
6:00 PM	2	5	2	0
TOTALS	**7**	**24**	**7**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-004
N/S Street: Telegraph Ave
E/W Street: Alcatraz Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	10	6	12	14
5:30 PM	15	7	13	17
5:45 PM	15	11	12	18
6:00 PM	9	3	11	13
TOTALS	**49**	**27**	**48**	**62**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	0	11	14
5:30 PM	9	6	11	17
5:45 PM	7	3	13	10
6:00 PM	6	1	7	8
TOTALS	**24**	**10**	**42**	**49**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-005
N/S Street: College Ave
E/W Street: Alcatraz Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	23	12	39	43
5:30 PM	20	26	55	61
5:45 PM	20	22	56	57
6:00 PM	19	37	25	51
TOTALS	**82**	**97**	**175**	**212**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	1	12	16
5:30 PM	1	3	2	11
5:45 PM	0	0	6	6
6:00 PM	0	0	2	6
TOTALS	**1**	**4**	**22**	**39**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-006
N/S Street: Claremont Ave
E/W Street: Alcatraz Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	9
5:30 PM	0	1	0	11
5:45 PM	0	0	0	13
6:00 PM	0	0	0	7
TOTALS	**0**	**1**	**0**	**40**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	1	0	1
5:30 PM	1	1	0	1
5:45 PM	0	1	0	2
6:00 PM	0	0	0	3
TOTALS	**1**	**3**	**0**	**7**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-007
N/S Street: College Ave
E/W Street: 63rd St
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	60	0	20	56
5:30 PM	41	0	22	56
5:45 PM	51	0	32	54
6:00 PM	54	0	25	41
TOTALS	**206**	**0**	**99**	**207**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	8	21
5:30 PM	1	0	9	22
5:45 PM	3	0	15	9
6:00 PM	0	0	10	14
TOTALS	**4**	**0**	**42**	**66**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-008
N/S Street: Claremont Ave
E/W Street: Mystic St
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			7	
5:30 PM			6	
5:45 PM			12	
6:00 PM			4	
TOTALS	**0**	**0**	**29**	**0**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			0	
5:30 PM			0	
5:45 PM			3	
6:00 PM			3	
TOTALS	**0**	**0**	**6**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-008
N/S Street: Claremont Ave
E/W Street: Auburn Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	1	5	4
5:30 PM	0	1	7	7
5:45 PM	1	13	15	8
6:00 PM	0	4	3	2
TOTALS	**1**	**19**	**30**	**21**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	2	1
6:00 PM	0	0	3	0
TOTALS	**0**	**0**	**5**	**1**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-009
N/S Street: College Ave
E/W Street: 62nd St
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			36	51
5:30 PM			44	47
5:45 PM			57	54
6:00 PM			34	28
TOTALS	**0**	**0**	**171**	**180**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			15	21
5:30 PM			18	23
5:45 PM			21	7
6:00 PM			10	8
TOTALS	**0**	**0**	**64**	**59**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-009
N/S Street: College Ave
E/W Street: Claremont Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	13	15	35	34
5:30 PM	16	3	49	48
5:45 PM	12	19	54	62
6:00 PM	14	6	33	35
TOTALS	**55**	**43**	**171**	**179**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	16	20
5:30 PM	6	0	17	17
5:45 PM	1	6	21	7
6:00 PM	1	1	10	6
TOTALS	**8**	**7**	**64**	**50**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-010
N/S Street: Claremont Ave
E/W Street: Colby St
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM				3
5:30 PM				3
5:45 PM				7
6:00 PM				3
TOTALS	**0**	**0**	**0**	**16**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM				4
5:30 PM				2
5:45 PM				4
6:00 PM				6
TOTALS	**0**	**0**	**0**	**16**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-010
N/S Street: Claremont Ave
E/W Street: Forest St
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	19	6	2	0
5:30 PM	15	6	1	0
5:45 PM	27	5	1	0
6:00 PM	16	6	2	1
TOTALS	**77**	**23**	**6**	**1**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	8	4	1	1
5:30 PM	9	4	0	2
5:45 PM	16	1	3	1
6:00 PM	15	3	2	1
TOTALS	**48**	**12**	**6**	**5**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-011
N/S Street: Claremont Ave
E/W Street: Hudson St-SR24 WB On Ramps
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	1	5
5:30 PM	2	0	1	1
5:45 PM	4	2	5	4
6:00 PM	2	0	1	1
TOTALS	**8**	**2**	**8**	**11**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	0	0	1
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
6:00 PM	0	2	0	0
TOTALS	**2**	**2**	**0**	**1**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-012
N/S Street: Claremont Ave
E/W Street: Clifton St-SR24 EB Off Ramps
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	2	1	4
5:30 PM	0	0	1	0
5:45 PM	0	2	1	4
6:00 PM	0	1	1	4
TOTALS	**0**	**5**	**4**	**12**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	5	3
5:30 PM	0	3	0	5
5:45 PM	0	1	1	6
6:00 PM	0	1	5	5
TOTALS	**0**	**5**	**11**	**19**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-013
N/S Street: College Ave
E/W Street: Miles Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	12	11	70	68
5:30 PM	16	7	60	50
5:45 PM	22	14	80	47
6:00 PM	19	10	65	47
TOTALS	**69**	**42**	**275**	**212**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	20	20	0	0
5:30 PM	21	7	4	0
5:45 PM	12	18	0	0
6:00 PM	12	11	0	0
TOTALS	**65**	**56**	**4**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-014
N/S Street: College Ave
E/W Street: Shafter Ave-Keith Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	40	67	134	48
5:30 PM	29	81	102	57
5:45 PM	36	80	168	34
6:00 PM	39	72	110	51
TOTALS	**144**	**300**	**514**	**190**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	3	1	16	15
5:30 PM	3	1	5	16
5:45 PM	2	3	15	7
6:00 PM	1	0	2	5
TOTALS	**9**	**5**	**38**	**43**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-015
N/S Street: College Ave
E/W Street: Hudson Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	21
5:30 PM	0	0	0	15
5:45 PM	0	0	0	42
6:00 PM	0	0	0	27
TOTALS	**0**	**0**	**0**	**105**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	0
5:30 PM	0	0	0	1
5:45 PM	0	0	0	3
6:00 PM	0	0	0	2
TOTALS	**0**	**0**	**0**	**6**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-015
N/S Street: College Ave
E/W Street: Manila Ave
DATE: 3/16/2010 DAY: Tuesday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	6	11	18	18
5:30 PM	0	13	26	10
5:45 PM	15	14	23	16
6:00 PM	10	15	48	21
TOTALS	**31**	**53**	**115**	**65**

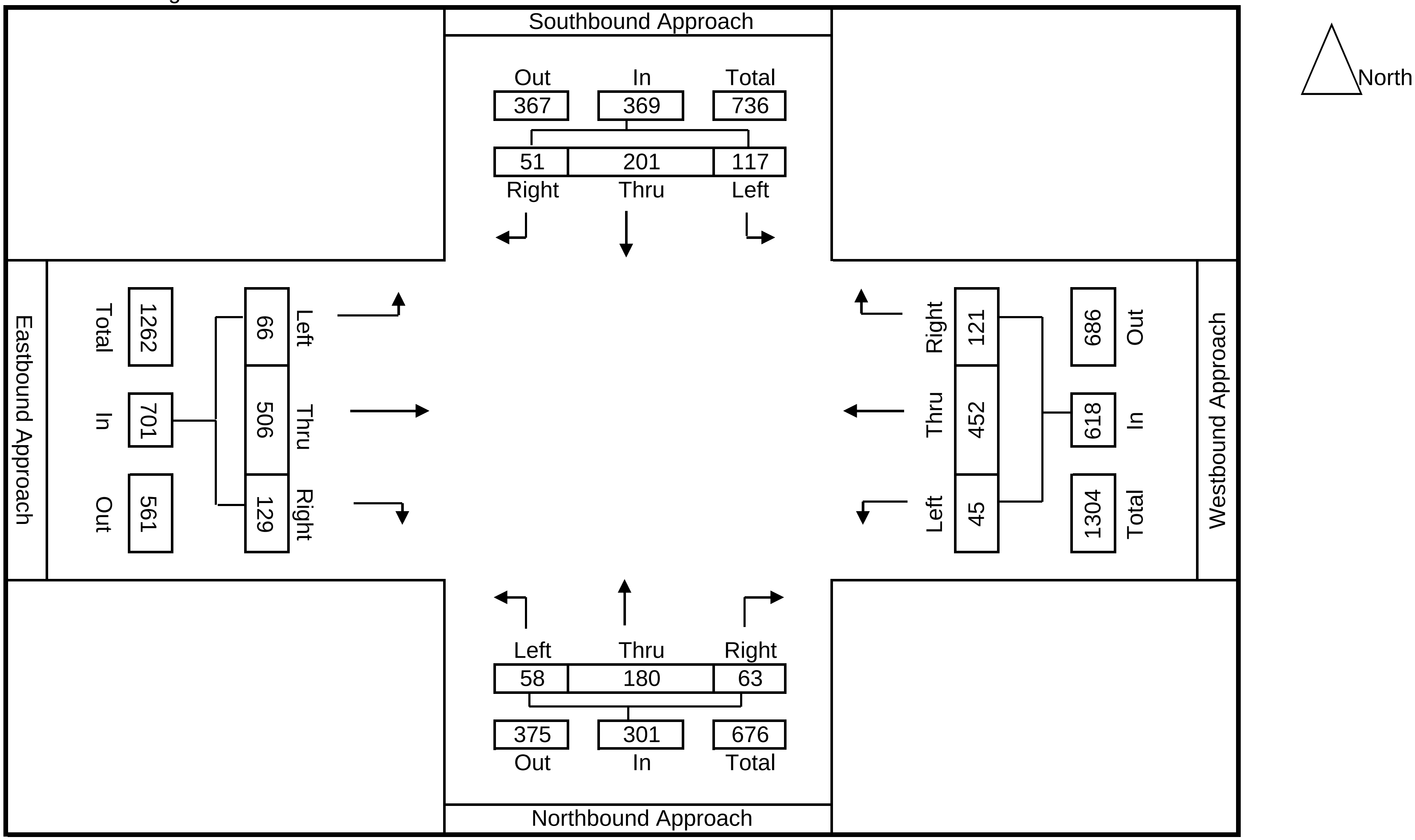
BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	2	4
5:30 PM	0	0	4	5
5:45 PM	0	0	2	1
6:00 PM	0	0	6	4
TOTALS	**0**	**0**	**14**	**14**

ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Ashby Ave
PM Peak Hr Begins at: 515 PM

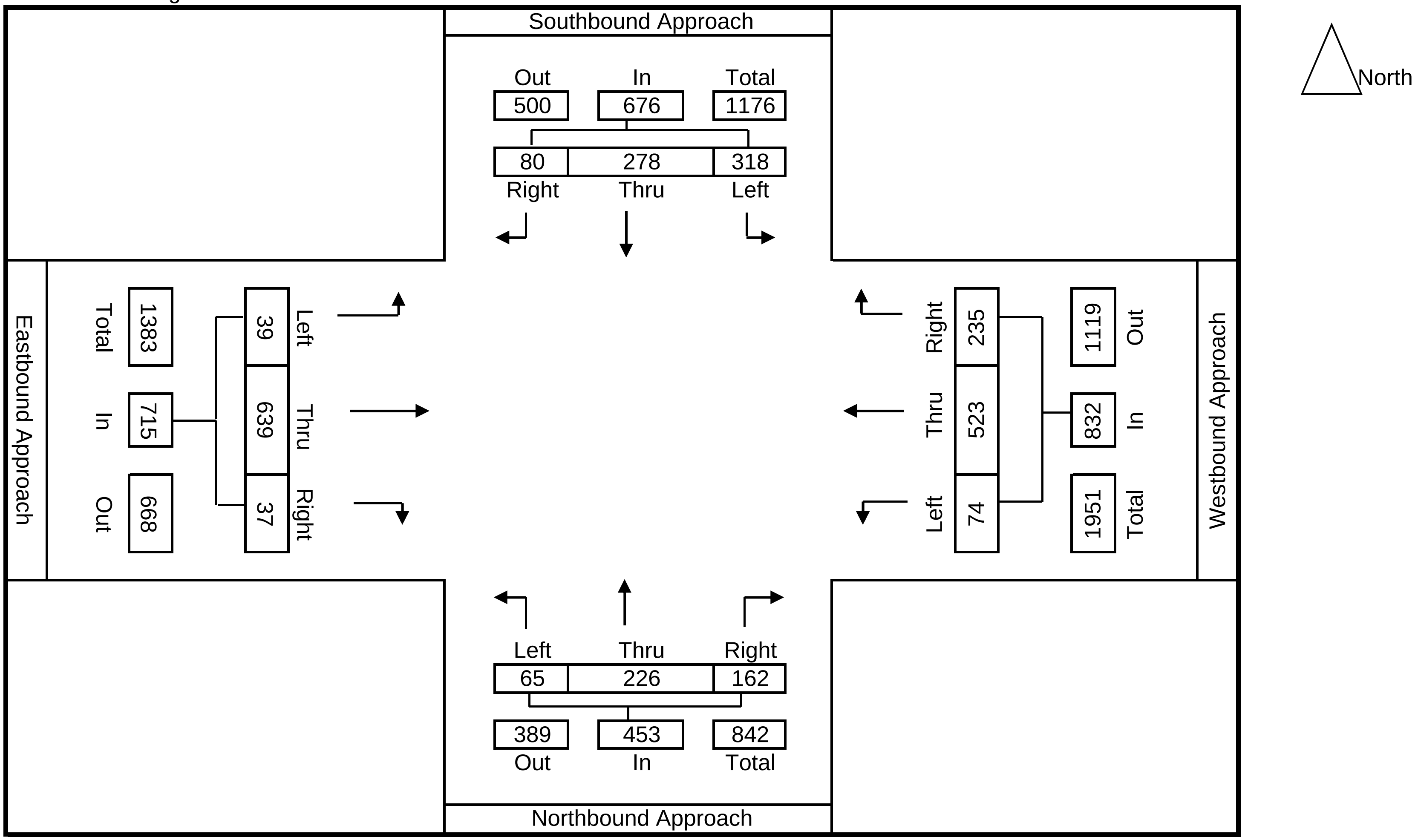
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-001



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Ashby Ave
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-002



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: The Uplands
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-003

North

Southbound Approach

Out	In	Total
435	402	837

Right	Thru	Left
0	377	25

Westbound Approach

Right	Thru	Left
51	0	38

Out	In	Total
70	89	159

Eastbound Approach

Total	In	Out
0	0	0

Left	Thru	Right
0	0	0

Northbound Approach

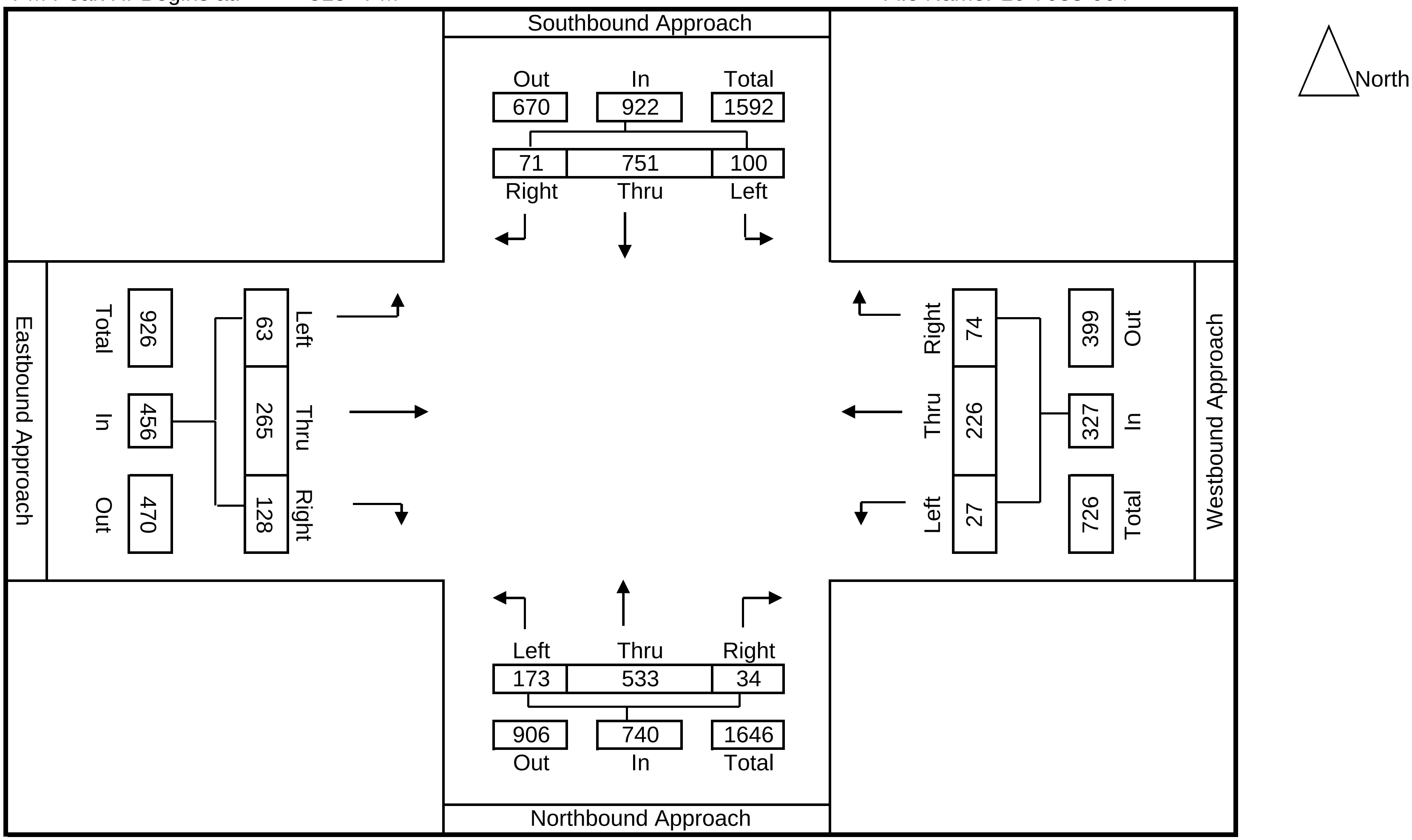
Left	Thru	Right
0	384	45

Out	In	Total
415	429	844

ALL TRAFFIC DATA, INC

North/South Street: Telegraph Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-004



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-005

North

Southbound Approach

Out	In	Total
343	378	721

Right	Thru	Left
74	295	9

Eastbound Approach

Total	In	Out
626	338	288

Left	Thru	Right
41	104	193

Westbound Approach

Right	Thru	Left
14	90	14

Out	In	Total
134	118	252

Northbound Approach

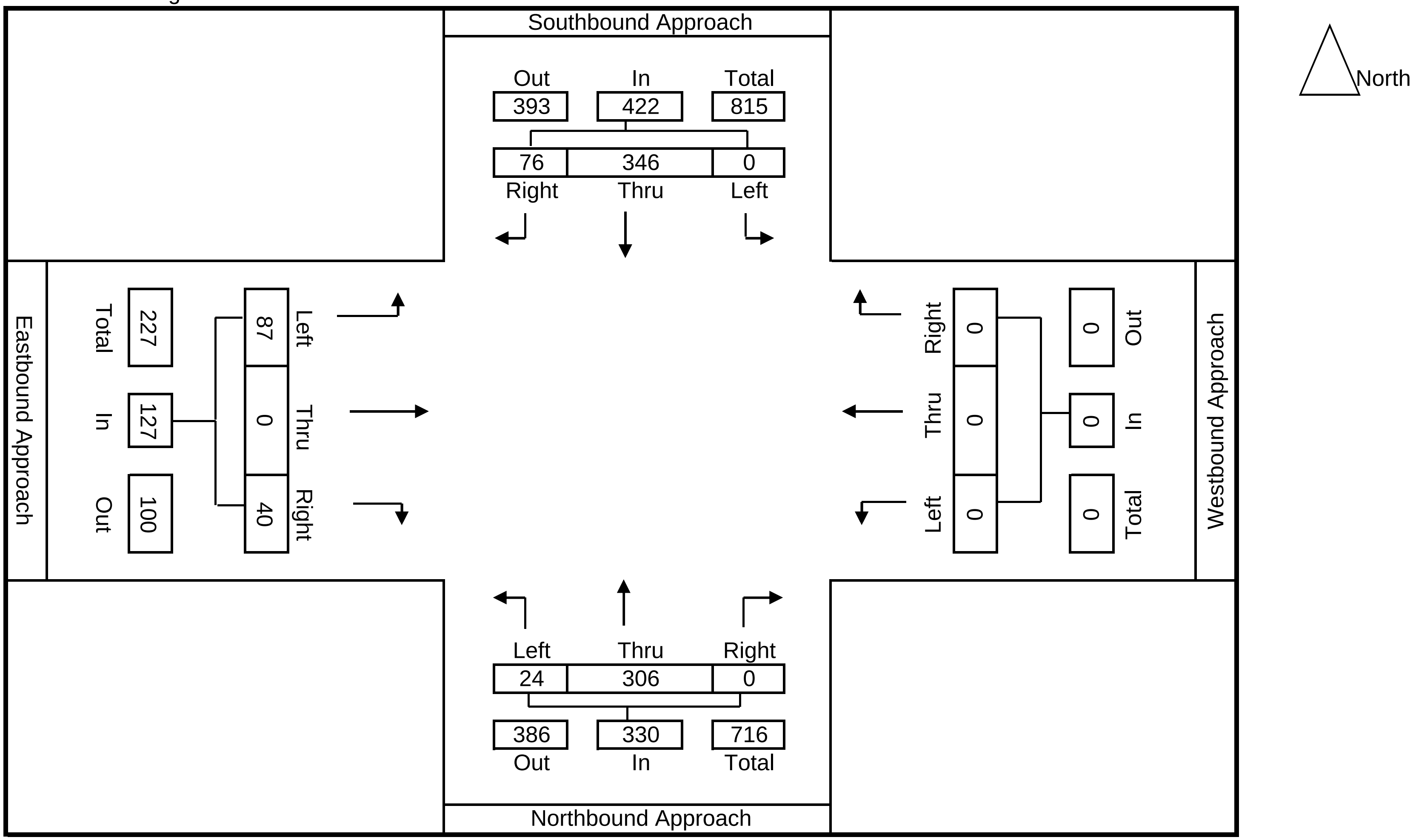
Left	Thru	Right
124	288	21

Out	In	Total
502	433	935

ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Alcatraz Ave
PM Peak Hr Begins at: 515 PM

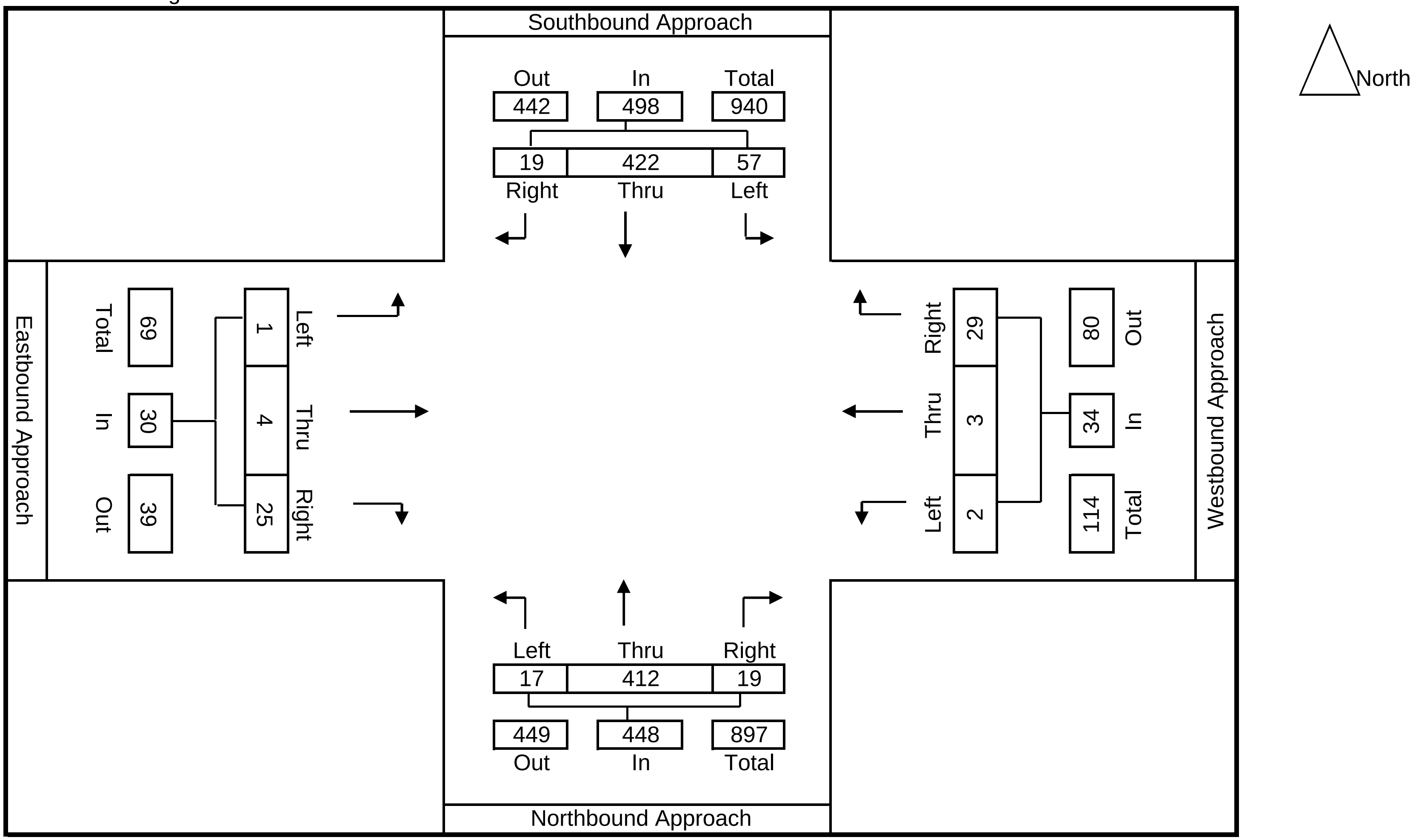
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-006



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: 63rd St
PM Peak Hr Begins at: 515 PM

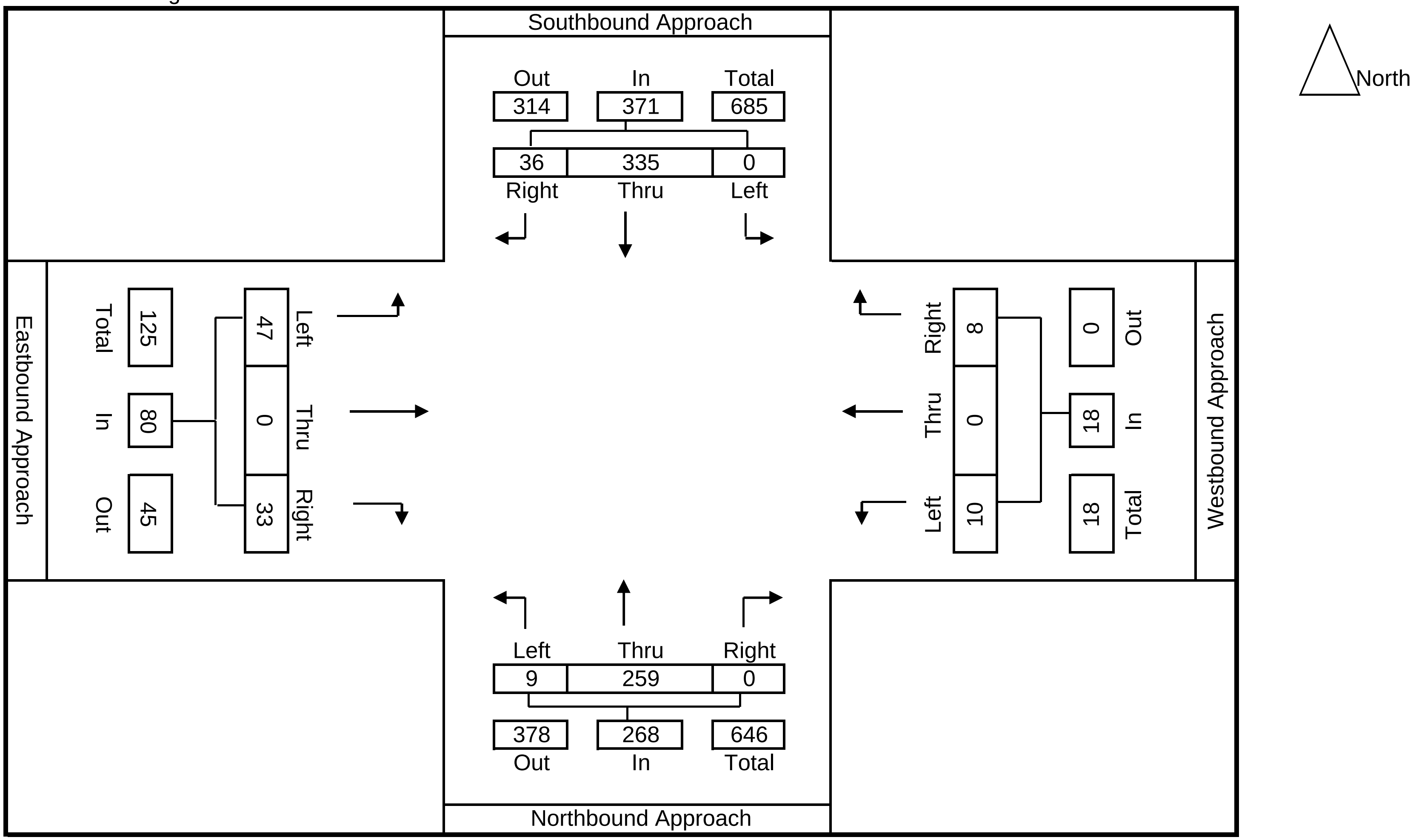
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-007



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Auburn Ave
PM Peak Hr Begins at: 515 PM

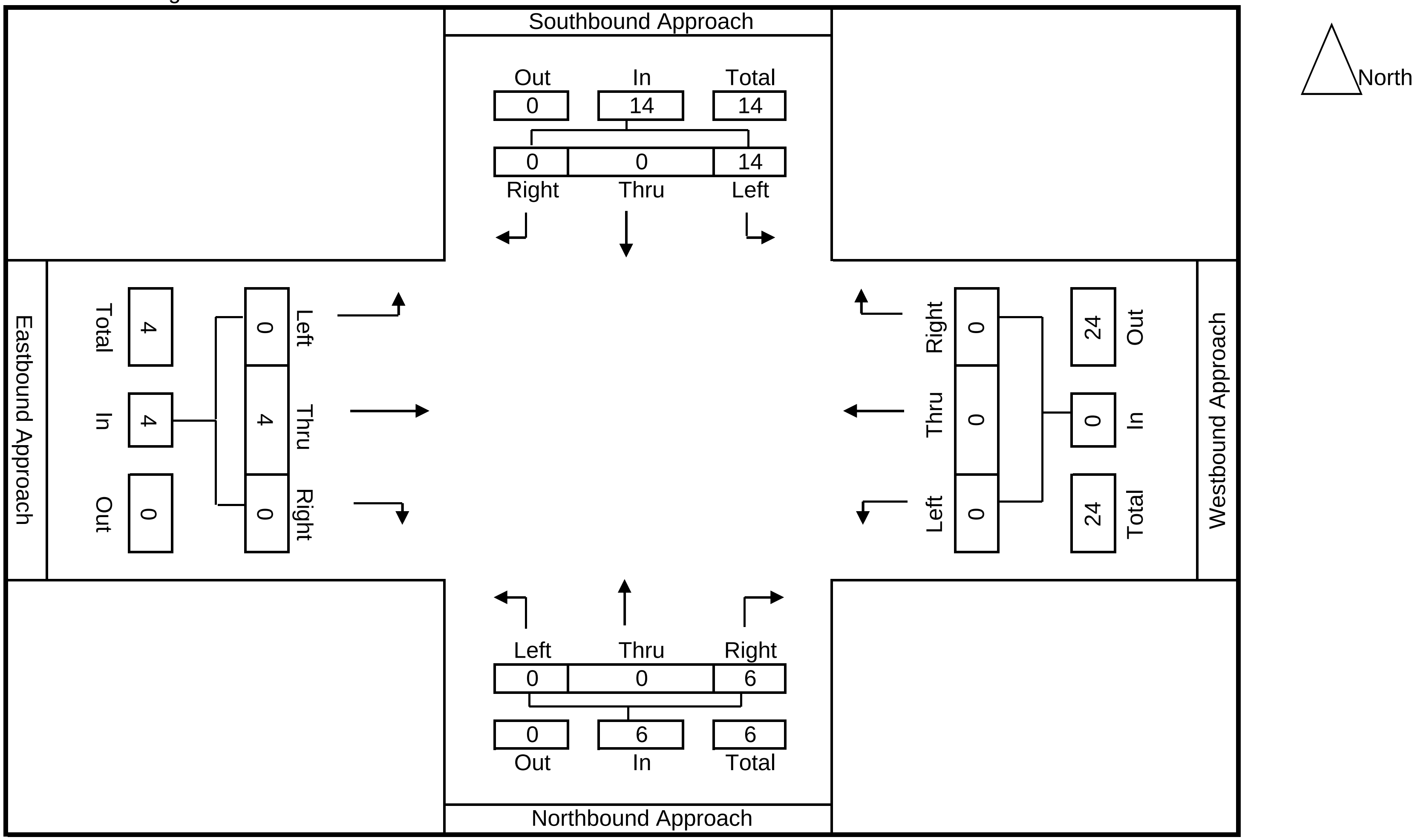
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-008



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th Leg of loc 8)
East/West Street: Mystic St (entering only)
PM Peak Hr Begins at: 515 PM

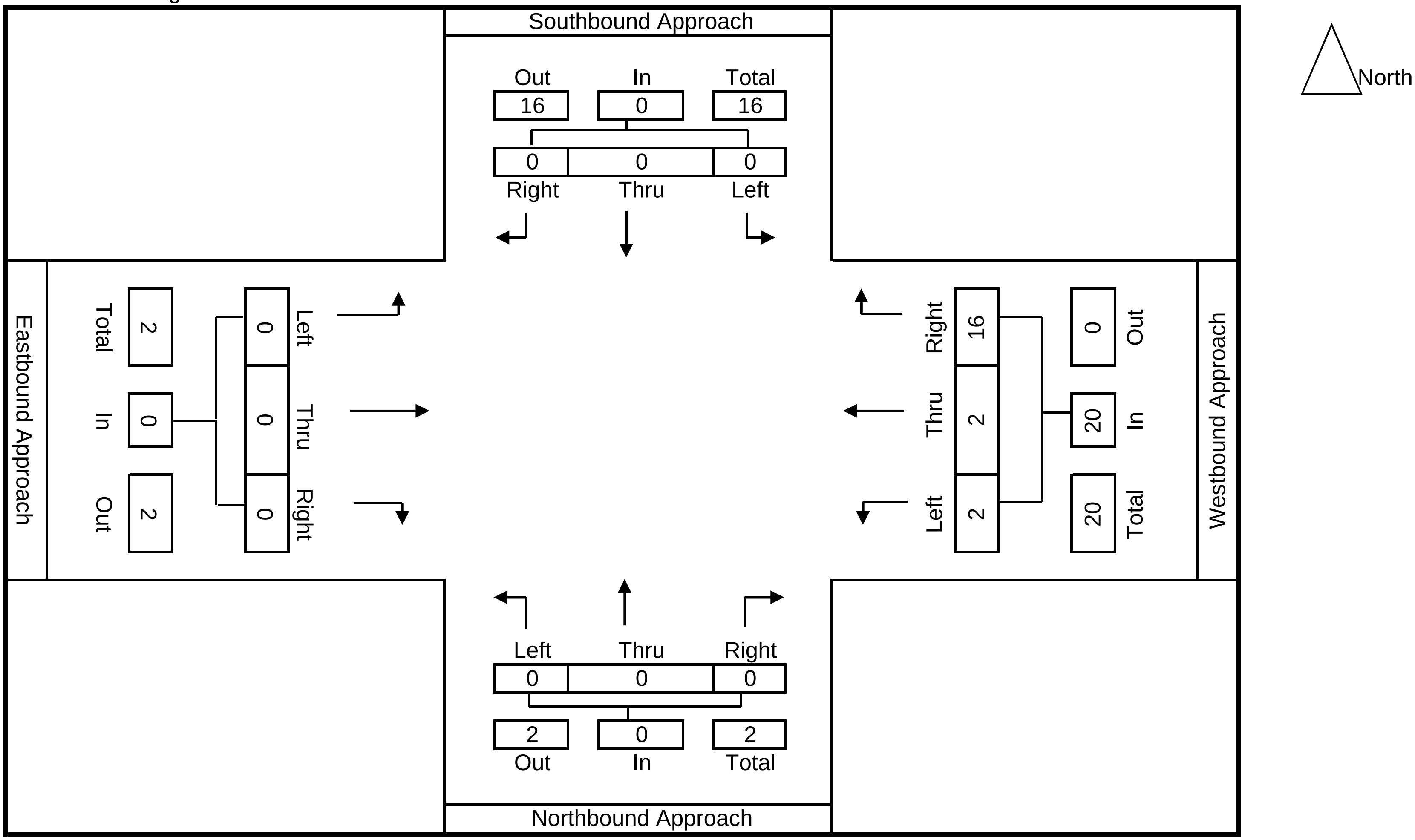
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-080



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th leg of loc 8)
East/West Street: Mystic St (exiting only)
PM Peak Hr Begins at: 515 PM

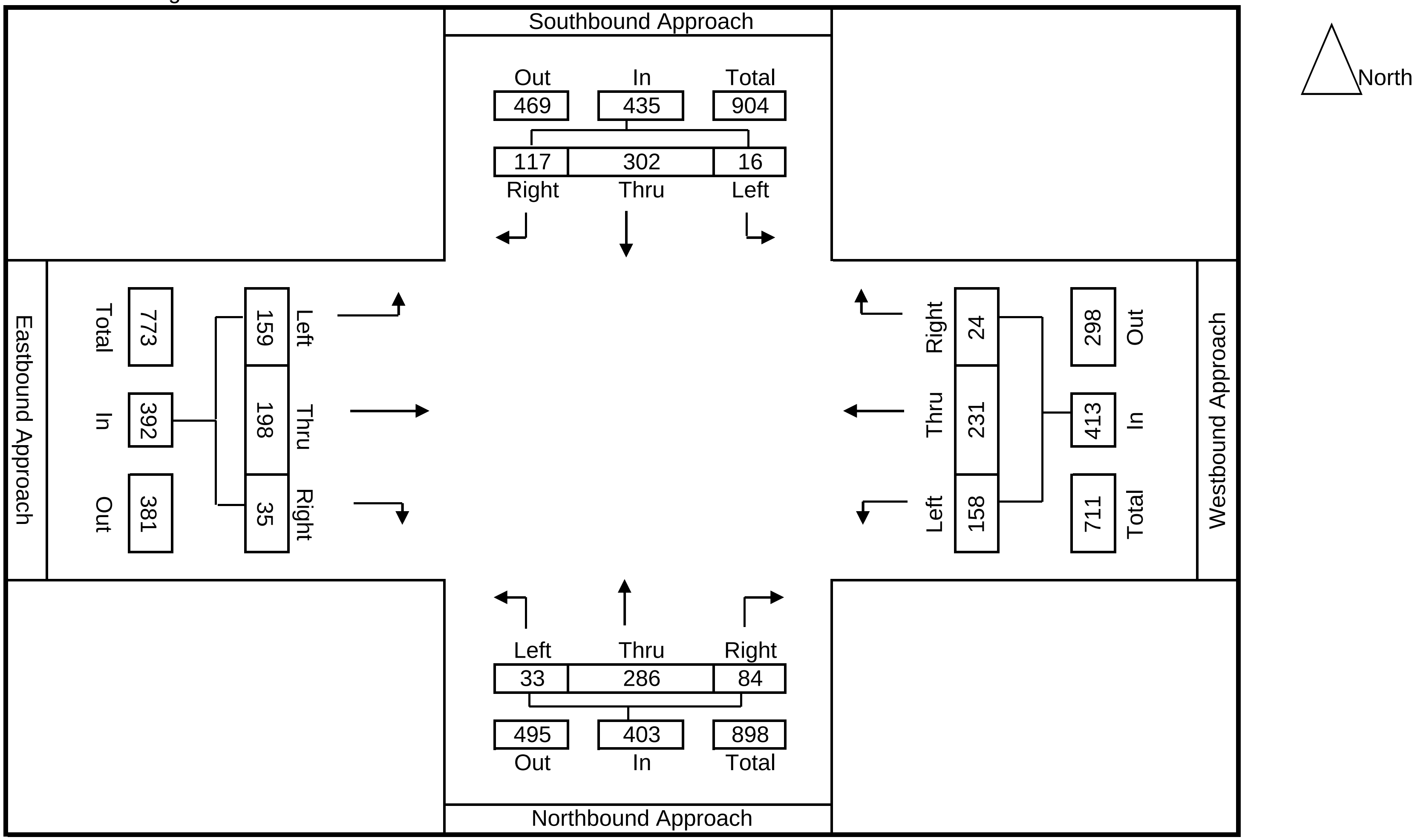
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-081



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Claremont Ave-62nd St
PM Peak Hr Begins at: 515 PM

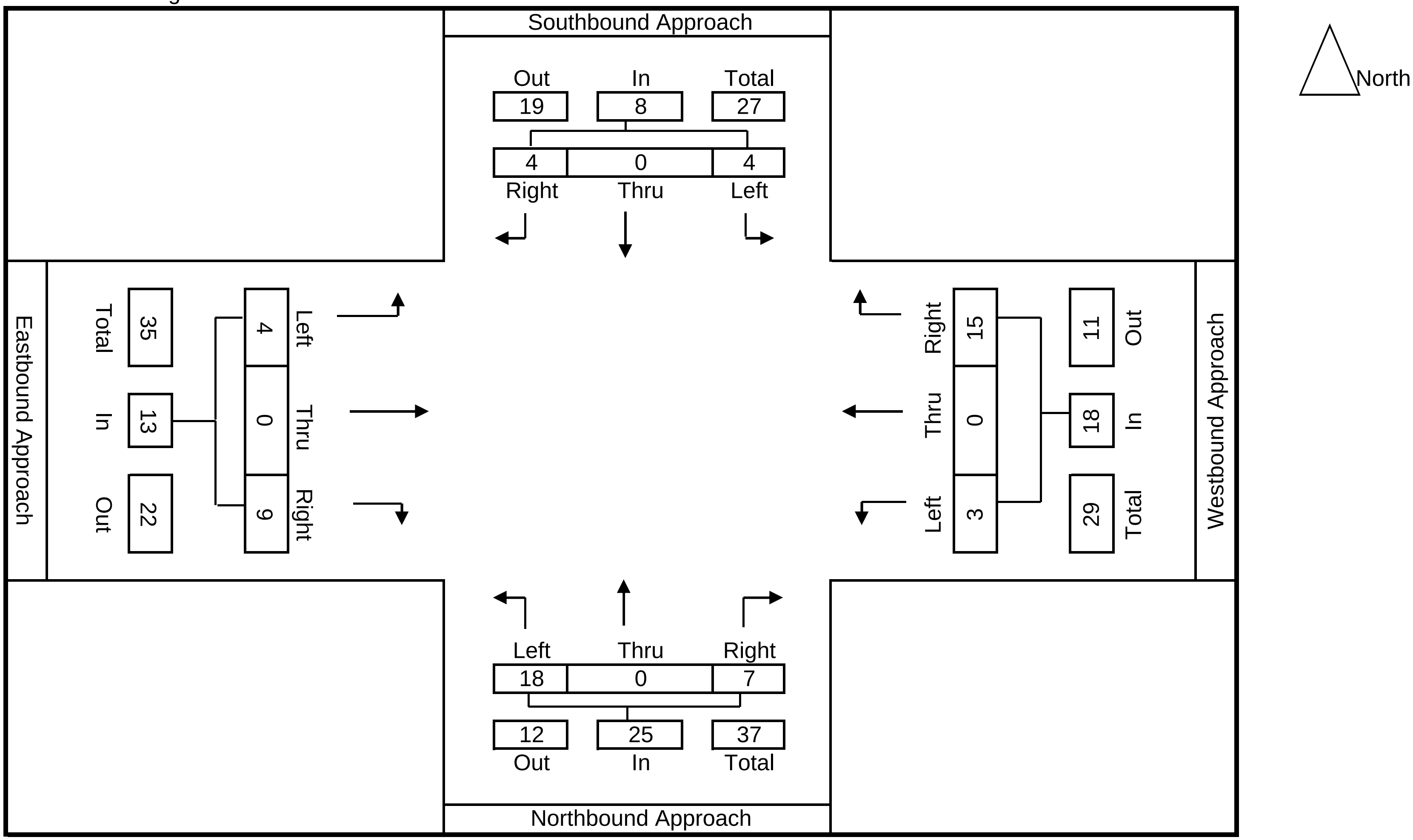
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-009



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 9)
East/West Street: 62nd St/Florio St (entering only)
PM Peak Hr Begins at: 515 PM

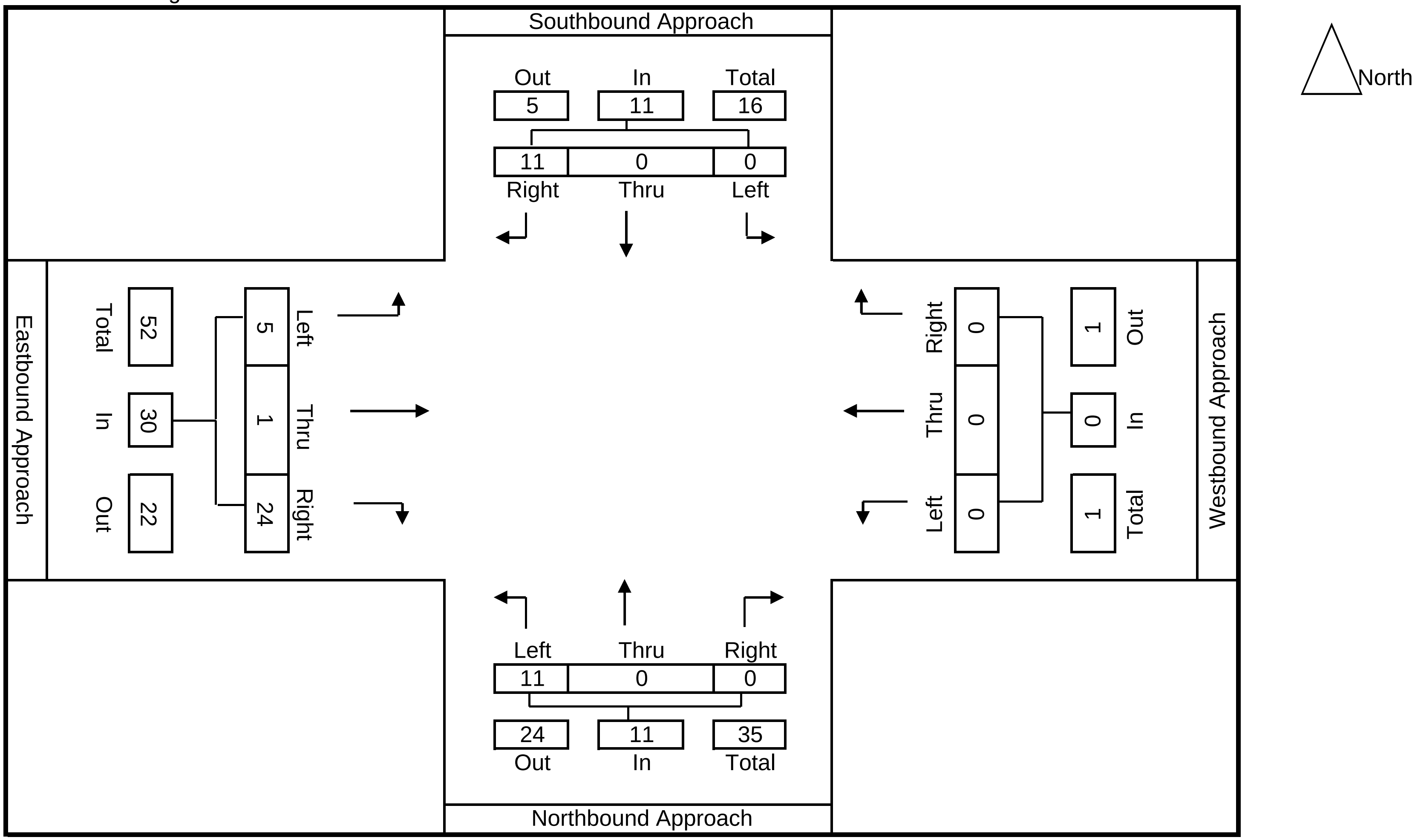
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-090



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 9)
East/West Street: 62nd St/Florio St (exiting only)
PM Peak Hr Begins at: 515 PM

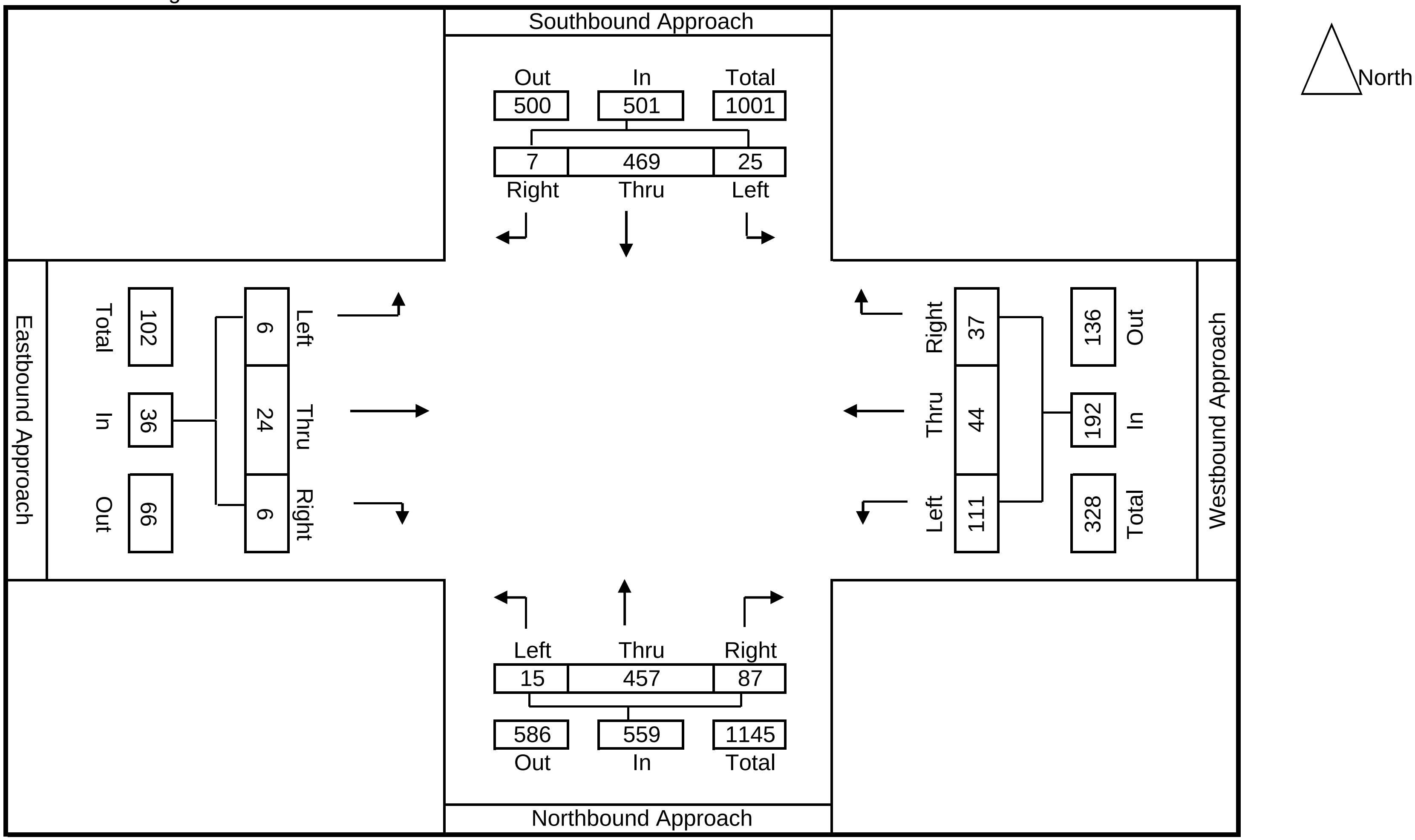
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-091



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Forest St
PM Peak Hr Begins at: 515 PM

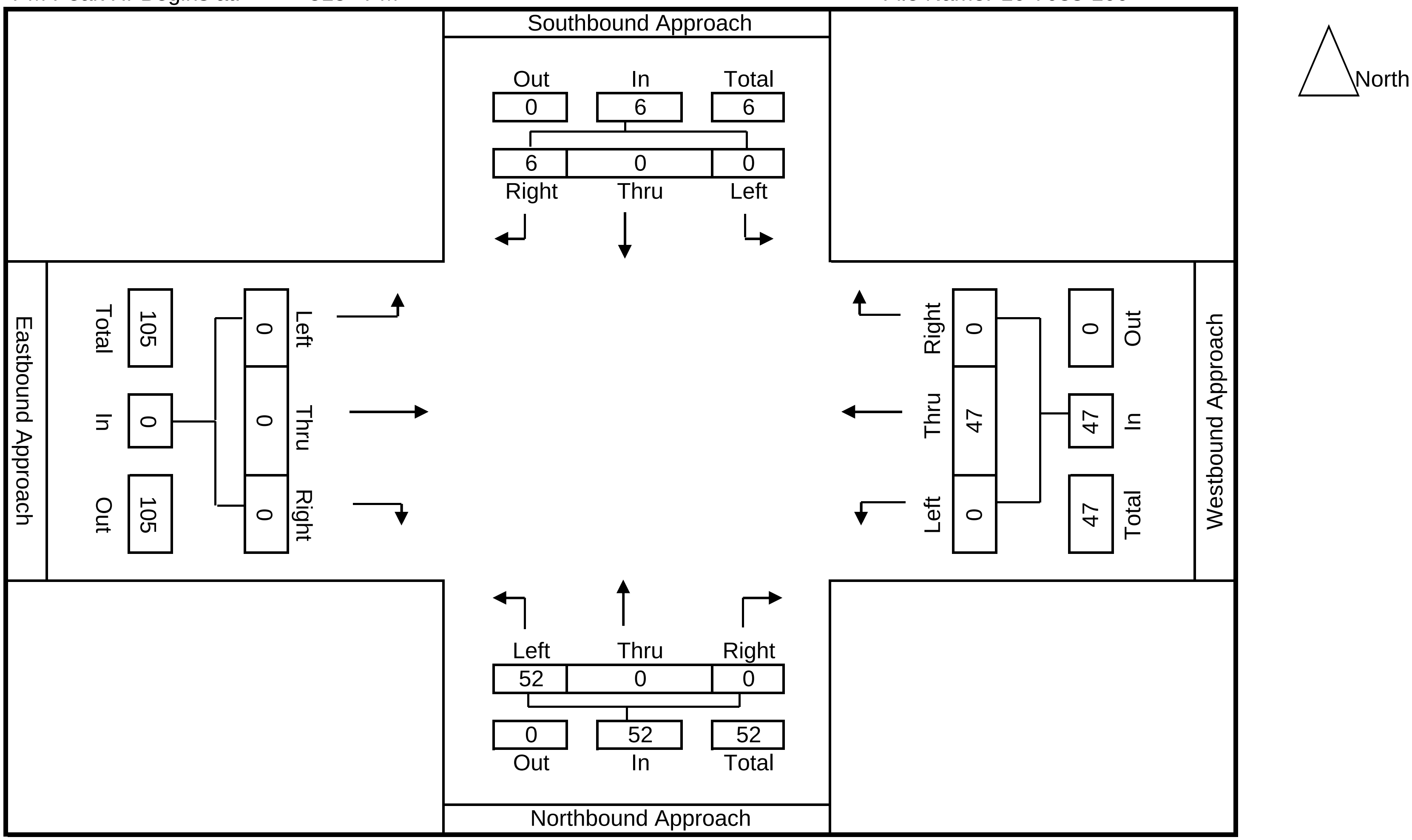
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-010



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th leg of loc 10)
East/West Street: Colby St (entering only)
PM Peak Hr Begins at: 515 PM

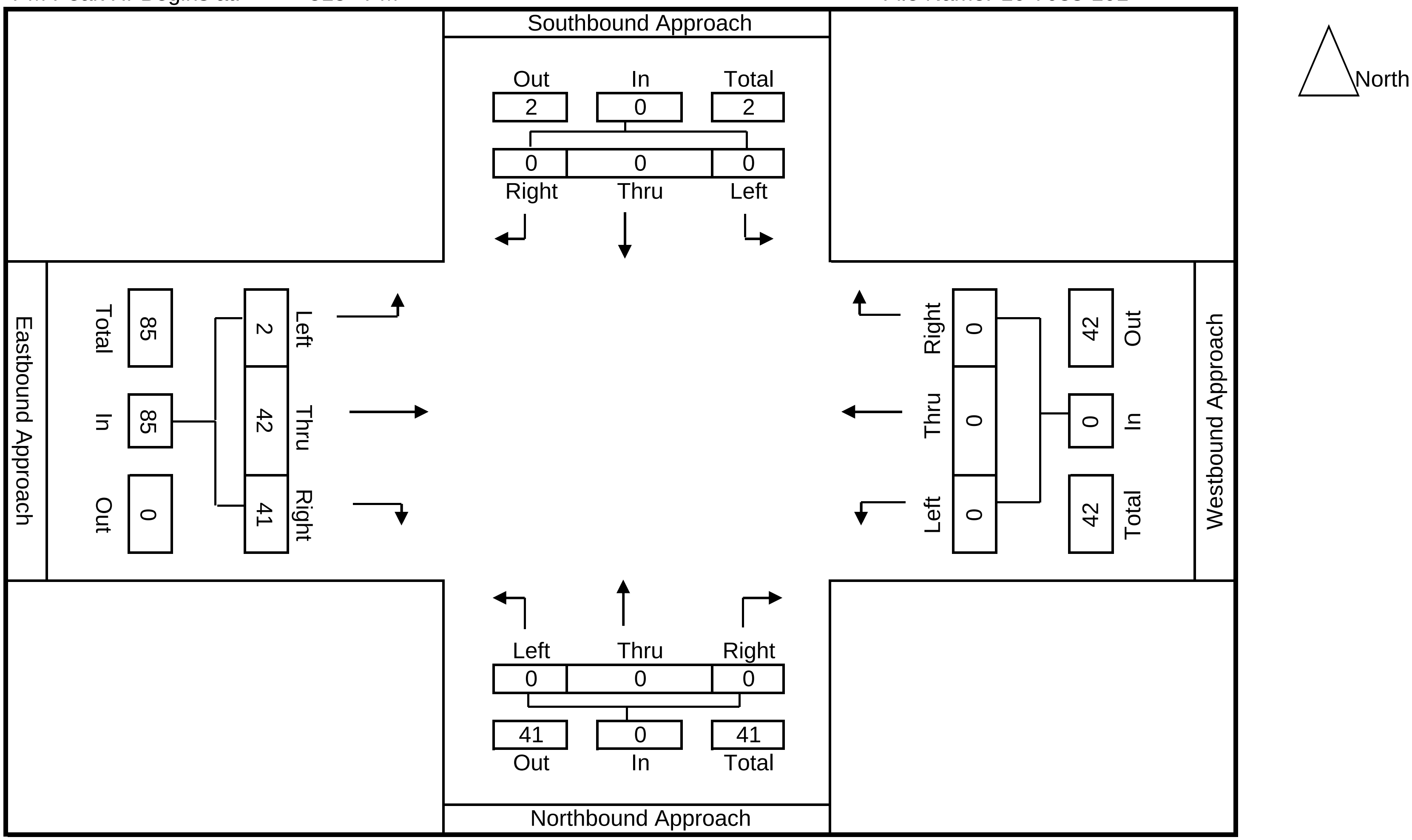
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-100



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave (5th leg of loc 10)
East/West Street: Colby St (exiting only)
PM Peak Hr Begins at: 515 PM

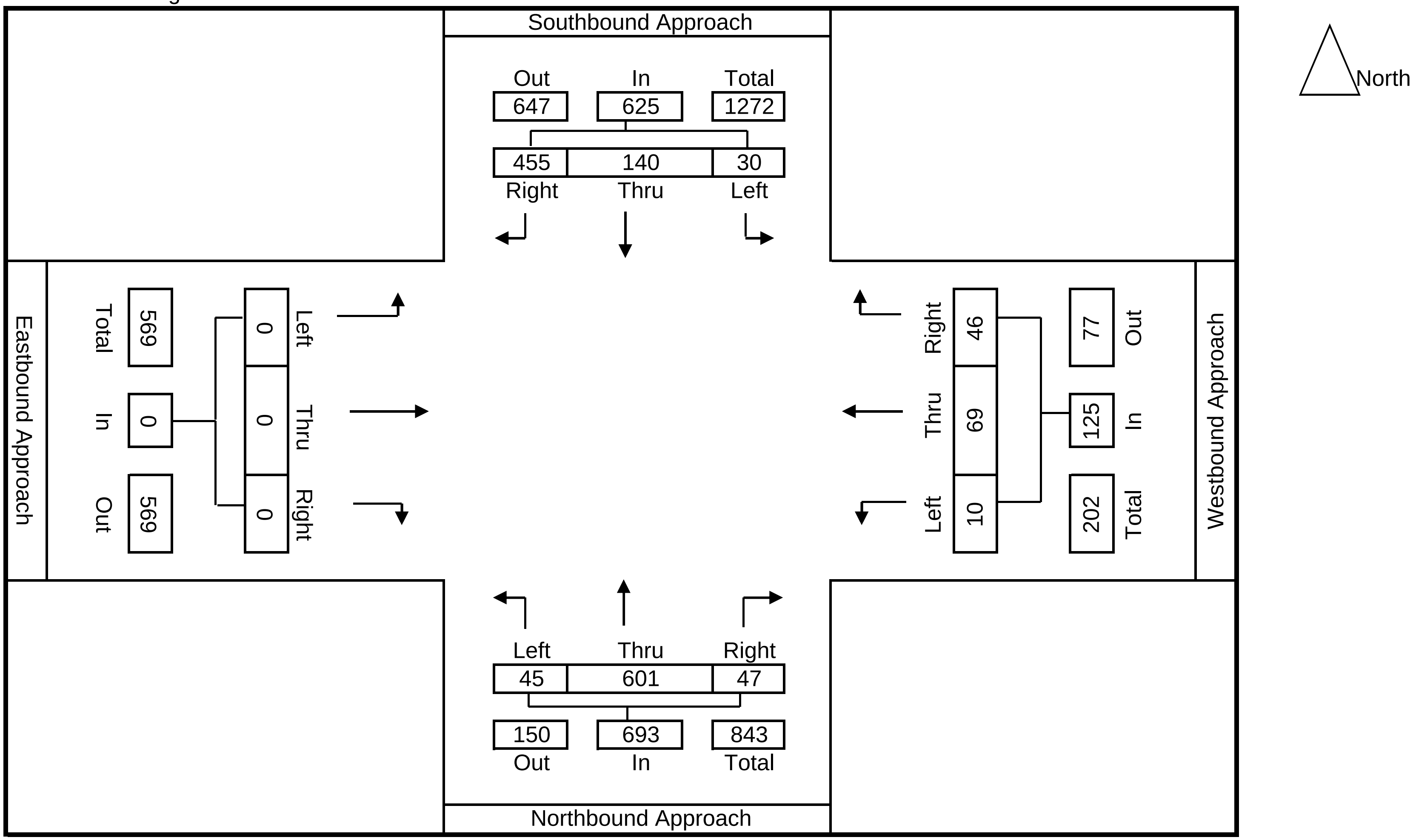
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-101



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Hudson St-SR24 WB On Ramps
PM Peak Hr Begins at: 515 PM

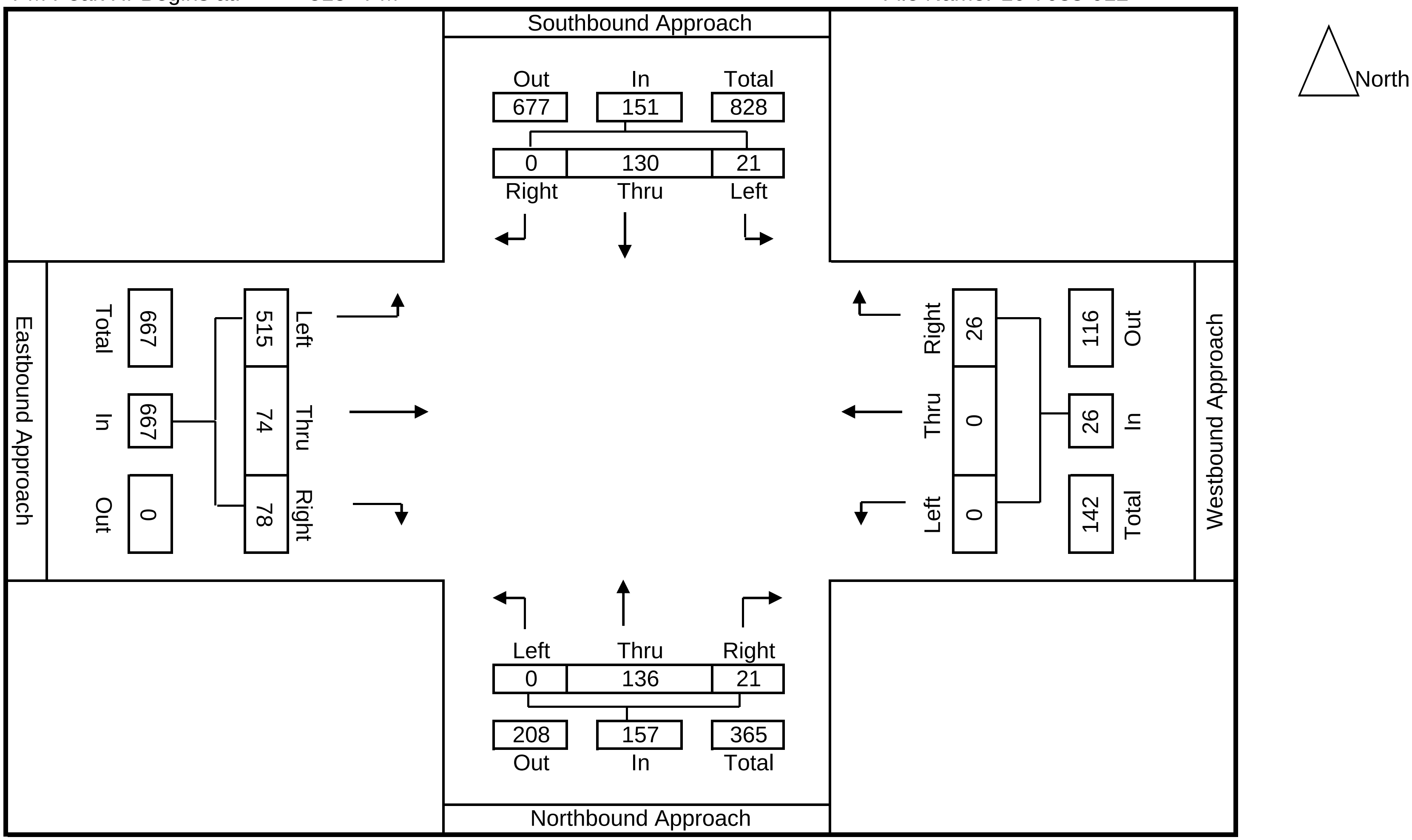
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-011



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Clifton St-SR24 EB Off Ramps
PM Peak Hr Begins at: 515 PM

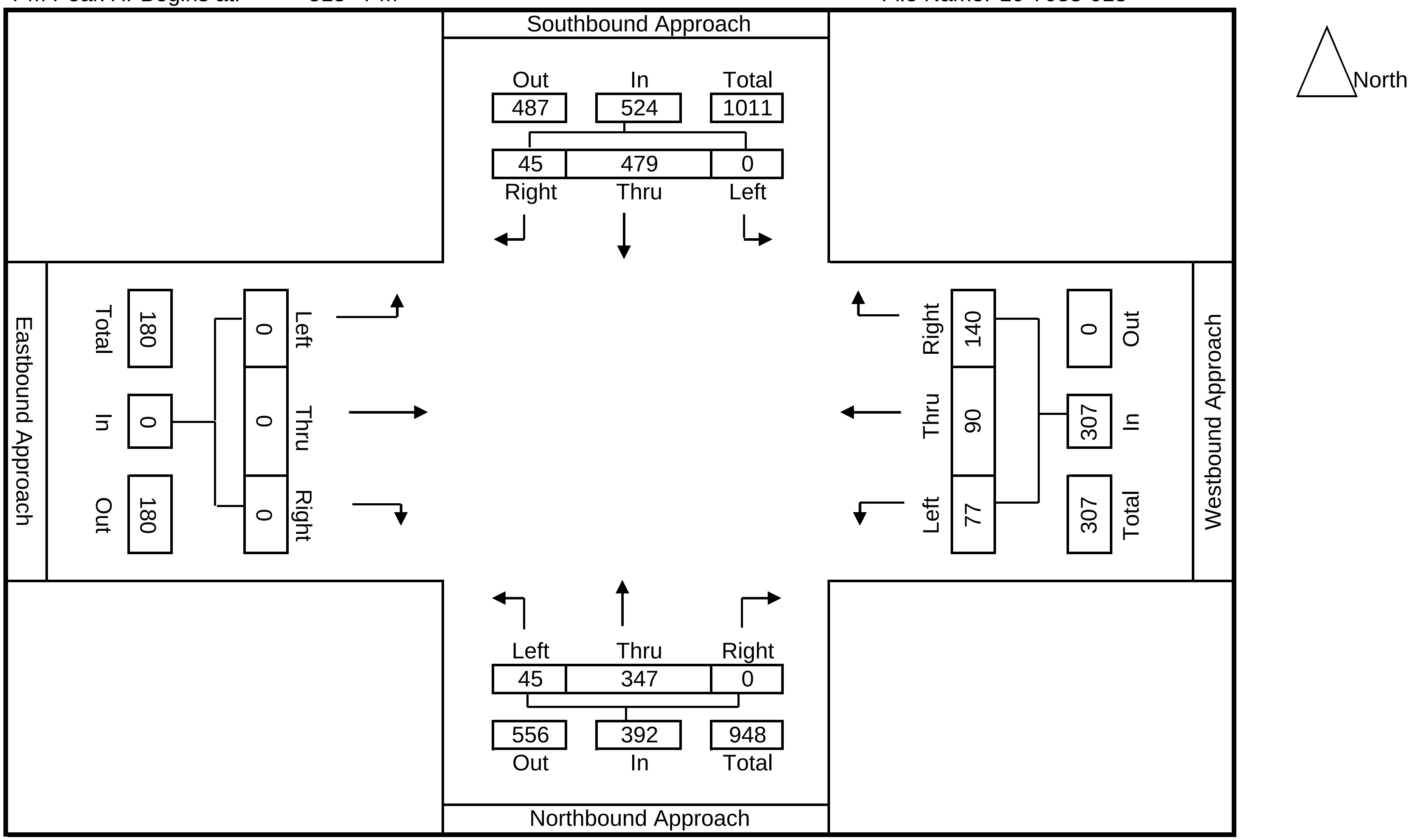
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-012



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Miles Ave
PM Peak Hr Begins at: 515 PM

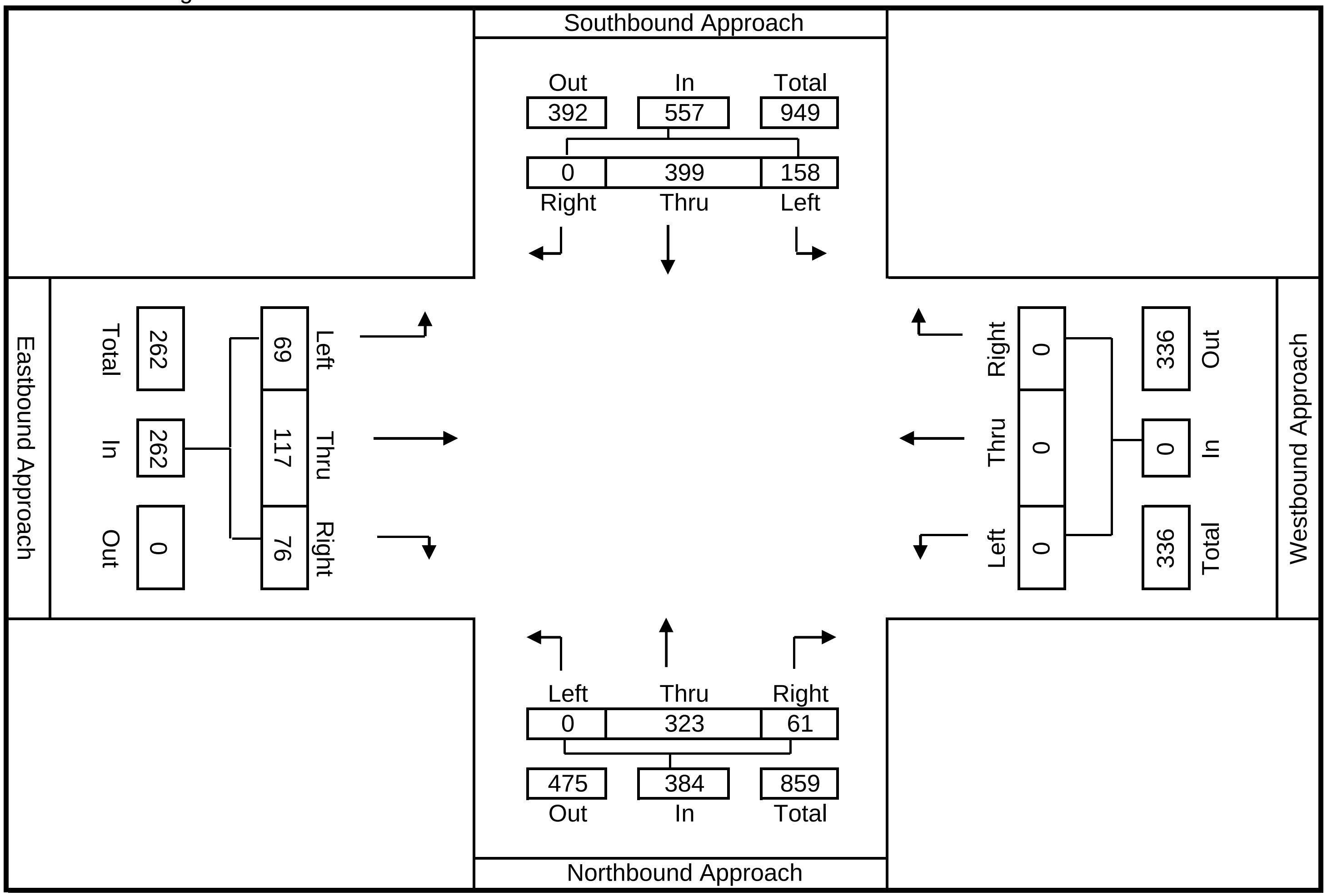
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-013

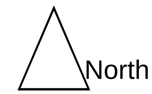


ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Shafter Ave-Keith Ave
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-014

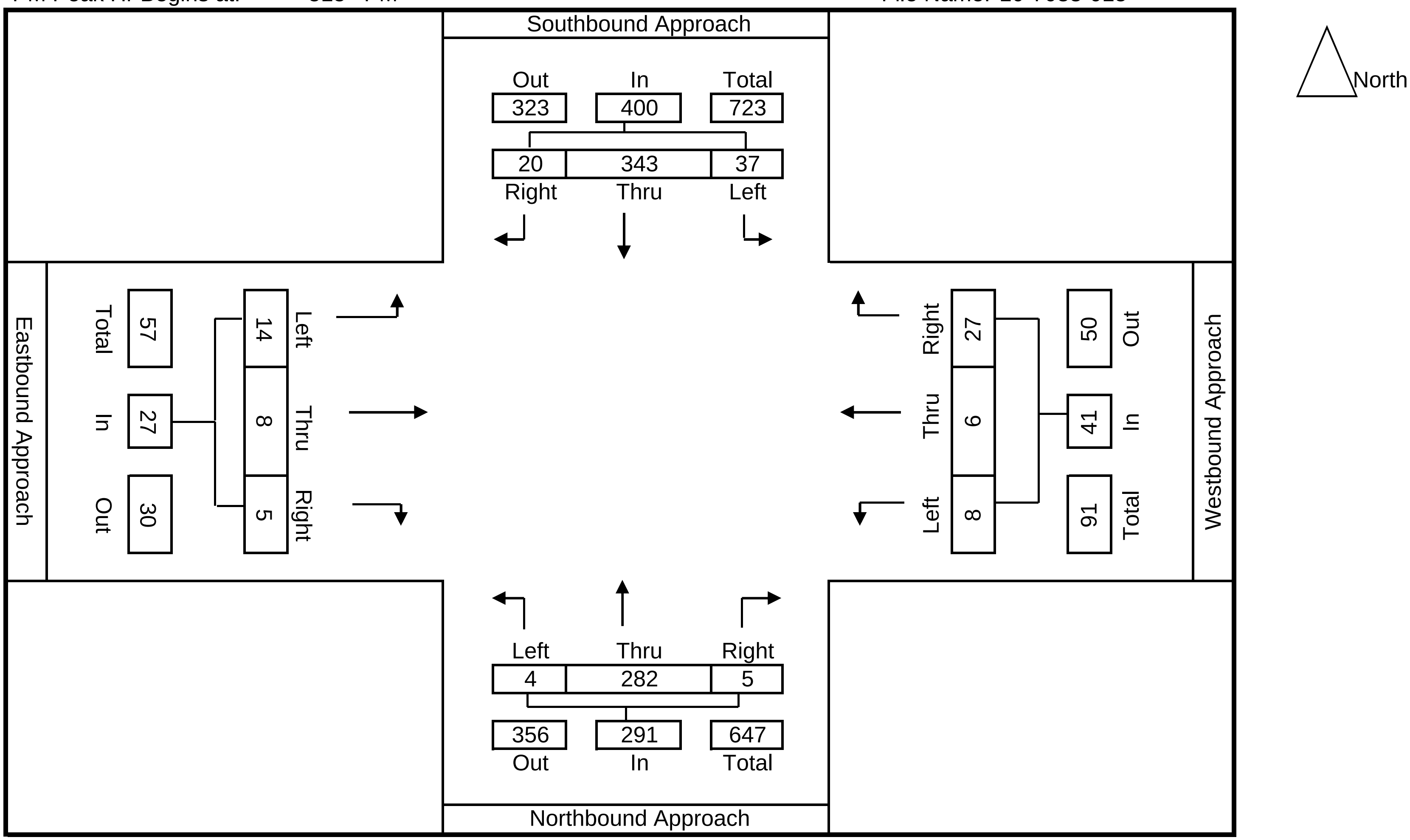




ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Manila Ave
PM Peak Hr Begins at: 515 PM

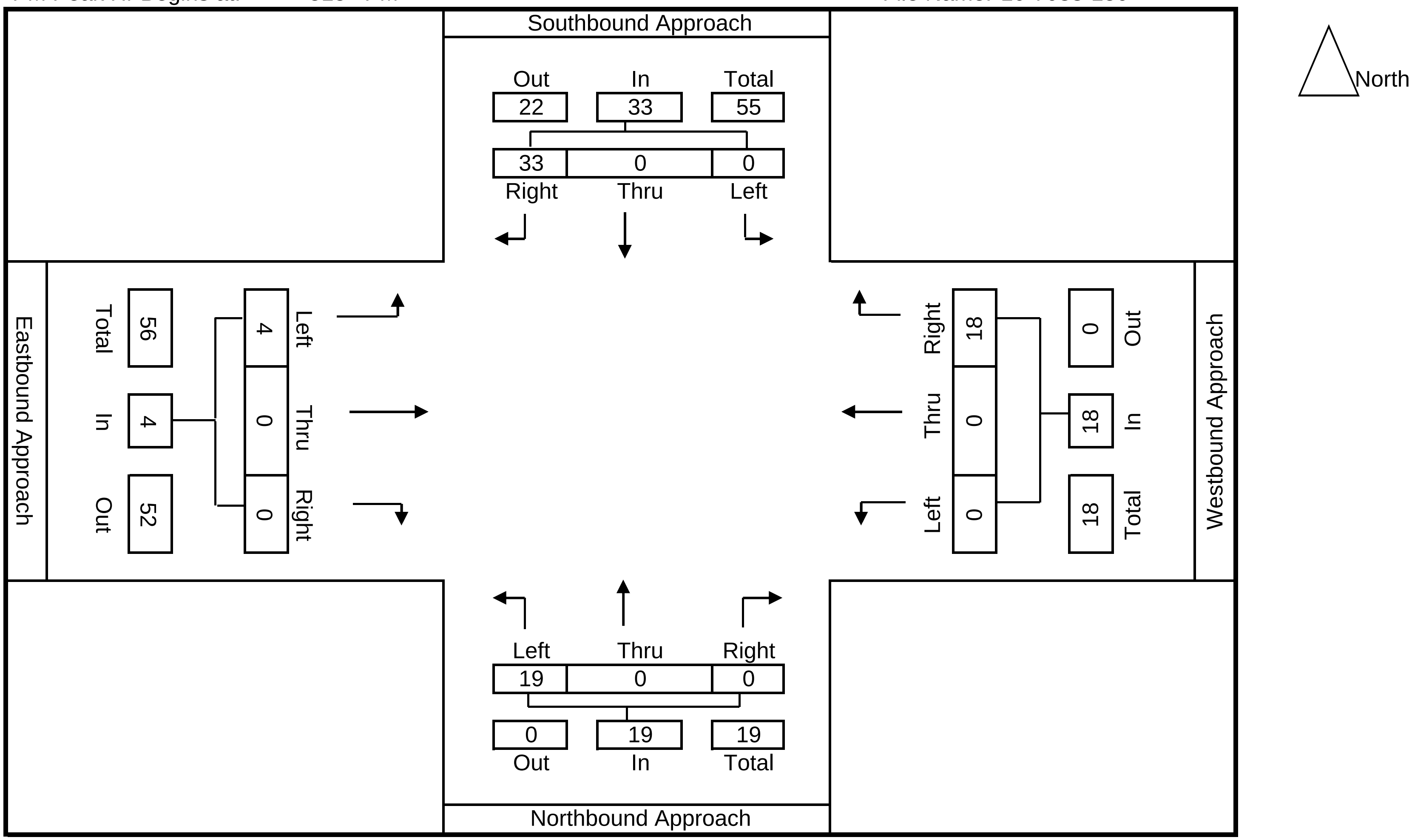
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-015



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 15)
East/West Street: Hudson St (entering only)
PM Peak Hr Begins at: 515 PM

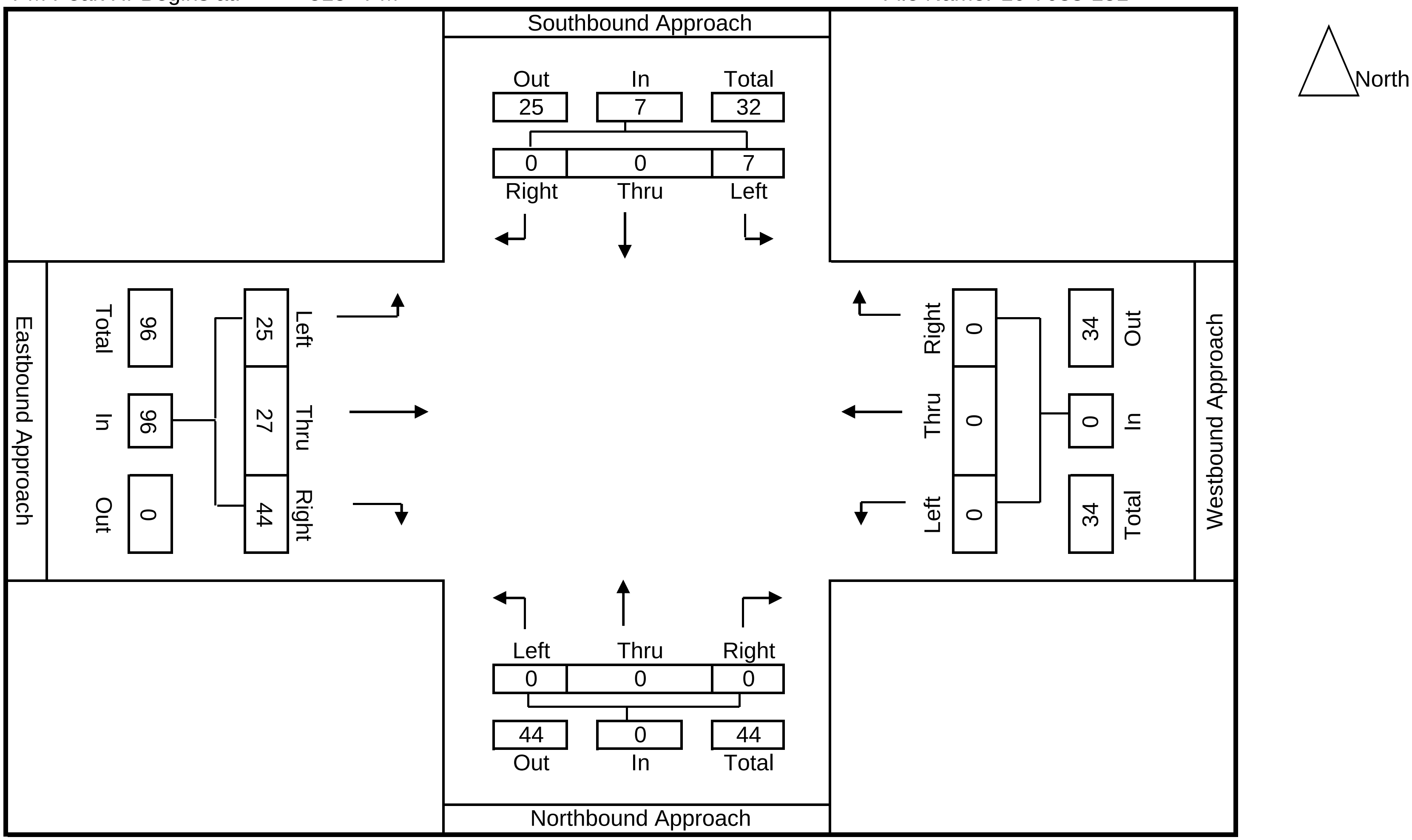
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-150



ALL TRAFFIC DATA, INC

North/South Street: College Ave (5th leg of loc 15)
East/West Street: Hudson St (exiting only)
PM Peak Hr Begins at: 515 PM

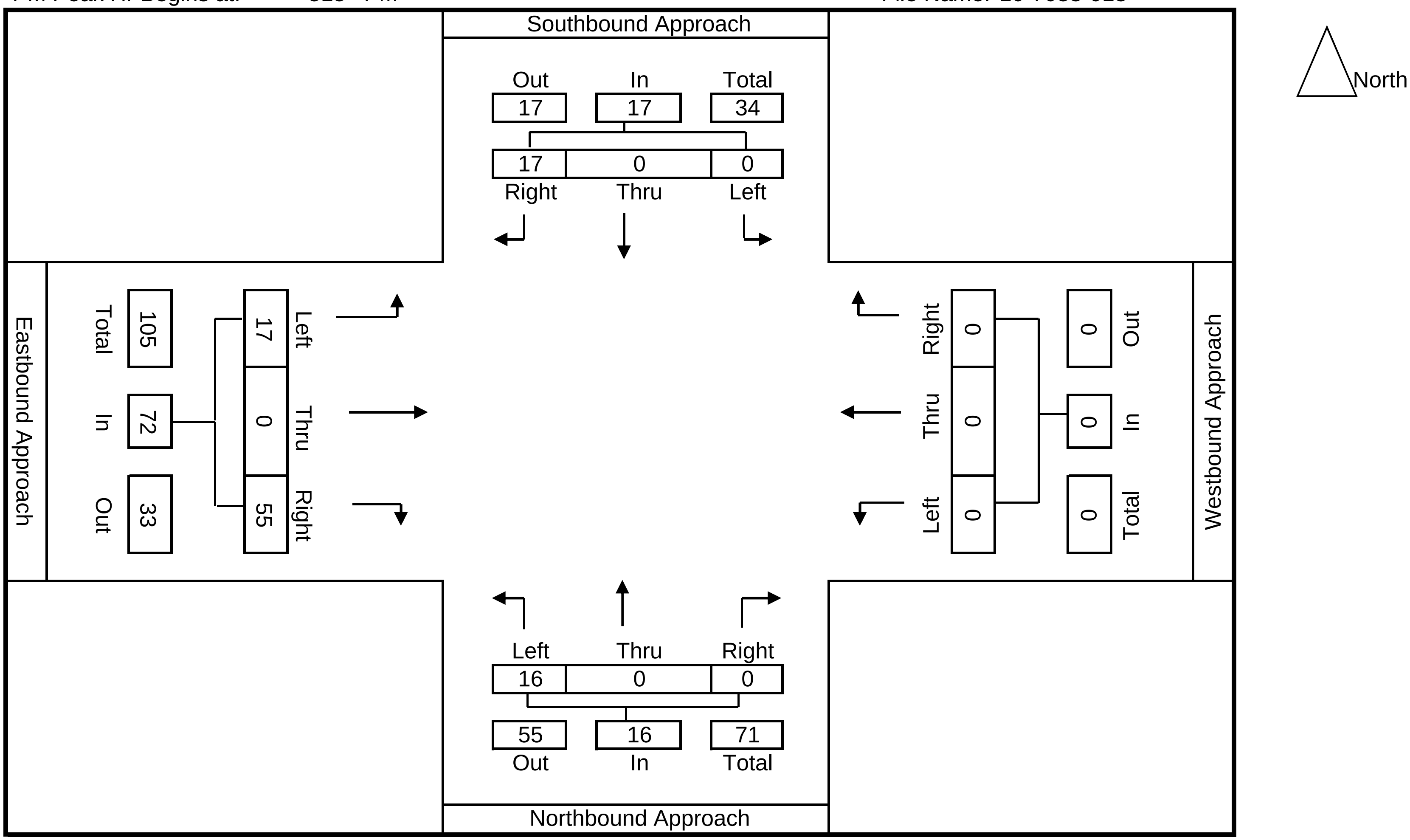
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-151



ALL TRAFFIC DATA, INC

North/South Street: Claremont Ave
East/West Street: Dwy 18
PM Peak Hr Begins at: 515 PM

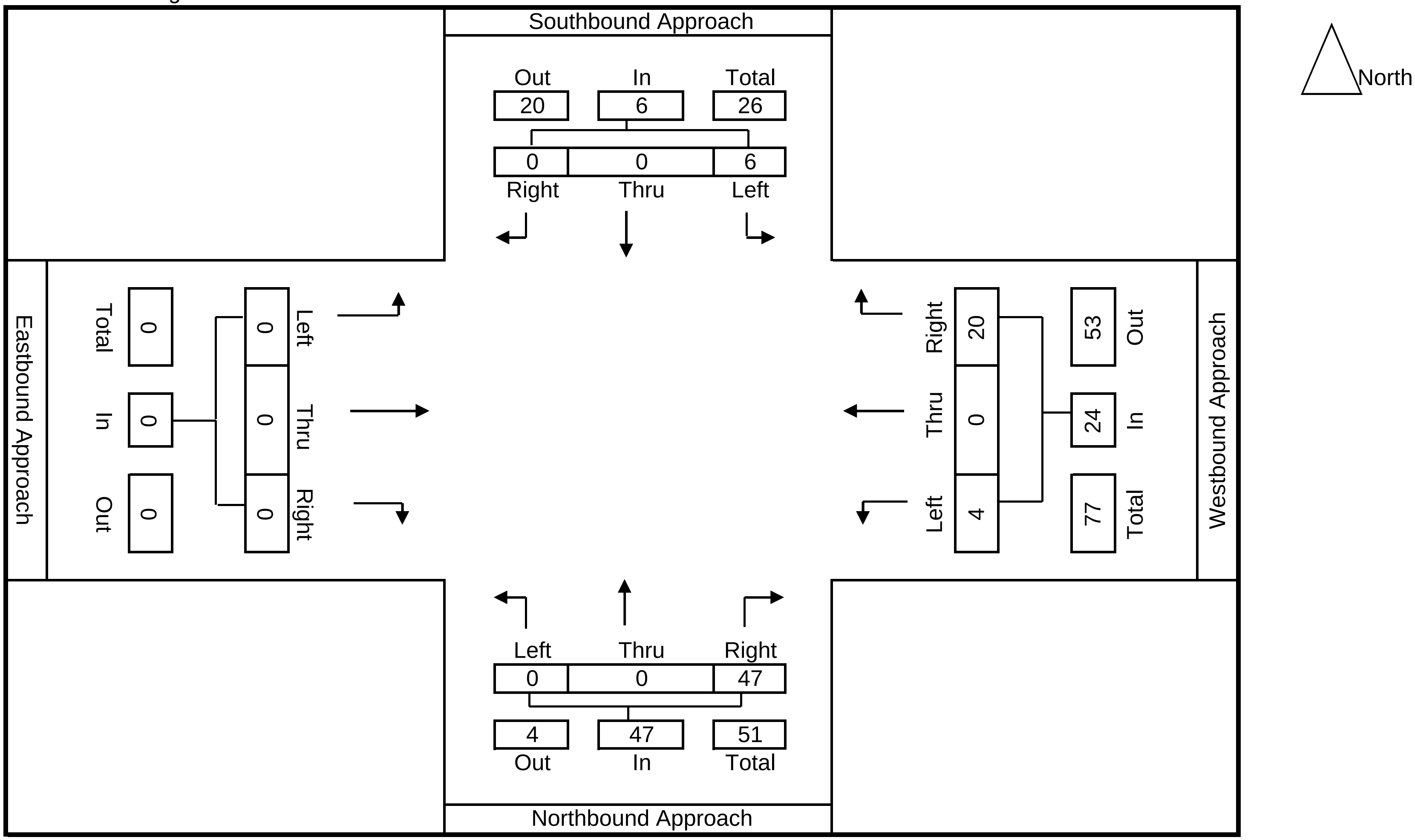
Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-018



ALL TRAFFIC DATA, INC

North/South Street: College Ave
East/West Street: Dwy 17
PM Peak Hr Begins at: 515 PM

Date: 3/13/2010
City: City of Oakland
File Name: 10-7088-017



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-001
N/S Street: College Ave
E/W Street: Ashby Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	13	49	117	129
5:30 PM	20	57	93	104
5:45 PM	33	55	70	135
6:00 PM	26	35	102	122
TOTALS	**92**	**196**	**382**	**490**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	5	6
5:30 PM	0	2	5	5
5:45 PM	3	1	3	6
6:00 PM	4	0	0	2
TOTALS	**7**	**3**	**13**	**19**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-002
N/S Street: Claremont Ave
E/W Street: Ashby Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	3	4	7
5:30 PM	7	2	1	10
5:45 PM	2	2	11	9
6:00 PM	10	4	5	13
TOTALS	**21**	**11**	**21**	**39**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	3	1	2	0
5:30 PM	0	0	3	0
5:45 PM	3	0	3	0
6:00 PM	2	3	1	0
TOTALS	**8**	**4**	**9**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-003
N/S Street: Claremont Ave
E/W Street: The Uplands
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	9	4	4	0
5:30 PM	11	7	5	0
5:45 PM	11	4	8	0
6:00 PM	10	2	7	0
TOTALS	**41**	**17**	**24**	**0**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	1	0	3	0
5:30 PM	1	0	1	0
5:45 PM	3	1	1	0
6:00 PM	0	0	3	0
TOTALS	**5**	**1**	**8**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-004
N/S Street: Telegraph Ave
E/W Street: Alcatraz Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	14	5	10	9
5:30 PM	0	3	2	11
5:45 PM	2	13	7	9
6:00 PM	6	4	3	12
TOTALS	**22**	**25**	**22**	**41**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	1	0	2	5
5:30 PM	1	1	1	5
5:45 PM	0	1	1	3
6:00 PM	0	0	1	2
TOTALS	**2**	**2**	**5**	**15**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-005
N/S Street: College Ave
E/W Street: Alcatraz Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	16	16	24	55
5:30 PM	12	8	22	60
5:45 PM	19	13	31	61
6:00 PM	9	16	20	46
TOTALS	**56**	**53**	**97**	**222**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	1	1	2	2
5:30 PM	2	0	4	6
5:45 PM	2	0	4	3
6:00 PM	2	2	1	2
TOTALS	**7**	**3**	**11**	**13**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-006
N/S Street: Claremont Ave
E/W Street: Alcatraz Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	3
5:30 PM	0	1	0	6
5:45 PM	0	0	0	8
6:00 PM	0	2	0	0
TOTALS	**0**	**3**	**0**	**17**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	4
5:30 PM	0	0	0	1
5:45 PM	0	0	0	1
6:00 PM	0	1	0	1
TOTALS	**0**	**1**	**0**	**7**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-007
N/S Street: College Ave
E/W Street: 63rd St
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	38	2	32	76
5:30 PM	32	0	24	70
5:45 PM	49	0	44	71
6:00 PM	42	0	23	49
TOTALS	**161**	**2**	**123**	**266**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	2	6
5:30 PM	2	0	3	7
5:45 PM	0	0	6	5
6:00 PM	0	0	2	6
TOTALS	**2**	**0**	**13**	**24**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-008
N/S Street: Claremont Ave
E/W Street: Mystic St
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			2	
5:30 PM			0	
5:45 PM			10	
6:00 PM			2	
TOTALS	**0**	**0**	**14**	**0**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			4	
5:30 PM			3	
5:45 PM			2	
6:00 PM			0	
TOTALS	**0**	**0**	**9**	**0**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-008
N/S Street: Claremont Ave
E/W Street: Auburn Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	1	3	3
5:30 PM	0	3	2	1
5:45 PM	0	4	12	2
6:00 PM	0	6	3	0
TOTALS	**0**	**14**	**20**	**6**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	0	4	1
5:30 PM	0	0	3	0
5:45 PM	0	0	2	0
6:00 PM	1	1	0	1
TOTALS	**3**	**1**	**9**	**2**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-009
N/S Street: College Ave
E/W Street: 62nd St
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			37	52
5:30 PM			26	53
5:45 PM			39	67
6:00 PM			42	56
TOTALS	**0**	**0**	**144**	**228**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM			1	0
5:30 PM			0	3
5:45 PM			5	6
6:00 PM			4	7
TOTALS	**0**	**0**	**10**	**16**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-009
N/S Street: College Ave
E/W Street: Claremont Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	7	40	48
5:30 PM	4	9	27	53
5:45 PM	6	17	39	67
6:00 PM	7	12	42	51
TOTALS	**19**	**45**	**148**	**219**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	2	1	0
5:30 PM	0	0	0	3
5:45 PM	0	1	5	7
6:00 PM	0	1	8	7
TOTALS	**0**	**4**	**14**	**17**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-010
N/S Street: Claremont Ave
E/W Street: Colby St
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM				2
5:30 PM				3
5:45 PM				3
6:00 PM				2
TOTALS	**0**	**0**	**0**	**10**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM				6
5:30 PM				4
5:45 PM				4
6:00 PM				3
TOTALS	**0**	**0**	**0**	**17**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-010
N/S Street: Claremont Ave
E/W Street: Forest St
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	12	2	1	0
5:30 PM	9	10	6	1
5:45 PM	16	3	0	1
6:00 PM	11	3	1	2
TOTALS	**48**	**18**	**8**	**4**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	3	4	1	4
5:30 PM	6	2	4	3
5:45 PM	9	1	1	2
6:00 PM	6	0	0	2
TOTALS	**24**	**7**	**6**	**11**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-011
N/S Street: Claremont Ave
E/W Street: Hudson St-SR24 WB On Ramps
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	2	3
5:30 PM	3	2	6	3
5:45 PM	0	1	2	2
6:00 PM	1	0	1	0
TOTALS	**4**	**3**	**11**	**8**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	1	1
5:30 PM	0	0	0	1
5:45 PM	0	0	0	0
6:00 PM	0	0	0	1
TOTALS	**0**	**0**	**1**	**3**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-012
N/S Street: Claremont Ave
E/W Street: Clifton St-SR24 EB Off Ramps
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	4	0
5:30 PM	0	1	3	3
5:45 PM	0	3	7	1
6:00 PM	0	3	4	1
TOTALS	**0**	**7**	**18**	**5**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	3	4
5:30 PM	0	0	5	3
5:45 PM	0	0	1	2
6:00 PM	0	0	0	1
TOTALS	**0**	**0**	**9**	**10**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-013
N/S Street: College Ave
E/W Street: Miles Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	6	9	40	56
5:30 PM	10	2	41	33
5:45 PM	5	6	45	47
6:00 PM	5	5	43	47
TOTALS	**26**	**22**	**169**	**183**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	10	10	0	1
5:30 PM	8	6	2	0
5:45 PM	9	13	0	0
6:00 PM	8	4	0	1
TOTALS	**35**	**33**	**2**	**2**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-014
N/S Street: College Ave
E/W Street: Shafter Ave-Keith Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	9	65	61	66
5:30 PM	15	80	75	62
5:45 PM	20	38	79	48
6:00 PM	17	57	66	49
TOTALS	**61**	**240**	**281**	**225**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	2	2	4	14
5:30 PM	1	0	2	4
5:45 PM	0	1	6	3
6:00 PM	2	0	2	3
TOTALS	**5**	**3**	**14**	**24**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-015
N/S Street: College Ave
E/W Street: Hudson Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	11
5:30 PM	0	0	0	32
5:45 PM	0	0	0	13
6:00 PM	0	0	0	24
TOTALS	**0**	**0**	**0**	**80**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	2
6:00 PM	0	0	0	0
TOTALS	**0**	**0**	**0**	**2**

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

PROJECT#: 10-7088-015
N/S Street: College Ave
E/W Street: Manila Ave
DATE: 3/13/2010 DAY: Saturday
CITY: Oakland

P M

PEDESTRIANS

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	1	6	16	7
5:30 PM	0	6	25	25
5:45 PM	0	6	24	11
6:00 PM	0	11	17	15
TOTALS	**1**	**29**	**82**	**58**

BIKES

T I M E	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
5:15 PM	0	0	0	0
5:30 PM	0	1	0	0
5:45 PM	0	2	0	2
6:00 PM	0	0	2	0
TOTALS	**0**	**3**	**2**	**2**

Appendix B
LOS Analysis Worksheets – Existing Conditions

FEHR & PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	650	74	18	528	140	76	242	55	130	293	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.97			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1534			3263			1485			1421	
Flt Permitted		0.98			0.93			0.82			0.66	
Satd. Flow (perm)		1509			3030			1226			948	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	684	78	19	556	147	80	255	58	137	308	71
RTOR Reduction (vph)	0	4	0	0	24	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	773	0	0	698	0	0	387	0	0	510	0
Confl. Peds. (#/hr)			102			81			269			224
Confl. Bikes (#/hr)			1			8			32			59
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		731			1467			374			449	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.51			0.23			0.32			c0.39	
v/c Ratio		1.06			0.48			1.03			1.14	
Uniform Delay, d1		24.5			16.4			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		49.5			1.1			55.6			85.0	
Delay (s)		74.0			17.5			88.6			112.0	
Level of Service		E			B			F			F	
Approach Delay (s)		74.0			17.5			88.6			112.0	
Approach LOS		E			B			F			F	

Intersection Summary			
HCM Average Control Delay	67.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	650	34	89	553	239	53	359	165	272	234	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.96		1.00	0.98	
Flt Protected		0.99			0.99			1.00		0.95	0.99	
Satd. Flow (prot)		3490			3357			3346		1610	3225	
Flt Permitted		0.65			0.72			1.00		0.95	0.99	
Satd. Flow (perm)		2289			2429			3346		1610	3225	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	684	36	94	582	252	56	378	174	286	246	45
RTOR Reduction (vph)	0	3	0	0	38	0	0	43	0	0	10	0
Lane Group Flow (vph)	0	821	0	0	890	0	0	565	0	192	375	0
Confl. Peds. (#/hr)			13			10			5			49
Confl. Bikes (#/hr)			4			2			5			6
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			17.5		18.0	18.0	
Actuated g/C Ratio		0.52			0.52			0.18		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1202			1275			586		290	581	
v/s Ratio Prot								c0.17		c0.12	0.12	
v/s Ratio Perm		0.36			c0.37							
v/c Ratio		0.68			0.70			0.96		0.66	0.65	
Uniform Delay, d1		17.6			17.8			40.9		38.2	38.0	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		3.2			3.2			29.4		11.3	5.5	
Delay (s)		20.7			21.0			70.3		49.5	43.5	
Level of Service		C			C			E		D	D	
Approach Delay (s)		20.7			21.0			70.3			45.5	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	66	80	593	111	43	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.98			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.98			1.00
Flt Protected	0.98		1.00			0.99
Satd. Flow (prot)	1641		3197			3275
Flt Permitted	0.98		1.00			0.84
Satd. Flow (perm)	1641		3197			2758
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	69	83	618	116	45	393
RTOR Reduction (vph)	54	0	19	0	0	0
Lane Group Flow (vph)	98	0	715	0	0	438
Confl. Peds. (#/hr)	36	32		40		
Confl. Bikes (#/hr)		7		24		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	492		1918			1655
v/s Ratio Prot	c0.06		c0.22			
v/s Ratio Perm						0.16
v/c Ratio	0.20		0.37			0.26
Uniform Delay, d1	20.8		8.2			7.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.9		0.6			0.4
Delay (s)	21.8		8.8			8.0
Level of Service	C		A			A
Approach Delay (s)	21.8		8.8			8.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	10.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	425	134	34	294	94	214	777	79	197	946	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1774		1770	1556		1770	3227		1770	3162	
Flt Permitted	0.30	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	551	1774		230	1556		1770	3227		1770	3162	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	68	443	140	35	306	98	223	809	82	205	985	84
RTOR Reduction (vph)	0	12	0	0	13	0	0	7	0	0	6	0
Lane Group Flow (vph)	68	571	0	35	391	0	223	884	0	205	1063	0
Confl. Peds. (#/hr)			27			49			48			62
Confl. Bikes (#/hr)			10			24			42			49
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	31.9	31.9		31.9	31.9		14.2	33.8		13.8	33.4	
Effective Green, g (s)	32.4	32.4		32.4	32.4		15.2	35.8		14.8	35.4	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.38		0.16	0.37	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	188	605		78	531		283	1216		276	1178	
v/s Ratio Prot		c0.32			0.25		c0.13	0.27		0.12	c0.34	
v/s Ratio Perm	0.12			0.15								
v/c Ratio	0.36	0.94		0.45	0.74		0.79	0.73		0.74	0.90	
Uniform Delay, d1	23.5	30.4		24.4	27.6		38.4	25.4		38.3	28.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	23.3		1.5	4.6		12.5	3.8		9.1	11.2	
Delay (s)	24.0	53.7		25.8	32.1		50.9	29.2		47.4	39.4	
Level of Service	C	D		C	C		D	C		D	D	
Approach Delay (s)		50.6			31.6			33.6			40.7	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	39.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	267	183	5	122	23	128	271	24	41	337	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.97			0.98			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1436			1766			1530			1341	
Flt Permitted		0.95			0.99			0.53			0.93	
Satd. Flow (perm)		1366			1742			820			1250	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	281	193	5	128	24	135	285	25	43	355	92
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	537	0	0	149	0	0	442	0	0	480	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		512			653			573			352	
v/s Ratio Prot								c0.15				
v/s Ratio Perm		c0.39			0.09			0.25			c0.38	
v/c Ratio		1.05			0.23			0.77			1.36	
Uniform Delay, d1		25.0			17.1			15.2			28.8	
Progression Factor		1.00			1.43			1.00			1.00	
Incremental Delay, d2		53.2			0.8			9.7			180.9	
Delay (s)		78.2			25.2			24.9			209.7	
Level of Service		E			C			C			F	
Approach Delay (s)		78.2			25.2			24.9			209.7	
Approach LOS		E			C			C			F	

Intersection Summary			
HCM Average Control Delay	98.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	233	64	38	521	351	103
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	251	69	41	560	377	111
Pedestrians	40			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked						
vC, conflicting volume	835	285	528			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	835	285	528			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	12	90	96			
cM capacity (veh/h)	284	687	1001			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	319	228	373	252	237
Volume Left	251	41	0	0	0
Volume Right	69	0	0	0	111
cSH	325	1001	1700	1700	1700
Volume to Capacity	0.98	0.04	0.22	0.15	0.14
Queue Length 95th (ft)	265	3	0	0	0
Control Delay (s)	82.1	1.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	82.1	0.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	18.9		
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	3	18	3	2	24	22	377	11	53	430	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	6	3	18	3	2	24	22	385	11	54	439	8
Pedestrians		207			99						206	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		17			8						17	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	1425	1298	650	1105	1296	695	654			495		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1405	1245	428	1002	1243	695	433			495		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	97	96	97	98	93	97			94		
cM capacity (veh/h)	44	96	411	115	96	336	739			981		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	28	30	418	501
Volume Left	6	3	22	54
Volume Right	18	24	11	8
cSH	128	245	739	981
Volume to Capacity	0.21	0.12	0.03	0.06
Queue Length 95th (ft)	19	10	2	4
Control Delay (s)	40.6	21.7	0.9	1.6
Lane LOS	E	C	A	A
Approach Delay (s)	40.6	21.7	0.9	1.6
Approach LOS	E	C		

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	7	17	13	2	33	6	461	8	33	340	42
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	74	8	19	14	2	37	7	512	9	37	378	47
Pedestrians		21			29			21			1	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			2			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked												
vC, conflicting volume	804	1059	254	865	1078	291	445			550		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	804	1059	254	865	1078	291	445			550		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	69	96	97	93	99	95	99			96		
cM capacity (veh/h)	237	205	719	210	199	688	1092			991		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	101	53	263	265	226	236
Volume Left	74	14	7	0	37	0
Volume Right	19	37	0	9	0	47
cSH	267	401	1092	1700	991	1700
Volume to Capacity	0.38	0.13	0.01	0.16	0.04	0.14
Queue Length 95th (ft)	42	11	0	0	3	0
Control Delay (s)	26.5	15.4	0.3	0.0	1.7	0.0
Lane LOS	D	C	A		A	
Approach Delay (s)	26.5	15.4	0.1		0.8	
Approach LOS	D	C				

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	286	110	3	12	324
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.81				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.96				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1220				1347
Flt Permitted			0.98				0.33	1.00				0.98
Satd. Flow (perm)			1474				623	1220				1328
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	304	117	3	13	345
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	424	0	0	0	461
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			188				238	466				507
v/s Ratio Prot								c0.35				
v/s Ratio Perm			0.04				0.08					0.35
v/c Ratio			0.35				0.22	0.91				0.91
Uniform Delay, d1			43.8				22.9	32.2				32.2
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			5.0				2.1	24.4				22.8
Delay (s)			48.8				25.0	56.6				55.0
Level of Service			D				C	E				E
Approach Delay (s)			48.8					53.1				55.0
Approach LOS			D					D				E

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	96	1	1	110	346	14	41	2	179	204	7	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3156					3164		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3156					3164		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	102	1	1	117	368	15	44	2	190	217	7	18
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	539	0	0	0	0	432	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					545					547		
v/s Ratio Prot					c0.17					c0.14		
v/s Ratio Perm												
v/c Ratio					0.99					0.79		
Uniform Delay, d1					45.4					43.6		
Progression Factor					1.00					1.00		
Incremental Delay, d2					36.0					11.0		
Delay (s)					81.4					54.6		
Level of Service					F					D		
Approach Delay (s)					81.4					54.6		
Approach LOS					F					D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	15	75	8	107	62	52	36	33	48	575	129	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		1.00			0.95					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1612			1443					3198		
Flt Permitted		0.94			0.82					0.83		
Satd. Flow (perm)		1532			1212					2681		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	16	78	8	111	65	54	38	34	50	599	134	28
RTOR Reduction (vph)	0	4	0	0	8	0	0	0	0	20	0	0
Lane Group Flow (vph)	0	98	0	0	260	0	0	0	0	797	0	0
Confl. Peds. (#/hr)			23				77				6	
Confl. Bikes (#/hr)			12				48				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					35.4		
Effective Green, g (s)		18.0			18.0					36.4		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		345			273					1220		
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.21					c0.30		
v/c Ratio		0.28			0.95					0.65		
Uniform Delay, d1		25.7			30.6					16.9		
Progression Factor		1.00			1.00					0.77		
Incremental Delay, d2		0.2			41.3					2.6		
Delay (s)		25.8			71.9					15.6		
Level of Service		C			E					B		
Approach Delay (s)		25.8			71.9					15.6		
Approach LOS		C			E					B		

Intersection Summary			
HCM Average Control Delay	27.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	464	10	6	6	126	72	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	1.00				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3286				1529		
Flt Permitted	0.89				0.97		
Satd. Flow (perm)	2927				1529		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	483	10	6	6	131	75	1
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	527	0	0	0	213	0	0
Confl. Peds. (#/hr)		1	16				
Confl. Bikes (#/hr)		5	16				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	35.4				13.6		
Effective Green, g (s)	36.4				13.6		
Actuated g/C Ratio	0.45				0.17		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1332				260		
v/s Ratio Prot					c0.14		
v/s Ratio Perm	0.18						
v/c Ratio	0.40				0.82		
Uniform Delay, d1	14.5				32.0		
Progression Factor	1.00				1.00		
Incremental Delay, d2	0.9				17.1		
Delay (s)	15.4				49.1		
Level of Service	B				D		
Approach Delay (s)	15.4				49.1		
Approach LOS	B				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	71	81	62	706	88	49	161	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.98		1.00	0.89	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1716		1770	3244		1770	2883	
Flt Permitted					0.99		0.38	1.00		0.30	1.00	
Satd. Flow (perm)					1716		710	3244		565	2883	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	72	83	63	720	90	50	164	474
RTOR Reduction (vph)	0	0	0	0	41	0	0	12	0	0	190	0
Lane Group Flow (vph)	0	0	0	0	134	0	63	798	0	50	448	0
Confl. Peds. (#/hr)			2			8			8			11
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		426	1946		339	1730	
v/s Ratio Prot								c0.25			0.16	
v/s Ratio Perm					0.08		0.09			0.09		
v/c Ratio					0.26		0.15	0.41		0.15	0.26	
Uniform Delay, d1					21.3		7.0	8.5		7.0	7.6	
Progression Factor					1.00		1.53	1.44		1.65	2.80	
Incremental Delay, d2					1.2		0.7	0.6		0.8	0.3	
Delay (s)					22.5		11.4	12.9		12.4	21.6	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			22.5			12.7			20.9	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	442	108	67	0	0	32	0	383	67	12	168	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1670				1418		3232			3299	
Flt Permitted	0.95	0.98				1.00		1.00			0.92	
Satd. Flow (perm)	1681	1670				1418		3232			3044	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	460	112	70	0	0	33	0	399	70	12	175	0
RTOR Reduction (vph)	0	13	0	0	0	12	0	18	0	0	0	0
Lane Group Flow (vph)	322	307	0	0	0	21	0	451	0	0	187	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1065				904		848			799	
v/s Ratio Prot								c0.14				
v/s Ratio Perm	c0.19	0.18				0.01					0.06	
v/c Ratio	0.30	0.29				0.02		0.53			0.23	
Uniform Delay, d1	6.5	6.4				5.3		25.3			23.2	
Progression Factor	1.00	1.00				1.00		1.00			0.99	
Incremental Delay, d2	0.7	0.7				0.0		2.4			0.7	
Delay (s)	7.2	7.1				5.4		27.7			23.7	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.2			5.4			27.7			23.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	72	112	170	54	386	0	0	540	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.92		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2996		1770	1863			1806	
Flt Permitted					0.99		0.32	1.00			1.00	
Satd. Flow (perm)					2996		592	1863			1806	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	77	120	183	58	415	0	0	581	77
RTOR Reduction (vph)	0	0	0	0	114	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	266	0	58	415	0	0	652	0
Confl. Peds. (#/hr)			42			69			275			212
Confl. Bikes (#/hr)									65			56
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					749		385	1211			1174	
v/s Ratio Prot								0.22			c0.36	
v/s Ratio Perm					0.09		0.10					
v/c Ratio					0.36		0.15	0.34			0.56	
Uniform Delay, d1					24.7		5.4	6.3			7.7	
Progression Factor					1.00		1.86	1.85			1.00	
Incremental Delay, d2					1.3		0.5	0.5			1.9	
Delay (s)					26.0		10.6	12.1			9.6	
Level of Service					C		B	B			A	
Approach Delay (s)		0.0			26.0			11.9			9.6	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	384	90	0	0	0	0	326	116	190	414	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.92						0.91		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.98						0.96		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2953						1396		1770	1863	
Flt Permitted		0.99						1.00		0.95	1.00	
Satd. Flow (perm)		2953						1396		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	117	400	94	0	0	0	0	340	121	198	431	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	593	0	0	0	0	0	445	0	198	431	0
Confl. Peds. (#/hr)			300			144			514			190
Confl. Bikes (#/hr)			5			9			38			43
Parking (#/hr)		5						10				
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)		22.0						34.0		15.0	52.0	
Effective Green, g (s)		21.0						33.0		14.0	51.0	
Actuated g/C Ratio		0.26						0.41		0.18	0.64	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		775						576		310	1188	
v/s Ratio Prot								c0.32		c0.11	0.23	
v/s Ratio Perm		0.20										
v/c Ratio		0.76						0.77		0.64	0.36	
Uniform Delay, d1		27.2						20.3		30.7	6.8	
Progression Factor		1.00						1.00		0.87	0.43	
Incremental Delay, d2		7.1						9.7		8.3	0.7	
Delay (s)		34.3						30.0		34.9	3.6	
Level of Service		C						C		C	A	
Approach Delay (s)		34.3			0.0			30.0			13.5	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	9	20	50	16	15	12	32	48	6	37	355	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.94					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					0.99	
Flt Protected			0.98			0.99					0.99	
Satd. Flow (prot)			1551			1377					1619	
Flt Permitted			0.89			0.96					0.91	
Satd. Flow (perm)			1408			1330					1481	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	10	22	55	18	16	13	35	53	7	41	390	18
RTOR Reduction (vph)	0	0	12	0	0	41	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	93	0	0	76	0	0	0	0	453	0
Confl. Peds. (#/hr)				53				31				115
Confl. Bikes (#/hr)												14
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			329			310					543	
v/s Ratio Prot												
v/s Ratio Perm			c0.07			0.06					0.31	
v/c Ratio			0.28			0.25					0.84	
Uniform Delay, d1			18.9			18.7					17.3	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.1			1.9					14.1	
Delay (s)			21.0			20.6					31.5	
Level of Service			C			C					C	
Approach Delay (s)			21.0			20.6					31.5	
Approach LOS			C			C					C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	56	377	14	30	11	62	49	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.98				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.99				0.93		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1760				1494		
Flt Permitted		0.90				0.98		
Satd. Flow (perm)		1596				1494		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	62	414	15	33	12	68	54	40
RTOR Reduction (vph)	0	4	0	0	0	18	0	0
Lane Group Flow (vph)	0	520	0	0	0	156	0	0
Confl. Peds. (#/hr)			65	105				
Confl. Bikes (#/hr)			14	6				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		585				299		
v/s Ratio Prot								
v/s Ratio Perm		c0.33				0.10		
v/c Ratio		0.89				0.52		
Uniform Delay, d1		17.9				21.4		
Progression Factor		1.00				1.00		
Incremental Delay, d2		18.1				6.4		
Delay (s)		36.0				27.9		
Level of Service		D				C		
Approach Delay (s)		36.0				27.9		
Approach LOS		D				C		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	25	385	43	5	446
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	26	405	45	5	469
Pedestrians	99					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	8					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			219			433
pX, platoon unblocked						
vC, conflicting volume	1007	527			550	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1007	527			550	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	95			99	
cM capacity (veh/h)	244	506			936	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	33	451	475
Volume Left	6	0	5
Volume Right	26	45	0
cSH	419	1700	936
Volume to Capacity	0.08	0.27	0.01
Queue Length 95th (ft)	6	0	0
Control Delay (s)	14.3	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	14.3	0.0	0.2
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: South Driveway/College Avenue			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	34	22	458	353	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	18	36	23	482	372	18
Pedestrians	21					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295		
pX, platoon unblocked	0.90					
vC, conflicting volume	689	216	410			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439	216	410			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	95	98			
cM capacity (veh/h)	474	775	1125			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	184	321	248	142
Volume Left	18	23	0	0	0
Volume Right	36	0	0	0	18
cSH	640	1125	1700	1700	1700
Volume to Capacity	0.08	0.02	0.19	0.15	0.08
Queue Length 95th (ft)	7	2	0	0	0
Control Delay (s)	11.1	1.2	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.1	0.4		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	525	134	45	452	121	58	180	63	125	215	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.92			0.96			0.93			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1426			3272			1436			1308	
Flt Permitted		0.89			0.86			0.85			0.67	
Satd. Flow (perm)		1274			2841			1233			885	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	72	559	143	48	481	129	62	191	67	133	229	137
RTOR Reduction (vph)	0	6	0	0	27	0	0	12	0	0	17	0
Lane Group Flow (vph)	0	768	0	0	631	0	0	308	0	0	482	0
Confl. Peds. (#/hr)			196			92			382			490
Confl. Bikes (#/hr)			3			7			13			19
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		669			1492			324			358	
v/s Ratio Prot											c0.08	
v/s Ratio Perm		c0.60			0.22			0.25			c0.42	
v/c Ratio		1.15			0.42			0.95			1.35	
Uniform Delay, d1		19.0			11.6			29.0			25.0	
Progression Factor		1.00			1.00			0.70			1.00	
Incremental Delay, d2		83.2			0.9			30.2			173.6	
Delay (s)		102.2			12.5			50.4			198.6	
Level of Service		F			B			D			F	
Approach Delay (s)		102.2			12.5			50.4			198.6	
Approach LOS		F			B			D			F	

Intersection Summary			
HCM Average Control Delay	90.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	118.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	716	41	74	523	235	65	226	162	323	283	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.95		1.00	0.97	
Flt Protected		1.00			1.00			0.99		0.95	0.99	
Satd. Flow (prot)		3498			3342			3259		1610	3225	
Flt Permitted		0.86			0.74			0.99		0.95	0.99	
Satd. Flow (perm)		3000			2491			3259		1610	3225	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	770	44	80	562	253	70	243	174	347	304	87
RTOR Reduction (vph)	0	5	0	0	47	0	0	85	0	0	19	0
Lane Group Flow (vph)	0	855	0	0	848	0	0	402	0	246	473	0
Confl. Peds. (#/hr)			11			21			21			39
Confl. Bikes (#/hr)			4			8			9			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.49			0.49			0.18		0.19	0.19	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1483			1232			597		304	609	
v/s Ratio Prot								c0.12		c0.15	0.15	
v/s Ratio Perm		0.29			c0.34							
v/c Ratio		0.58			0.69			0.67		0.81	0.78	
Uniform Delay, d1		16.1			17.4			34.2		34.9	34.7	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.6			3.2			6.0		20.3	9.4	
Delay (s)		17.7			20.6			40.2		55.3	44.1	
Level of Service		B			C			D		E	D	
Approach Delay (s)		17.7			20.6			40.2			47.8	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

Description: Ashby Avenue - Claremont Avenue

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	38	51	384	45	25	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1627		3252			3281
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1627		3252			3005
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	55	417	49	27	410
RTOR Reduction (vph)	39	0	11	0	0	0
Lane Group Flow (vph)	58	0	455	0	0	437
Confl. Peds. (#/hr)	17	41		24		
Confl. Bikes (#/hr)		5		8		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	488		1951			1803
v/s Ratio Prot	c0.04		0.14			
v/s Ratio Perm						c0.15
v/c Ratio	0.12		0.23			0.24
Uniform Delay, d1	20.3		7.4			7.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		0.3			0.3
Delay (s)	20.8		7.7			7.8
Level of Service	C		A			A
Approach Delay (s)	20.8		7.7			7.8
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	265	128	27	226	74	173	533	34	100	751	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1746		1770	1572		1770	3281		1770	3176	
Flt Permitted	0.34	1.00		0.19	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	631	1746		360	1572		1770	3281		1770	3176	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	279	135	28	238	78	182	561	36	105	791	75
RTOR Reduction (vph)	0	20	0	0	14	0	0	4	0	0	6	0
Lane Group Flow (vph)	66	394	0	28	302	0	182	593	0	105	860	0
Confl. Peds. (#/hr)			25			22			22			41
Confl. Bikes (#/hr)			2			2			5			15
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	25.8	25.8		25.8	25.8		13.0	44.9		8.8	40.7	
Effective Green, g (s)	26.3	26.3		26.3	26.3		14.0	46.9		9.8	42.7	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.15	0.49		0.10	0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	175	483		100	435		261	1620		183	1428	
v/s Ratio Prot		c0.23			0.19		c0.10	0.18		0.06	c0.27	
v/s Ratio Perm	0.10			0.08								
v/c Ratio	0.38	0.82		0.28	0.69		0.70	0.37		0.57	0.60	
Uniform Delay, d1	27.7	32.1		26.9	30.8		38.5	14.9		40.6	19.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	9.7		0.6	3.9		6.4	0.6		2.7	1.9	
Delay (s)	28.2	41.8		27.5	34.6		44.9	15.5		43.3	21.6	
Level of Service	C	D		C	C		D	B		D	C	
Approach Delay (s)		39.9			34.0			22.4			24.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	104	193	14	90	14	124	288	21	9	295	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.98			0.99			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			0.99			0.97	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1401			1790			1551			1336	
Flt Permitted		0.95			0.95			0.58			0.99	
Satd. Flow (perm)		1344			1704			907			1318	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	112	208	15	97	15	133	310	23	10	317	80
RTOR Reduction (vph)	0	60	0	0	6	0	0	2	0	0	11	0
Lane Group Flow (vph)	0	304	0	0	121	0	0	464	0	0	396	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		504			639			605			371	
v/s Ratio Prot								c0.15				
v/s Ratio Perm		c0.23			0.07			0.25			c0.30	
v/c Ratio		0.60			0.19			0.77			1.07	
Uniform Delay, d1		20.2			16.8			15.1			28.8	
Progression Factor		1.00			1.46			1.00			0.94	
Incremental Delay, d2		5.3			0.7			9.0			36.4	
Delay (s)		25.5			25.3			24.1			63.4	
Level of Service		C			C			C			E	
Approach Delay (s)		25.5			25.3			24.1			63.4	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	87	40	24	306	346	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	93	43	26	326	368	81
Pedestrians	17			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked						
vC, conflicting volume	639	244	466			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	639	244	466			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	94	98			
cM capacity (veh/h)	393	743	1076			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	135	134	217	245	204
Volume Left	93	26	0	0	0
Volume Right	43	0	0	0	81
cSH	461	1076	1700	1700	1700
Volume to Capacity	0.29	0.02	0.13	0.14	0.12
Queue Length 95th (ft)	30	2	0	0	0
Control Delay (s)	16.0	1.8	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.0	0.7		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	4	25	2	3	29	17	412	19	57	422	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	4	27	2	3	32	18	448	21	62	459	21
Pedestrians		266			123			2			161	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		22			10			0			13	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.80	0.80	0.80	0.80	0.80		0.80					
vC, conflicting volume	1548	1487	737	1242	1487	742	745			591		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1560	1484	544	1177	1484	742	554			591		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	93	92	97	95	90	97			93		
cM capacity (veh/h)	30	63	334	75	63	323	631			883		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	33	37	487	541
Volume Left	1	2	18	62
Volume Right	27	32	21	21
cSH	175	207	631	883
Volume to Capacity	0.19	0.18	0.03	0.07
Queue Length 95th (ft)	17	16	2	6
Control Delay (s)	30.2	26.2	0.8	1.9
Lane LOS	D	D	A	A
Approach Delay (s)	30.2	26.2	0.8	1.9
Approach LOS	D	D		

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	4	33	12	2	24	9	259	6	14	335	36
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	51	4	35	13	2	26	10	278	6	15	360	39
Pedestrians		6			14			21				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			2				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked												
vC, conflicting volume	601	734	226	584	750	156	405			299		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	601	734	226	584	750	156	405			299		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	99	95	96	99	97	99			99		
cM capacity (veh/h)	358	333	759	352	326	851	1145			1244		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	90	41	149	146	195	219
Volume Left	51	13	10	0	15	0
Volume Right	35	26	0	6	0	39
cSH	450	555	1145	1700	1244	1700
Volume to Capacity	0.20	0.07	0.01	0.09	0.01	0.13
Queue Length 95th (ft)	19	6	1	0	1	0
Control Delay (s)	15.0	12.0	0.6	0.0	0.7	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	15.0	12.0	0.3		0.3	
Approach LOS	B	B				

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	286	84	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.86				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1295				
Flt Permitted			0.98				0.31	1.00				
Satd. Flow (perm)			1459				579	1295				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	325	95	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	428	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			186				221	494				
v/s Ratio Prot								0.33				
v/s Ratio Perm			0.04				0.10					
v/c Ratio			0.31				0.26	0.87				
Uniform Delay, d1			43.6				23.4	31.4				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			4.3				2.9	18.1				
Delay (s)			47.9				26.2	49.6				
Level of Service			D				C	D				
Approach Delay (s)			47.9					46.8				
Approach LOS			D					D				

Intersection Summary			
HCM Average Control Delay	66.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	302	117	4	4	159	198	9	35	3	158	231	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1276					3125					3174	
Flt Permitted	0.96					0.98					0.98	
Satd. Flow (perm)	1223					3125					3174	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	343	133	5	5	181	225	10	40	3	180	262	17
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	4	0
Lane Group Flow (vph)	504	0	0	0	0	454	0	0	0	0	485	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	467					540					548	
v/s Ratio Prot						c0.15					c0.15	
v/s Ratio Perm	c0.41											
v/c Ratio	1.08					0.84					0.88	
Uniform Delay, d1	34.0					44.0					44.4	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	64.6					14.7					18.6	
Delay (s)	98.6					58.7					63.0	
Level of Service	F					E					E	
Approach Delay (s)	98.6					58.7					63.0	
Approach LOS	F					E					E	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	24
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	27
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	6	24	6	111	44	47	37	15	52	457	87	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.97					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.98			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1590			1466					3208		
Flt Permitted		0.96			0.83					0.84		
Satd. Flow (perm)		1538			1249					2699		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	6	26	6	118	47	50	39	16	55	486	93	27
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	33	0	0	245	0	0	0	0	636	0	0
Confl. Peds. (#/hr)			18				48				8	
Confl. Bikes (#/hr)			7				24				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		17.2			17.2					41.6		
Effective Green, g (s)		17.2			17.2					42.6		
Actuated g/C Ratio		0.21			0.21					0.53		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		331			269					1437		
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.20					c0.24		
v/c Ratio		0.10			0.91					0.44		
Uniform Delay, d1		25.2			30.7					11.4		
Progression Factor		1.00			1.00					0.49		
Incremental Delay, d2		0.0			32.1					0.9		
Delay (s)		25.2			62.8					6.6		
Level of Service		C			E					A		
Approach Delay (s)		25.2			62.8					6.6		
Approach LOS		C			E					A		

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	469	7	6	2	42	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	1.00				0.93	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3292				1511	
Flt Permitted	0.91				0.97	
Satd. Flow (perm)	2992				1511	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	499	7	6	2	45	44
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	539	0	0	0	91	0
Confl. Peds. (#/hr)		4	10			
Confl. Bikes (#/hr)		11	17			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	41.6				8.2	
Effective Green, g (s)	42.6				8.2	
Actuated g/C Ratio	0.53				0.10	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1593				155	
v/s Ratio Prot					c0.06	
v/s Ratio Perm	0.18					
v/c Ratio	0.34				0.59	
Uniform Delay, d1	10.7				34.3	
Progression Factor	1.00				1.00	
Incremental Delay, d2	0.6				3.6	
Delay (s)	11.2				37.9	
Level of Service	B				D	
Approach Delay (s)	11.2				37.9	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	69	46	45	601	47	30	140	455
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.89	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1753		1770	3266		1770	2873	
Flt Permitted					1.00		0.38	1.00		0.35	1.00	
Satd. Flow (perm)					1753		702	3266		651	2873	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	75	50	49	653	51	33	152	495
RTOR Reduction (vph)	0	0	0	0	26	0	0	7	0	0	198	0
Lane Group Flow (vph)	0	0	0	0	110	0	49	697	0	33	449	0
Confl. Peds. (#/hr)			3			4			11			8
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					526		421	1960		391	1724	
v/s Ratio Prot								c0.21			0.16	
v/s Ratio Perm					0.06		0.07			0.05		
v/c Ratio					0.21		0.12	0.36		0.08	0.26	
Uniform Delay, d1					20.9		6.9	8.1		6.7	7.6	
Progression Factor					1.00		0.83	0.82		1.26	1.50	
Incremental Delay, d2					0.9		0.5	0.5		0.4	0.3	
Delay (s)					21.8		6.3	7.2		8.9	11.7	
Level of Service					C		A	A		A	B	
Approach Delay (s)		0.0			21.8			7.1			11.6	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	515	74	78	0	0	26	0	136	21	21	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1656				1418		3233			3287	
Flt Permitted	0.95	0.97				1.00		1.00			0.91	
Satd. Flow (perm)	1681	1656				1418		3233			3000	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	572	82	87	0	0	29	0	151	23	23	144	0
RTOR Reduction (vph)	0	14	0	0	0	11	0	15	0	0	0	0
Lane Group Flow (vph)	372	355	0	0	0	18	0	159	0	0	167	0
Confl. Peds. (#/hr)			7						18			5
Confl. Bikes (#/hr)									9			10
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1056				904		849			788	
v/s Ratio Prot								0.05				
v/s Ratio Perm	c0.22	0.21				0.01					c0.06	
v/c Ratio	0.35	0.34				0.02		0.19			0.21	
Uniform Delay, d1	6.7	6.7				5.3		22.9			23.0	
Progression Factor	1.00	1.00				1.00		1.00			0.84	
Incremental Delay, d2	0.9	0.9				0.0		0.5			0.6	
Delay (s)	7.6	7.6				5.4		23.4			19.9	
Level of Service	A	A				A		C			B	
Approach Delay (s)		7.6			5.4			23.4			19.9	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	77	90	140	45	347	0	0	479	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.97		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3156		1770	1863			1822	
Flt Permitted					0.99		0.35	1.00			1.00	
Satd. Flow (perm)					3156		649	1863			1822	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	83	97	151	48	373	0	0	515	48
RTOR Reduction (vph)	0	0	0	0	106	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	225	0	48	373	0	0	557	0
Confl. Peds. (#/hr)			22			26			169			183
Confl. Bikes (#/hr)			2			2			33			35
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					947		368	1056			1032	
v/s Ratio Prot								0.20			c0.31	
v/s Ratio Perm					0.07		0.07					
v/c Ratio					0.24		0.13	0.35			0.54	
Uniform Delay, d1					15.8		6.1	7.0			8.1	
Progression Factor					1.00		1.97	1.86			1.00	
Incremental Delay, d2					0.6		0.6	0.8			2.0	
Delay (s)					16.4		12.6	13.9			10.1	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			16.4			13.7			10.1	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	117	76	0	0	0	0	323	61	158	399	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.87						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2710						1500		1770	1863	
Flt Permitted		0.99						1.00		0.95	1.00	
Satd. Flow (perm)		2710						1500		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	76	129	84	0	0	0	0	355	67	174	438	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	226	0	0	0	0	0	411	0	174	438	0
Confl. Peds. (#/hr)			240			61			281			225
Confl. Bikes (#/hr)			3			5			14			24
Parking (#/hr)		5						10				
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)		16.0						27.0		8.0	38.0	
Effective Green, g (s)		15.0						26.0		7.0	37.0	
Actuated g/C Ratio		0.25						0.43		0.12	0.62	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		678						650		207	1149	
v/s Ratio Prot								c0.27		c0.10	0.24	
v/s Ratio Perm		0.08										
v/c Ratio		0.33						0.63		0.84	0.38	
Uniform Delay, d1		18.4						13.3		26.0	5.8	
Progression Factor		1.00						0.86		1.42	0.38	
Incremental Delay, d2		1.3						4.3		28.8	0.8	
Delay (s)		19.7						15.7		65.6	3.0	
Level of Service		B						B		E	A	
Approach Delay (s)		19.7			0.0			15.7			20.8	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	14	8	5	8	6	18	27	4	19	282	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.99			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1549			1444					1636	
Flt Permitted			0.87			0.97					0.96	
Satd. Flow (perm)			1381			1411					1570	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	15	9	5	9	6	19	29	4	20	303	5
RTOR Reduction (vph)	0	0	4	0	0	22	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	29	0	0	41	0	0	0	0	331	0
Confl. Peds. (#/hr)				29				1				82
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			322			329					654	
v/s Ratio Prot												
v/s Ratio Perm			0.02			c0.03					0.21	
v/c Ratio			0.09			0.12					0.51	
Uniform Delay, d1			18.0			18.2					12.9	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			0.6			0.8					2.8	
Delay (s)			18.6			18.9					15.7	
Level of Service			B			B					B	
Approach Delay (s)			18.6			18.9					15.7	
Approach LOS			B			B					B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	37	343	20	33	7	25	27	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.98				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.91		
Flt Protected		1.00				0.98		
Satd. Flow (prot)		1758				1473		
Flt Permitted		0.95				0.98		
Satd. Flow (perm)		1680				1473		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	40	369	22	35	8	27	29	47
RTOR Reduction (vph)	0	5	0	0	0	40	0	0
Lane Group Flow (vph)	0	461	0	0	0	71	0	0
Confl. Peds. (#/hr)			58	80				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		700				221		
v/s Ratio Prot								
v/s Ratio Perm		c0.27				0.05		
v/c Ratio		0.66				0.32		
Uniform Delay, d1		14.1				22.8		
Progression Factor		0.62				1.00		
Incremental Delay, d2		4.5				3.8		
Delay (s)		13.3				26.6		
Level of Service		B				C		
Approach Delay (s)		13.3				26.6		
Approach LOS		B				C		

Intersection Summary

Appendix C
Signal Warrant Analysis Worksheets

FEHR PEERS

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Sheet No	1	of	1	

Major Street	Claremont Avenue
Minor Street	Alacatraz Avenue
Project	College Safeway
Scenario	Weekday - Existing
Peak Hour	PM

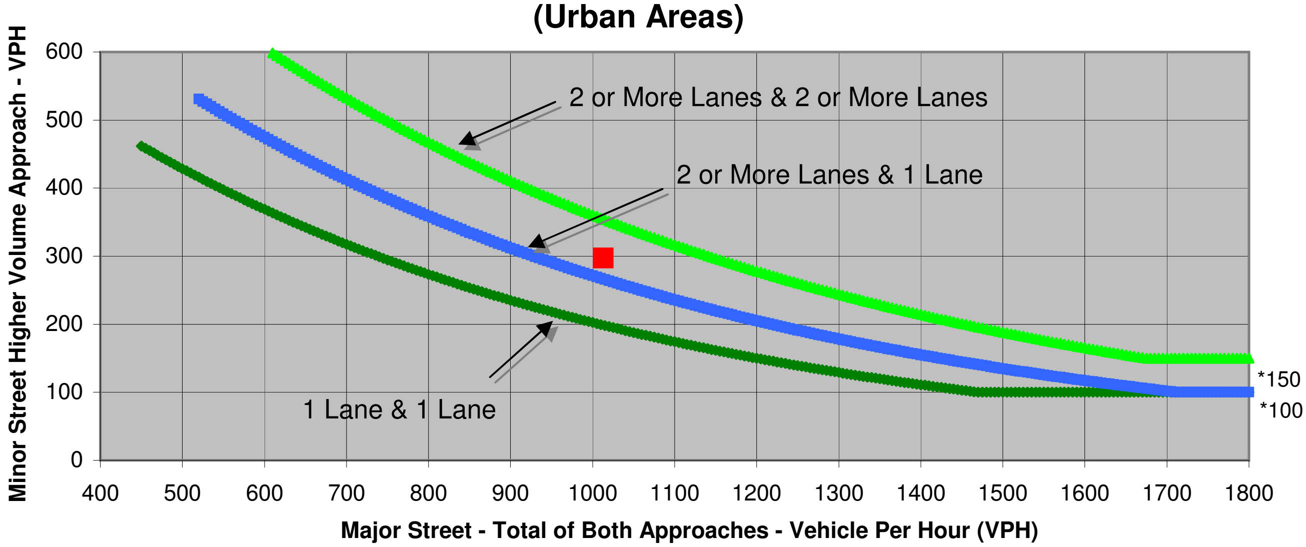
Turn Movement Volumes

	NB	SB	EB	WB
Left	38	0	233	0
Through	521	351	0	0
Right	0	103	64	0
Total	559	454	297	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Claremont Avenue	Minor Street Alacatraz Avenue	Warrant Met
Number of Approach Lanes	2	1	YES
Traffic Volume (VPH) *	1,013	297	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

Sheet No	1	of	1	

Project	College Safeway
Scenario	Weekday - Existing
Peak Hour	PM
Major Street	College Avenue
Minor Street	63rd Street/Project Driveway

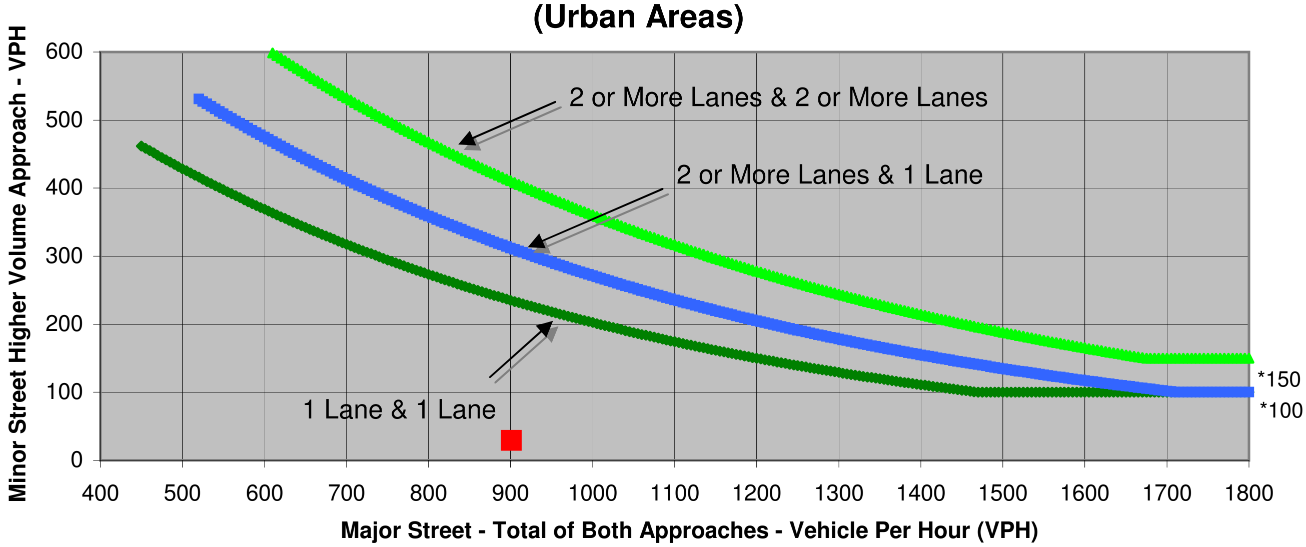
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	53	6	3
Through	377	430	3	2
Right	11	8	18	24
Total	410	491	27	29

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	**Minor Street** 63rd Street/Project Driveway	**Warrant Met**
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	901	29	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Major Street	Claremont Avenue		Sheet No	1	of 1
Minor Street	Mystic Street		Project	College Safeway	
			Scenario	Weekday - Existing	
			Peak Hour	PM	

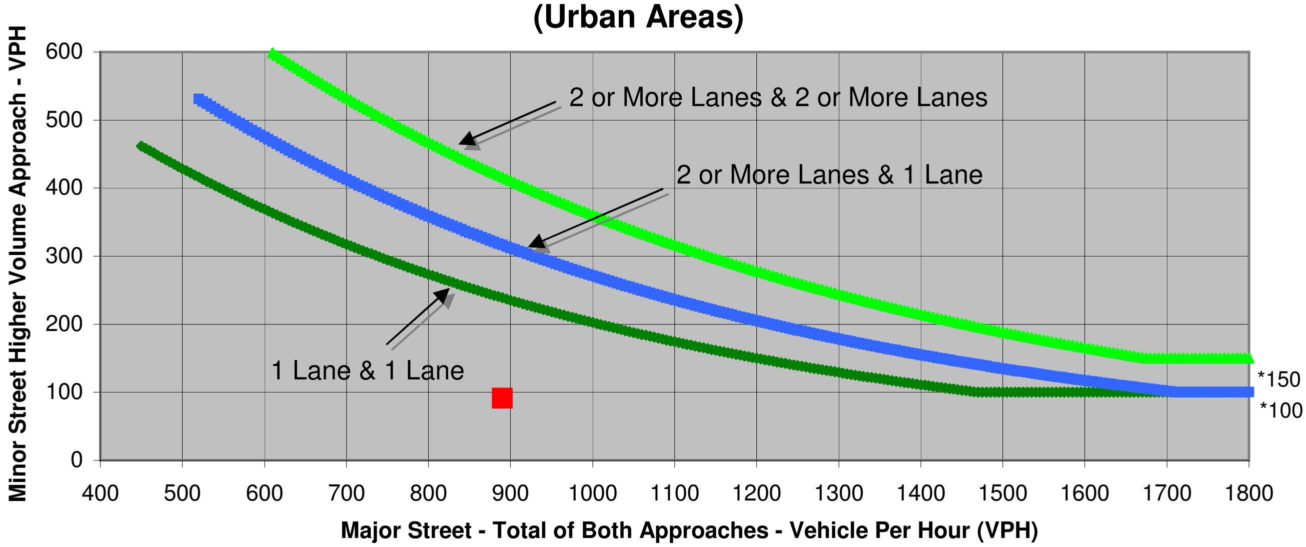
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	33	67	13
Through	461	340	7	2
Right	8	42	17	35
Total	475	415	91	50

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Claremont Avenue	Minor Street Mystic Street	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	890	91	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Sheet No 1 of 1

Major Street	Claremont Avenue
Minor Street	Alacatraz Avenue
Project	College Safeway
Scenario	Saturday - Existing
Peak Hour	PM

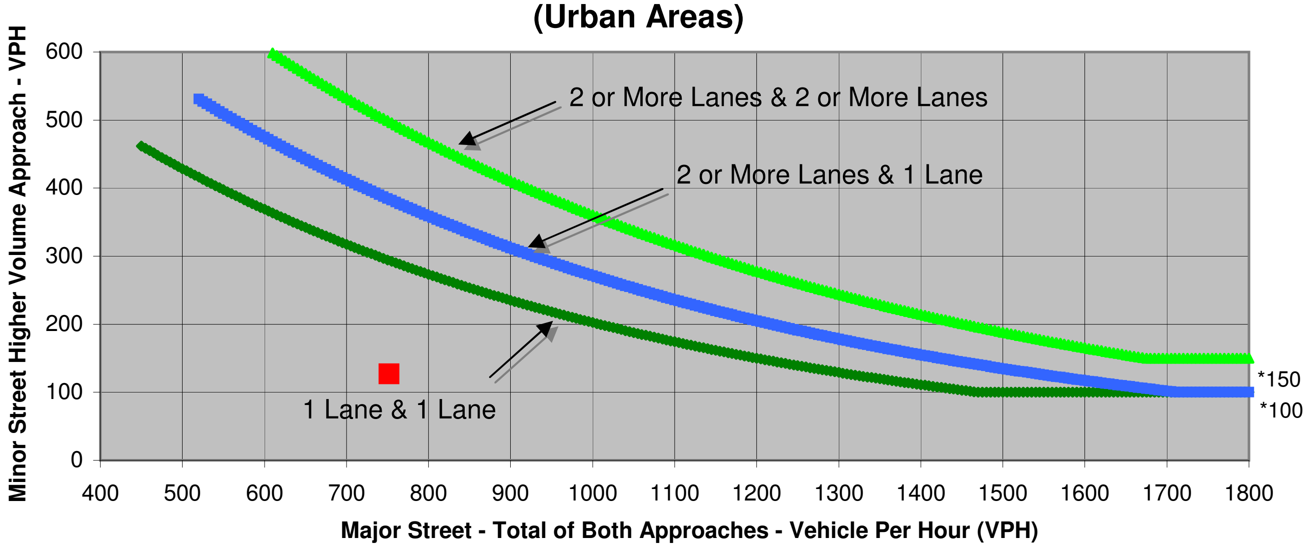
Turn Movement Volumes

	NB	SB	EB	WB
Left	24	0	87	0
Through	306	346	0	0
Right	0	76	40	0
Total	330	422	127	0

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Claremont Avenue	**Minor Street** Alacatraz Avenue	**Warrant Met**
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	752	127	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway
Project	College Safeway
Scenario	Saturday - Existing
Peak Hour	PM

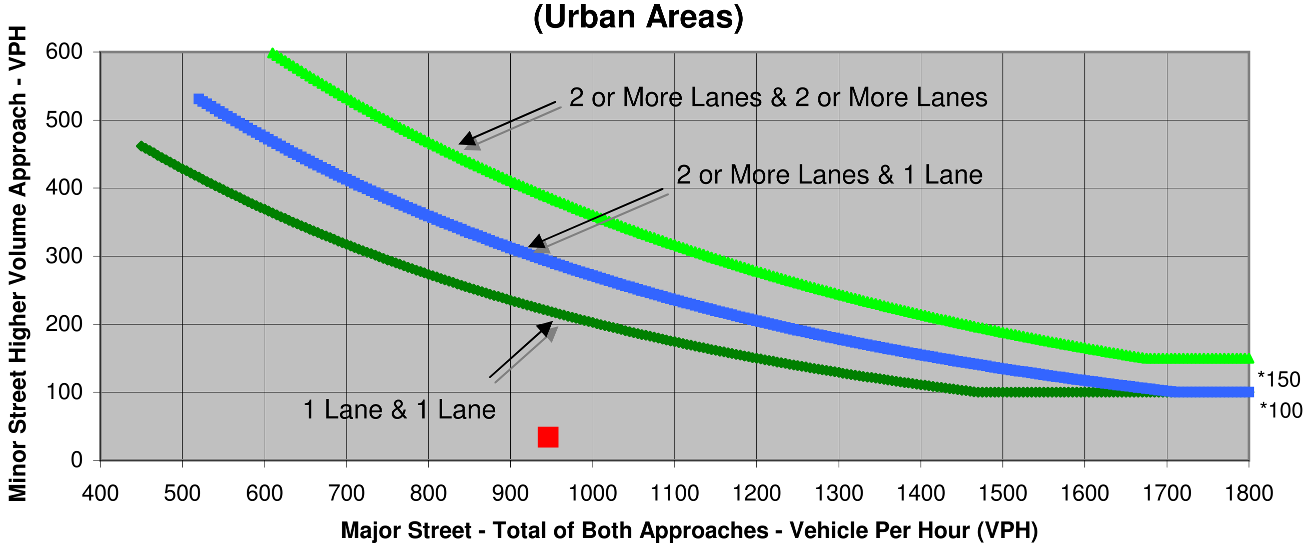
Turn Movement Volumes

	NB	SB	EB	WB
Left	17	57	1	2
Through	412	422	4	3
Right	19	19	25	29
Total	448	498	30	34

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	946	34	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1

Major Street	Claremont Avenue
Minor Street	Mystic Street

Project	College Safeway
Scenario	Saturday - Existing
Peak Hour	PM

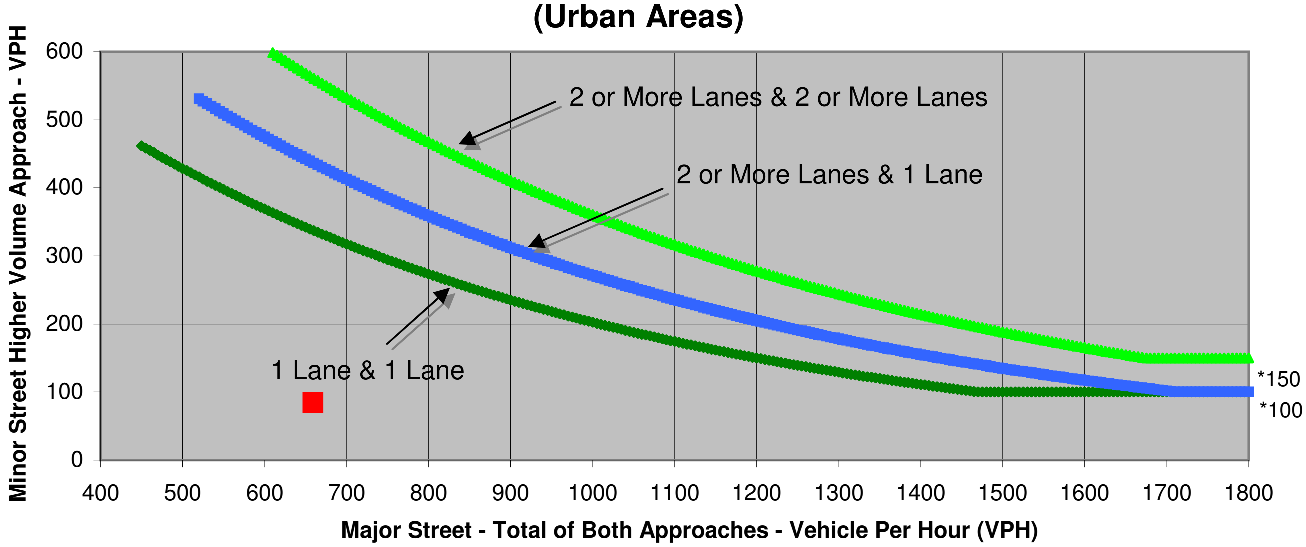
Turn Movement Volumes

	NB	SB	EB	WB
Left	9	14	47	12
Through	259	335	4	2
Right	6	36	33	24
Total	274	385	84	38

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Claremont Avenue	Minor Street Mystic Street	Warrant Met
Number of Approach Lanes	2	1	NO
Traffic Volume (VPH) *	659	84	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway
Project	College Safeway
Scenario	Weekday - Existing + Project
Peak Hour	PM

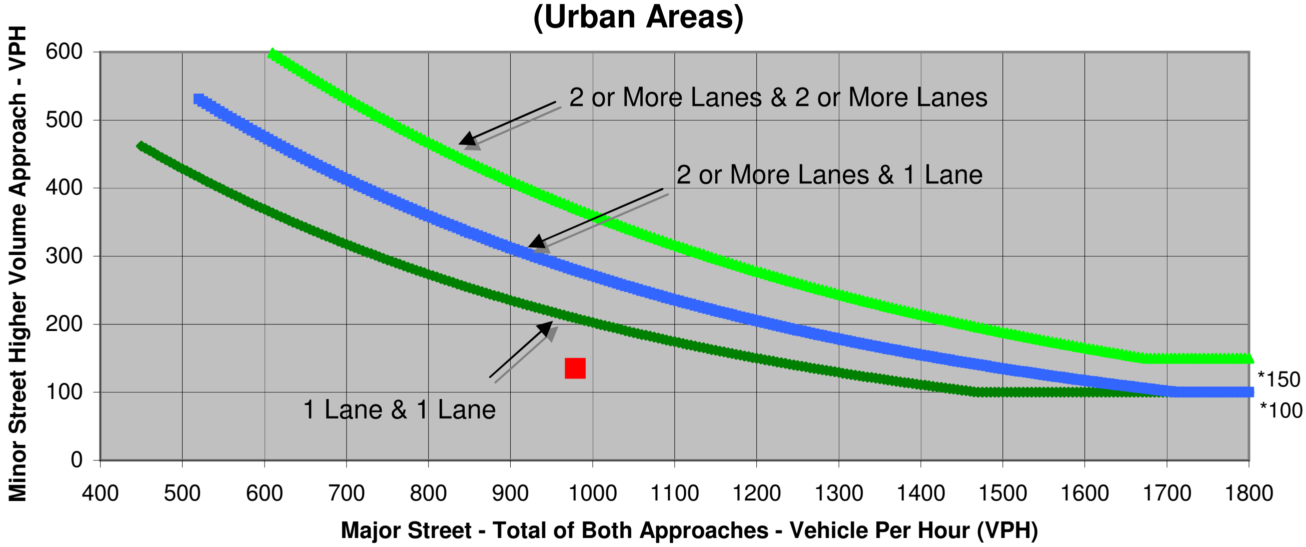
Turn Movement Volumes

	NB	SB	EB	WB
Left	22	103	6	35
Through	343	418	7	6
Right	85	8	18	94
Total	450	529	31	135

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	979	135	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

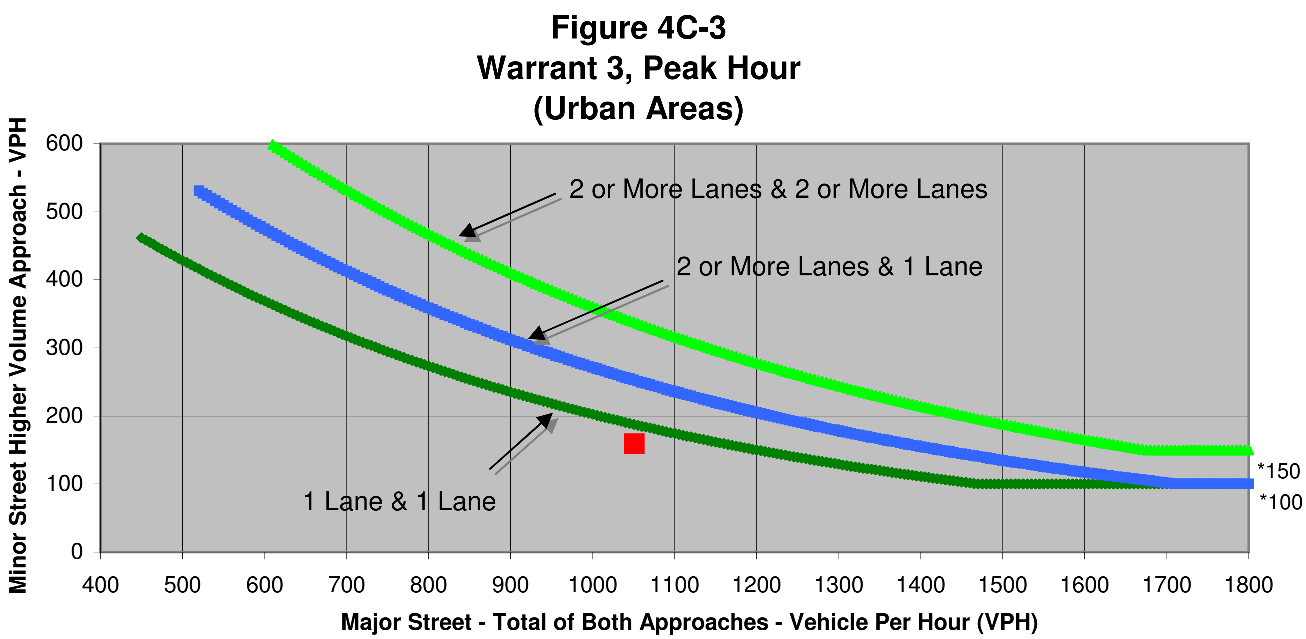
Major Street	College Avenue
Minor Street	63rd Street/Project Driveway
Project	College Safeway
Scenario	Saturday - Existing + Project
Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	17	123	1	109
Through	379	406	10	8
Right	107	19	25	42
Total	503	548	36	159

Major Street Direction

x	North/South
	East/West



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,051	159	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1	
Project	College Safeway			
Scenario	Weekday - 2015			
Peak Hour	PM			

Major Street: College Avenue
Minor Street: 63rd Street/Project Driveway

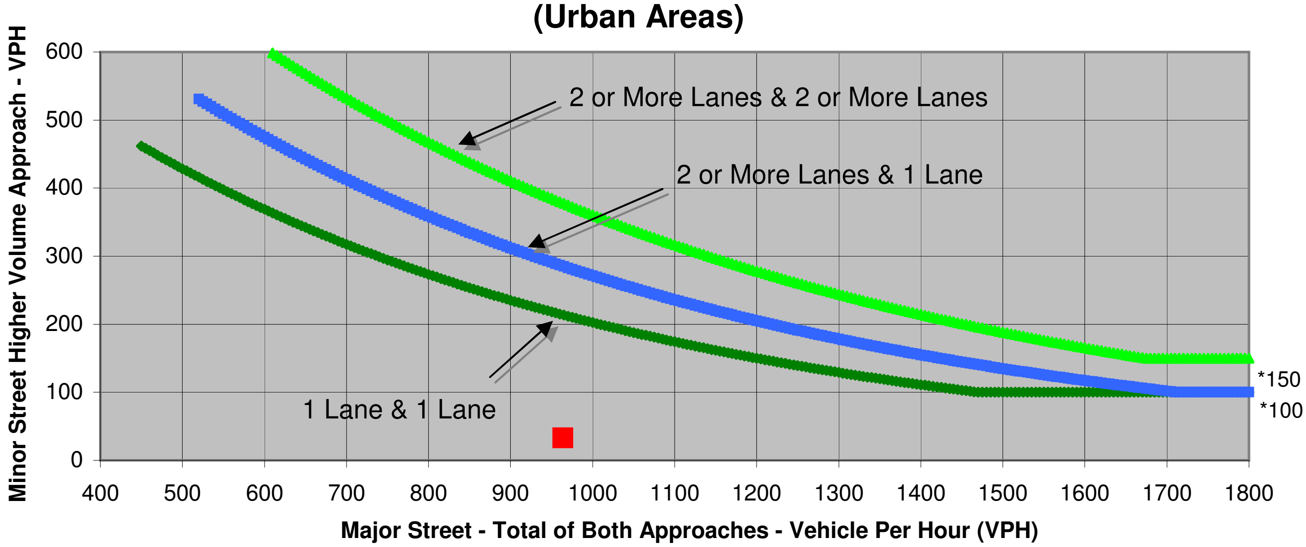
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	53	10	3
Through	410	440	3	2
Right	11	20	20	24
Total	451	513	33	29

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	**Minor Street** 63rd Street/Project Driveway	**Warrant Met**
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	964	33	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1	

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway
Project	College Safeway
Scenario	Saturday - 2015
Peak Hour	PM

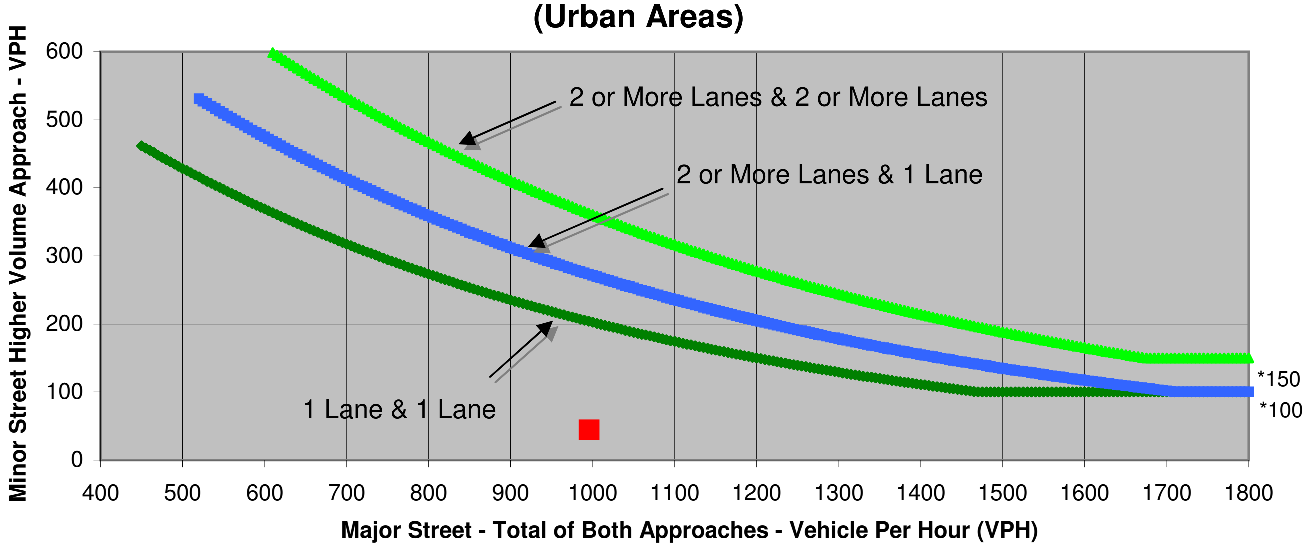
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	57	10	2
Through	440	440	4	3
Right	19	20	30	29
Total	479	517	44	34

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	996	44	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway

Project	College Safeway
Scenario	Weekday - 2015 + Project
Peak Hour	PM

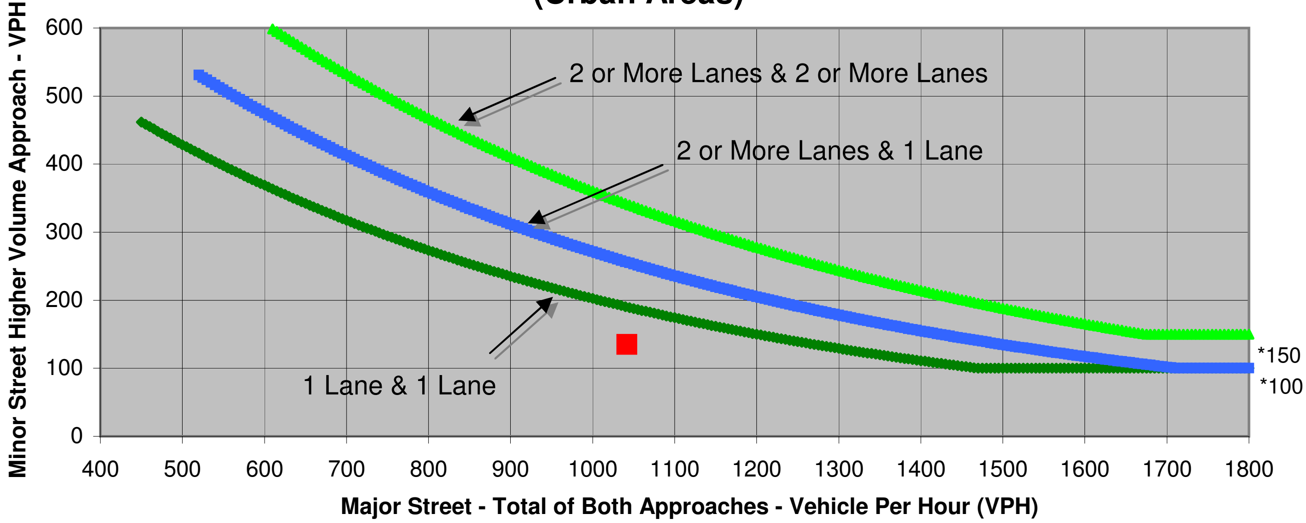
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	103	10	35
Through	376	428	7	6
Right	85	20	20	94
Total	491	551	37	135

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,042	135	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway

Project	College Safeway
Scenario	Saturday - 2015 + Project
Peak Hour	PM

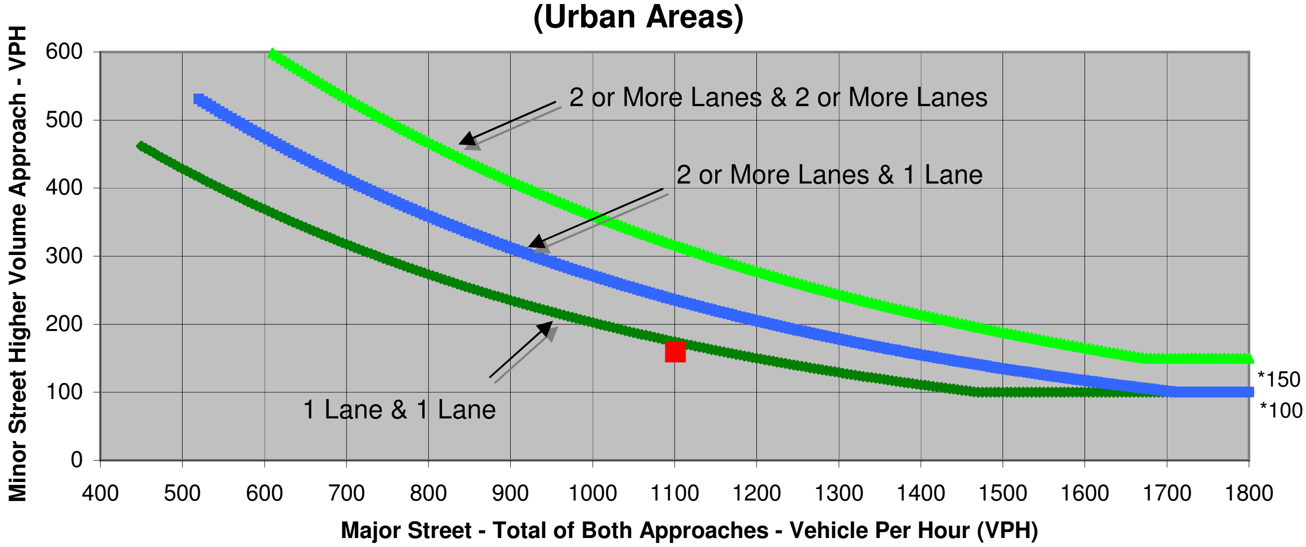
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	123	10	109
Through	407	424	10	8
Right	107	20	30	42
Total	534	567	50	159

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,101	159	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR & PEERS TRANSPORTATION CONSULTANTS

Sheet No	1	of	1	

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway
Project	College Safeway
Scenario	Weekday - 2035
Peak Hour	PM

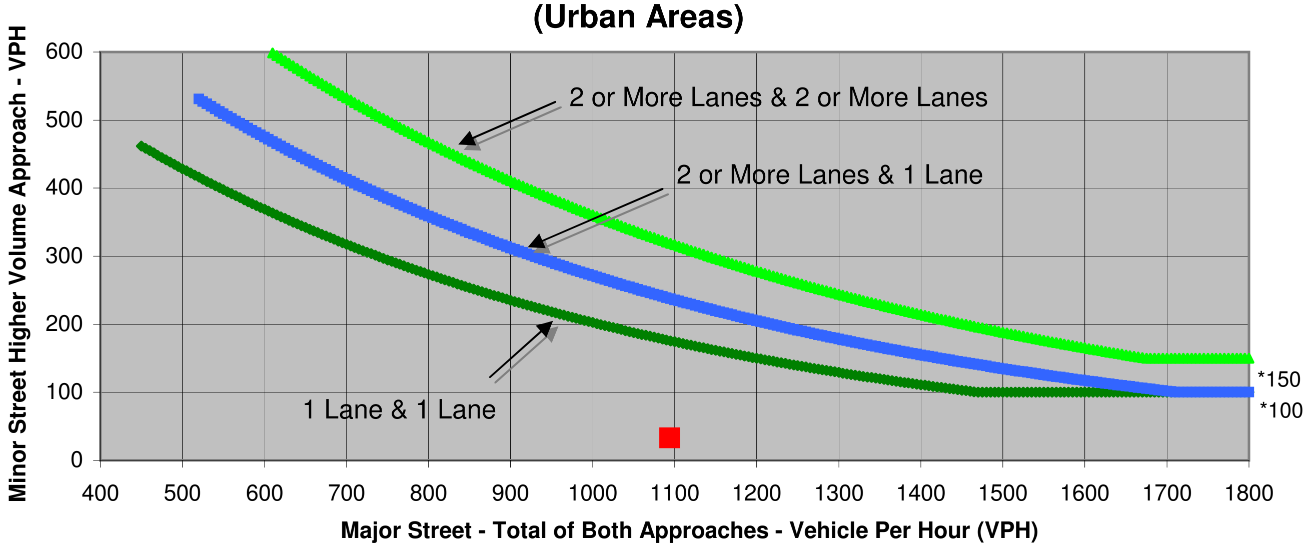
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	53	10	3
Through	520	470	3	2
Right	11	10	20	24
Total	561	533	33	29

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



* Note: 150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.
Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	**Minor Street** 63rd Street/Project Driveway	**Warrant Met**
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,094	33	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1	
Major Street	College Avenue	Project	College Safeway	
Minor Street	63rd Street/Project Driveway	Scenario	Saturday - 2035	
		Peak Hour	PM	

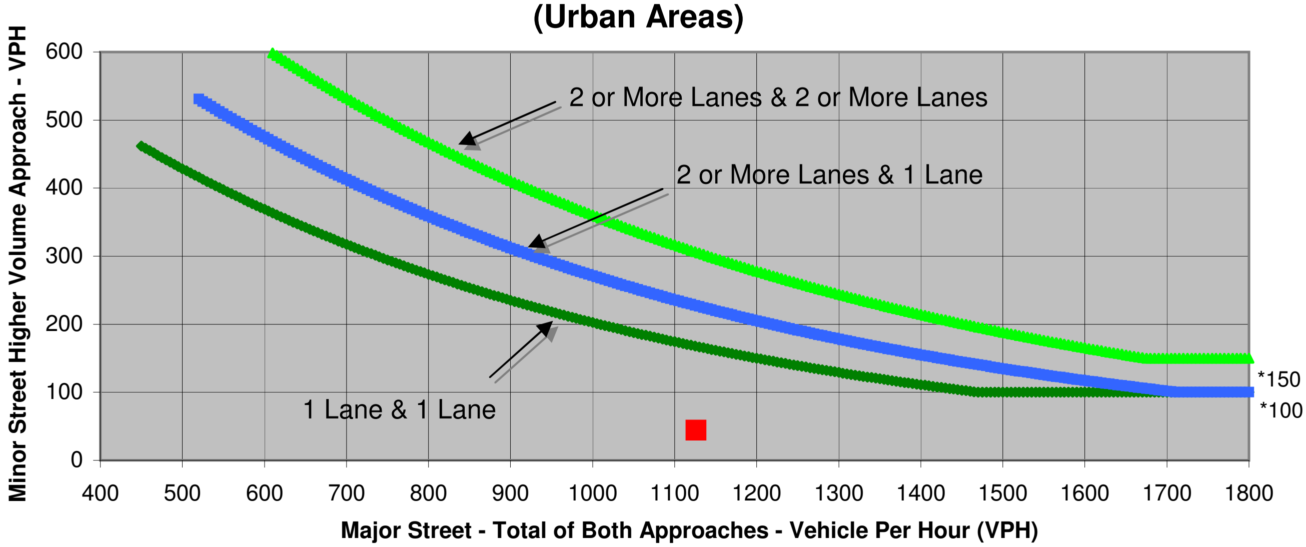
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	57	10	2
Through	530	480	4	3
Right	19	20	30	29
Total	569	557	44	34

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,126	44	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No 1 of 1

Major Street	College Avenue
Minor Street	63rd Street/Project Driveway

Project	College Safeway
Scenario	Weekday - 2035 + Project
Peak Hour	PM

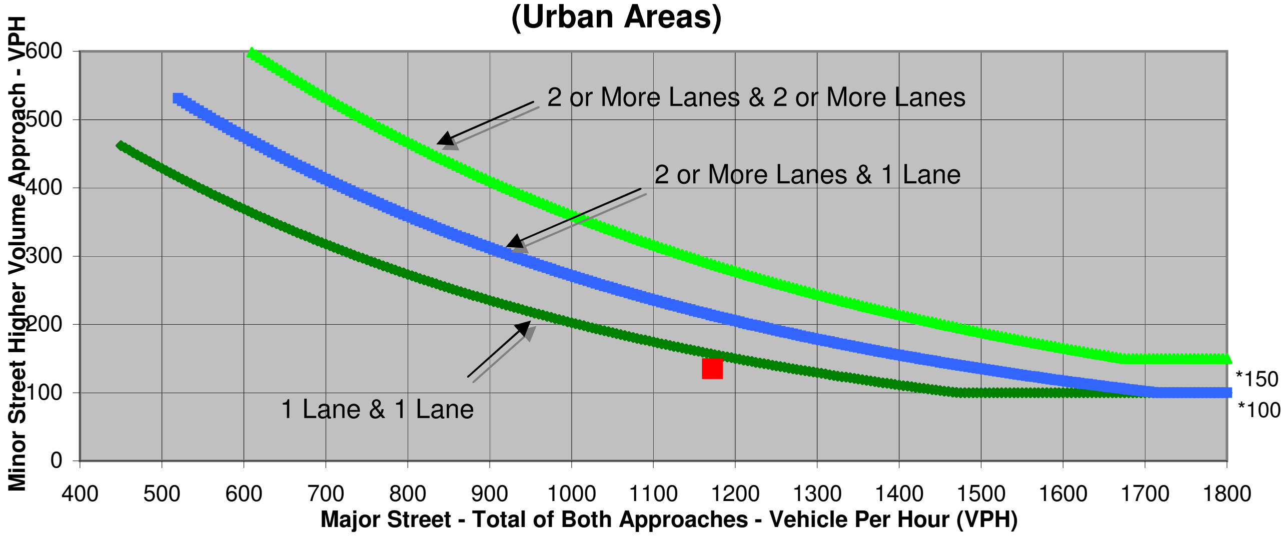
Turn Movement Volumes

	NB	SB	EB	WB
Left	30	103	10	35
Through	486	458	7	6
Right	85	10	20	94
Total	601	571	37	135

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	**Minor Street** 63rd Street/Project Driveway	**Warrant Met**
Number of Approach Lanes	1	1	NO
Traffic Volume (VPH) *	1,172	135	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Sheet No	1	of	1	

Major Street	Claremont Avenue
Minor Street	Mystic Street
Project	College Safeway
Scenario	Weekday - 2035 Plus Project
Peak Hour	PM

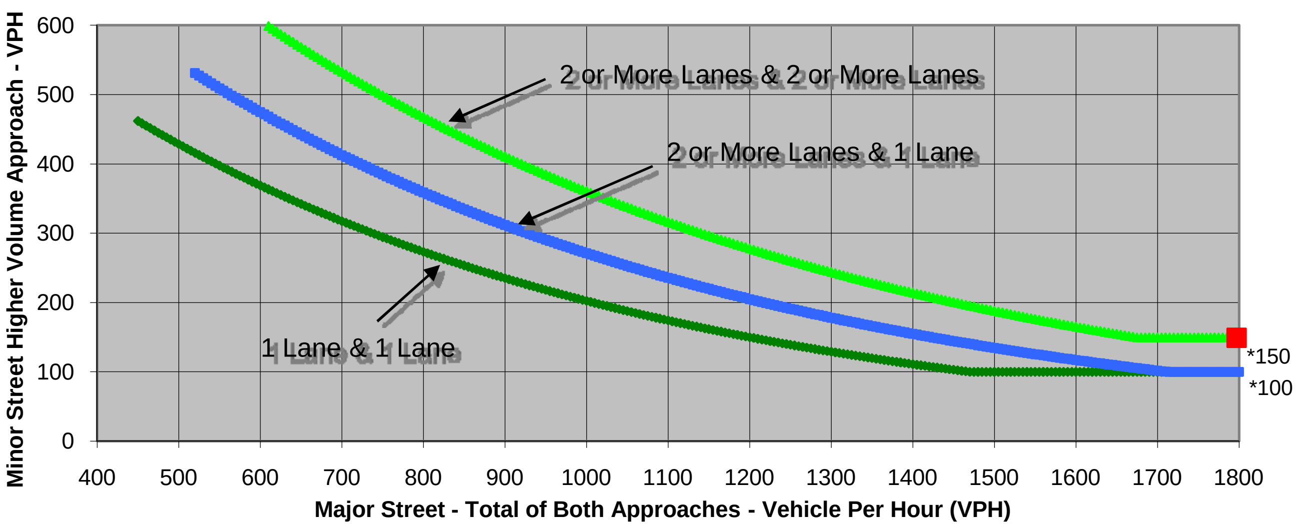
Turn Movement Volumes

	NB	SB	EB	WB
Left	65	40	107	13
Through	970	661	9	2
Right	10	51	33	35
Total	1,045	752	149	50

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street Claremont Avenue	**Minor Street** Mystic Street	**Warrant Met**
Number of Approach Lanes	**2**	**1**	**YES**
Traffic Volume (VPH) *	**1,797**	**149**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

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Major Street	College Avenue
Minor Street	63rd Street/Project Driveway

Project	College Safeway
Scenario	Saturday - 2035 + Project
Peak Hour	PM

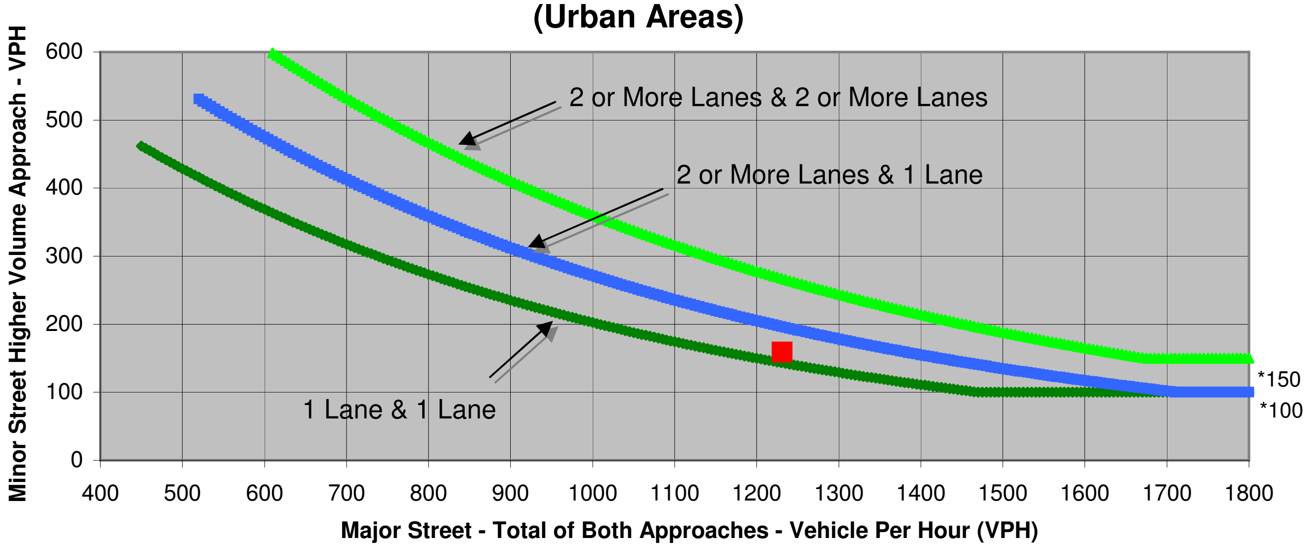
Turn Movement Volumes

	NB	SB	EB	WB
Left	20	123	10	109
Through	497	464	10	8
Right	107	20	30	42
Total	624	607	50	159

Major Street Direction

x	North/South
	East/West

Figure 4C-3
Warrant 3, Peak Hour
(Urban Areas)



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Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2006

	Major Street College Avenue	Minor Street 63rd Street/Project Driveway	Warrant Met
Number of Approach Lanes	1	1	YES
Traffic Volume (VPH) *	1,231	159	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

Appendix D
BRT Considerations

Appendix D – BRT Considerations

In May of 2007, AC Transit published a Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the implementation of Bus Rapid Transit (BRT) on Telegraph Avenue and International Boulevard; connecting Berkeley, Oakland, and San Leandro. The proposed system would dedicate one travel lane in each direction to bus operations only, allowing buses to provide a quicker and more reliable service than regular bus service today. In the vicinity of the project, the proposed BRT project would generally eliminate one through lane in each direction and narrow Telegraph Avenue to one through lane in each direction.

Currently, there are no finalized design plans, an assurance of full funding for the BRT project, or approvals from AC Transit, the City of Oakland and other public agencies. Although proposed (but not approved) transit improvements are not typically considered as part of the projected baseline conditions, this EIR nevertheless (conservatively) provides a discussion of the potential effects on project impacts caused by proposed modifications to the traffic circulation network by the proposed BRT under Cumulative Year 2035 Baseline Plus Project conditions.

In the vicinity of the project, the Telegraph Avenue BRT project would result in elimination of one travel lane in each direction of Telegraph Avenue. Traffic signals along Telegraph Avenue would also be upgraded and traffic signal timings would be improved to provide transit priority. Nearest BRT stations to the project site would be located at 65th Street

The proposed BRT project would result in more automobile congestion along Telegraph Avenue due to the reduced lane capacity. The reduced traffic capacity on Telegraph Avenue may also result in traffic diverting to other parallel corridors such as College Avenue or Claremont Avenue. The BRT project may have off-setting benefits as it would increase the capacity of Telegraph Avenue on a per person basis. Thus, if a substantial number of people switch to BRT, the overall person delay in the corridor would be less than with the current configuration.

The EIS/EIR analyzed intersection operations at intersections under no BRT and with BRT conditions in 2025. The EIS/EIR analysis identified potentially significant impacts at the following intersections also analyzed for the Safeway on College Avenue project:

- The College Avenue/Ashby Avenue intersection would degrade from LOS D to LOS E during the PM peak hour as result of traffic diverting from the Telegraph Avenue corridor to College Avenue corridor. The EIS/EIR proposes to provide a southbound left-turn lane on College Avenue to mitigate the impact at this intersection (similar to Mitigation Measure TRANS-9).

- The Alcatraz Avenue/Telegraph Avenue intersection would degrade from LOS D to LOS F during the PM peak hour as a result of the BRT project. The EIS/EIR does not identify a mitigation measure at this intersection.
- The College Avenue/Claremont Avenue intersection would degrade from LOS D to LOS E during the AM peak hour as result of traffic diverting from the Telegraph Avenue corridor to College Avenue and Claremont Avenue corridors. The EIS/EIR proposes to adjust signal timing parameters to mitigate the impact at this intersection (similar to Mitigation Measure TRANS-4).

This EIR identified significant impacts at two of these three intersections. If the BRT project is implemented, the Safeway on College Avenue project may result in an additional impact at the Telegraph Alcatraz/Avenue intersection, and impacts already identified by this EIR may have a higher magnitude.

Over the next year, AC Transit will update the Draft EIS/EIR for the BRT project. The analysis will be based on a new travel demand forecasting model, an expanded study area, and additional data collection.

Appendix E
Customer and Employee Survey Samples

SAFEWAY VISITOR SURVEY

1. Please indicate time of arrival: _______ AM PM

2. How did you get to the grocery store today?

_______ Drive
_______ Bus (AC Transit)
_______ Bicycle
_______ Walk
_______ Other (please specify)

2a. If you arrived by car, where did you park?

_______ Surface Lot
_______ On-street:
_____ Within 1 block
_____ Within 2 blocks
_____ Within 3 blocks
_____ More than 3 blocks

_______ Other Lot (specify) ______________________

3. How long do you expect to be at the store?

_______ Less than ½-hour
_______ ½ to 1-hour
_______ > 1 to 2 hours
_______ > 2 hours

SAFEWAY VISITOR SURVEY

1. Please indicate time of arrival: _______ AM PM

2. How did you get to the grocery store today?

_______ Drive
_______ Bus (AC Transit)
_______ Bicycle
_______ Walk
_______ Other (please specify)

2b. If you arrived by car, where did you park?

_______ Surface Lot
_______ On-street:
_____ Within 1 block
_____ Within 2 blocks
_____ Within 3 blocks
_____ More than 3 blocks

_______ Other Lot (specify) ______________________

3. How long do you expect to be at the store?

_______ Less than ½-hour
_______ ½ to 1-hour
_______ > 1 to 2 hours
_______ > 2 hours

SAFEWAY VISITOR SURVEY

1. Please indicate time of arrival: _______ AM PM

2. How did you get to the grocery store today?

_______ Drive
_______ Bus (AC Transit)
_______ Bicycle
_______ Walk
_______ Other (please specify)

2a. If you arrived by car, where did you park?

_______ Surface Lot
_______ On-street:
_____ Within 1 block
_____ Within 2 blocks
_____ Within 3 blocks
_____ More than 3 blocks

_______ Other Lot (specify) ______________________

3. How long do you expect to be at the store?

_______ Less than ½-hour
_______ ½ to 1-hour
_______ > 1 to 2 hours
_______ > 2 hours

SAFEWAY VISITOR SURVEY

1. Please indicate time of arrival: _______ AM PM

2. How did you get to the grocery store today?

_______ Drive
_______ Bus (AC Transit)
_______ Bicycle
_______ Walk
_______ Other (please specify)

2b. If you arrived by car, where did you park?

_______ Surface Lot
_______ On-street:
_____ Within 1 block
_____ Within 2 blocks
_____ Within 3 blocks
_____ More than 3 blocks

_______ Other Lot (specify) ______________________

3. How long do you expect to be at the store?

_______ Less than ½-hour
_______ ½ to 1-hour
_______ > 1 to 2 hours
_______ > 2 hours

Safeway on College Avenue
Employee Commute Survey

Safeway is interested in learning about your work commute as we plan for the expansion of the store on College Avenue. The information is important so that we can develop programs and services that can help make your commute more convenient. We are looking for improved ways to help control traffic, parking, and environmental impacts in our community.

Please take a few minutes to fill out this two-page survey. Your responses are important to us. Please return the completed survey by **March 30, 2010**. All responses are confidential. Thank you for participating in this survey.

---

1. Last week, what days did you work at the Safeway on College Avenue?

   ☐ Sunday ☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday

2. What time did you typically arrive at work?

   ____

3. What time did you typically leave work?

   ____

4. Last week, how did you typically commute to work (check one box for the method you typically used):

   ☐ Walk

   ☐ Bike

   ☐ BART Only

   ☐ AC Transit Bus Only Which Route? ______________________

   ☐ BART and AC Transit Bus

   ☐ Motorcycle

   ☐ Carpooled with some one else who parked in the area

   ☐ Dropped off by some one else who did not park in the area

   ☐ Drove alone and parked in the area

   ☐ Other: ________________________

Carpools Only

5. If you carpooled, were you usually the driver or a passenger?

   ☐ Driver

   ☐ Passenger

Please turn page over

6. If you carpooled, how many people, including the driver, were in your carpool the majority of the time?

____

Drive Alone/Carpools/Motorcycles Only

7. If you drove, where did you park the majority of the time?

- ☐ In the Safeway surface parking lot
- ☐ On-street, within two blocks of Safeway
- ☐ On-street, more than two blocks away from Safeway
- ☐ Other: ________________________

8. If you drove to work, what were your main reasons for doing so? (check up to 3)

- ☐ Need car for work
- ☐ Need to transport children
- ☐ Prefer to drive my own car
- ☐ Need my car to run errands before/after work
- ☐ Need to get home in case of an emergency
- ☐ Transit not available at home
- ☐ Transit is too expensive
- ☐ Don't know which transit route to take
- ☐ Safety concerns
- ☐ Don't have anyone to ride with
- ☐ Anything else takes too long
- ☐ Irregular work hours
- ☐ Poor bicycle parking
- ☐ Other:________________________

9. Any additional comments?

Appendix F
LOS Analysis Worksheets – Existing Plus Project Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	650	79	23	528	140	80	254	59	130	305	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.97			0.95			0.95			0.96	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1530			3264			1483			1423	
Flt Permitted		0.98			0.92			0.82			0.65	
Satd. Flow (perm)		1505			2998			1225			942	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	684	83	24	556	147	84	267	62	137	321	71
RTOR Reduction (vph)	0	5	0	0	24	0	0	7	0	0	6	0
Lane Group Flow (vph)	0	777	0	0	703	0	0	406	0	0	523	0
Confl. Peds. (#/hr)			102			81			269			224
Confl. Bikes (#/hr)			1			8			32			59
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		729			1452			374			447	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.52			0.23			0.33			c0.41	
v/c Ratio		1.07			0.48			1.09			1.17	
Uniform Delay, d1		24.5			16.5			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		52.4			1.2			71.5			98.4	
Delay (s)		76.9			17.7			104.5			125.4	
Level of Service		E			B			F			F	
Approach Delay (s)		76.9			17.7			104.5			125.4	
Approach LOS		E			B			F			F	

Intersection Summary			
HCM Average Control Delay	74.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	650	34	93	553	239	53	362	169	272	237	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.96		1.00	0.98	
Flt Protected		0.99			0.99			1.00		0.95	0.99	
Satd. Flow (prot)		3490			3357			3344		1610	3226	
Flt Permitted		0.65			0.71			1.00		0.95	0.99	
Satd. Flow (perm)		2285			2397			3344		1610	3226	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	104	684	36	98	582	252	56	381	178	286	249	45
RTOR Reduction (vph)	0	3	0	0	38	0	0	44	0	0	10	0
Lane Group Flow (vph)	0	821	0	0	894	0	0	571	0	192	378	0
Confl. Peds. (#/hr)			13			10			5			49
Confl. Bikes (#/hr)			4			2			5			6
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			17.5		18.0	18.0	
Actuated g/C Ratio		0.52			0.52			0.18		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1200			1258			585		290	581	
v/s Ratio Prot								c0.17		c0.12	0.12	
v/s Ratio Perm		0.36			c0.37							
v/c Ratio		0.68			0.71			0.98		0.66	0.65	
Uniform Delay, d1		17.6			18.0			41.0		38.2	38.1	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		3.2			3.4			31.9		11.3	5.6	
Delay (s)		20.8			21.4			72.9		49.5	43.7	
Level of Service		C			C			E		D	D	
Approach Delay (s)		20.8			21.4			72.9			45.6	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	68	80	601	113	43	385
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.98			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.98			1.00
Flt Protected	0.98		1.00			0.99
Satd. Flow (prot)	1643		3197			3275
Flt Permitted	0.98		1.00			0.84
Satd. Flow (perm)	1643		3197			2758
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	71	83	626	118	45	401
RTOR Reduction (vph)	53	0	19	0	0	0
Lane Group Flow (vph)	102	0	725	0	0	446
Confl. Peds. (#/hr)	36	32		40		
Confl. Bikes (#/hr)		7		24		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	493		1918			1655
v/s Ratio Prot	c0.06		c0.23			
v/s Ratio Perm						0.16
v/c Ratio	0.21		0.38			0.27
Uniform Delay, d1	20.9		8.3			7.6
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.9		0.6			0.4
Delay (s)	21.8		8.8			8.0
Level of Service	C		A			A
Approach Delay (s)	21.8		8.8			8.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	431	134	35	300	98	214	777	80	202	946	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1775		1770	1554		1770	3225		1770	3162	
Flt Permitted	0.29	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	533	1775		229	1554		1770	3225		1770	3162	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	68	449	140	36	312	102	223	809	83	210	985	84
RTOR Reduction (vph)	0	12	0	0	12	0	0	8	0	0	6	0
Lane Group Flow (vph)	68	577	0	36	402	0	223	884	0	210	1063	0
Confl. Peds. (#/hr)			27			49			48			62
Confl. Bikes (#/hr)			10			24			42			49
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	32.1	32.1		32.1	32.1		14.2	33.5		13.9	33.2	
Effective Green, g (s)	32.6	32.6		32.6	32.6		15.2	35.5		14.9	35.2	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.37		0.16	0.37	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	183	609		79	533		283	1205		278	1172	
v/s Ratio Prot		c0.33			0.26		c0.13	0.27		0.12	c0.34	
v/s Ratio Perm	0.13			0.16								
v/c Ratio	0.37	0.95		0.46	0.75		0.79	0.73		0.76	0.91	
Uniform Delay, d1	23.5	30.4		24.3	27.6		38.4	25.7		38.3	28.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	23.8		1.5	5.3		12.5	4.0		9.9	11.7	
Delay (s)	24.0	54.1		25.8	33.0		50.9	29.7		48.2	40.0	
Level of Service	C	D		C	C		D	C		D	D	
Approach Delay (s)		51.0			32.4			33.9			41.4	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	267	195	5	122	23	140	295	24	41	363	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.91			0.97			0.98			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1428			1766			1534			1350	
Flt Permitted		0.95			0.98			0.48			0.93	
Satd. Flow (perm)		1360			1742			753			1258	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	281	205	5	128	24	147	311	25	43	382	92
RTOR Reduction (vph)	0	0	0	0	8	0	0	2	0	0	10	0
Lane Group Flow (vph)	0	549	0	0	149	0	0	481	0	0	507	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		510			653			552			354	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		c0.40			0.09			0.28			c0.40	
v/c Ratio		1.08			0.23			0.87			1.43	
Uniform Delay, d1		25.0			17.1			16.6			28.8	
Progression Factor		1.00			1.42			1.00			1.00	
Incremental Delay, d2		62.0			0.8			17.0			210.0	
Delay (s)		87.0			25.1			33.6			238.8	
Level of Service		F			C			C			F	
Approach Delay (s)		87.0			25.1			33.6			238.8	
Approach LOS		F			C			C			F	

Intersection Summary			
HCM Average Control Delay	112.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.0%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	233	64	38	531	361	103
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	251	69	41	571	388	111
Pedestrians	40			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.96					
vC, conflicting volume	851	290	539			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	764	290	539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	17	90	96			
cM capacity (veh/h)	303	682	991			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	319	231	381	259	240
Volume Left	251	41	0	0	0
Volume Right	69	0	0	0	111
cSH	344	991	1700	1700	1700
Volume to Capacity	0.93	0.04	0.22	0.15	0.14
Queue Length 95th (ft)	237	3	0	0	0
Control Delay (s)	67.2	1.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	67.2	0.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	15.3		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	7	18	35	6	95	22	342	86	103	418	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	6	7	18	36	6	97	22	349	88	105	427	8
Pedestrians		207			99						206	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		17			8						17	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked												
vC, conflicting volume	1548	1428	638	1195	1389	698	642			536		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1548	1428	638	1195	1389	698	642			536		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	92	95	64	93	71	97			89		
cM capacity (veh/h)	32	88	395	98	93	335	780			947		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	32	139	22	437	105	435
Volume Left	6	36	22	0	105	0
Volume Right	18	97	0	88	0	8
cSH	99	193	780	1700	947	1700
Volume to Capacity	0.32	0.72	0.03	0.26	0.11	0.26
Queue Length 95th (ft)	31	114	2	0	9	0
Control Delay (s)	57.9	60.3	9.8	0.0	9.3	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	57.9	60.3	0.5		1.8	
Approach LOS	F	F				

Intersection Summary			
Average Delay	9.7		
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	108	8	33	4	4	18	66	430	8	33	341	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.90			1.00			0.98	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1727			1655			3504			3434	
Flt Permitted		0.77			0.96			0.84			0.89	
Satd. Flow (perm)		1375			1598			2976			3076	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	9	37	4	4	20	73	478	9	37	379	57
RTOR Reduction (vph)	0	13	0	0	16	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	153	0	0	12	0	0	560	0	0	464	0
Confl. Peds. (#/hr)			19			1			29			21
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		11.5			11.5			36.3			36.3	
Effective Green, g (s)		11.5			11.5			36.3			36.3	
Actuated g/C Ratio		0.18			0.18			0.58			0.58	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		253			294			1726			1784	
v/s Ratio Prot												
v/s Ratio Perm		c0.11			0.01			c0.19			0.15	
v/c Ratio		0.60			0.04			0.32			0.26	
Uniform Delay, d1		23.5			21.0			6.8			6.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.0			0.1			0.5			0.4	
Delay (s)		27.5			21.1			7.3			6.9	
Level of Service		C			C			A			A	
Approach Delay (s)		27.5			21.1			7.3			6.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	62.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	10	0	14	1
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.92		
Flt Protected		0.98		
Satd. Flow (prot)		1677		
Flt Permitted		0.98		
Satd. Flow (perm)		1677		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	0	16	1
RTOR Reduction (vph)	0	1	0	0
Lane Group Flow (vph)	0	27	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		2.8		
Effective Green, g (s)		2.8		
Actuated g/C Ratio		0.04		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		75		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.36		
Uniform Delay, d1		29.0		
Progression Factor		1.00		
Incremental Delay, d2		2.9		
Delay (s)		32.0		
Level of Service		C		
Approach Delay (s)		32.0		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	299	123	3	12	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.81				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.96				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1204				1338
Flt Permitted			0.98				0.32	1.00				0.98
Satd. Flow (perm)			1474				598	1204				1319
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	318	131	3	13	357
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	481
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			188				228	460				504
v/s Ratio Prot								c0.38				
v/s Ratio Perm			0.04				0.09					0.36
v/c Ratio			0.35				0.23	0.98				0.95
Uniform Delay, d1			43.8				23.0	33.6				33.1
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			5.0				2.3	37.9				30.2
Delay (s)			48.8				25.3	71.5				63.3
Level of Service			D				C	E				E
Approach Delay (s)			48.8					66.7				63.3
Approach LOS			D					E				E

Intersection Summary			
HCM Average Control Delay	70.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	103	1	1	119	357	14	41	2	192	215	7	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3159					3167		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3159					3167		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	110	1	1	127	380	15	44	2	204	229	7	18
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	561	0	0	0	0	458	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					546					547		
v/s Ratio Prot					c0.18					c0.14		
v/s Ratio Perm												
v/c Ratio					1.03					0.84		
Uniform Delay, d1					45.5					44.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					45.8					14.1		
Delay (s)					91.3					58.1		
Level of Service					F					E		
Approach Delay (s)					91.3					58.1		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	17	75	8	107	62	52	38	33	48	588	129	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		1.00			0.95					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1611			1442					3200		
Flt Permitted		0.93			0.82					0.83		
Satd. Flow (perm)		1516			1209					2676		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	18	78	8	111	65	54	40	34	50	612	134	29
RTOR Reduction (vph)	0	4	0	0	8	0	0	0	0	19	0	0
Lane Group Flow (vph)	0	100	0	0	262	0	0	0	0	811	0	0
Confl. Peds. (#/hr)			23				77				6	
Confl. Bikes (#/hr)			12				48				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					35.3		
Effective Green, g (s)		18.0			18.0					36.3		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		341			272					1214		
v/s Ratio Prot												
v/s Ratio Perm		0.07			c0.22					c0.30		
v/c Ratio		0.29			0.96					0.67		
Uniform Delay, d1		25.7			30.7					17.1		
Progression Factor		1.00			1.00					0.77		
Incremental Delay, d2		0.2			44.2					2.7		
Delay (s)		25.9			74.9					16.0		
Level of Service		C			E					B		
Approach Delay (s)		25.9			74.9					16.0		
Approach LOS		C			E					B		

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	476	12	9	9	126	72	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	0.99				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3280				1530		
Flt Permitted	0.89				0.97		
Satd. Flow (perm)	2914				1530		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	496	12	9	9	131	75	1
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	546	0	0	0	216	0	0
Confl. Peds. (#/hr)		1	16				
Confl. Bikes (#/hr)		5	16				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	35.3				13.7		
Effective Green, g (s)	36.3				13.7		
Actuated g/C Ratio	0.45				0.17		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1322				262		
v/s Ratio Prot					c0.14		
v/s Ratio Perm	0.19						
v/c Ratio	0.41				0.82		
Uniform Delay, d1	14.7				32.0		
Progression Factor	1.00				1.00		
Incremental Delay, d2	1.0				17.8		
Delay (s)	15.6				49.8		
Level of Service	B				D		
Approach Delay (s)	15.6				49.8		
Approach LOS	B				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	71	83	62	717	88	51	165	471
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.98		1.00	0.89	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1715		1770	3245		1770	2884	
Flt Permitted					0.99		0.38	1.00		0.30	1.00	
Satd. Flow (perm)					1715		700	3245		556	2884	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	72	85	63	732	90	52	168	481
RTOR Reduction (vph)	0	0	0	0	41	0	0	12	0	0	192	0
Lane Group Flow (vph)	0	0	0	0	136	0	63	810	0	52	457	0
Confl. Peds. (#/hr)			2			8			8			11
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		420	1947		334	1730	
v/s Ratio Prot								c0.25			0.16	
v/s Ratio Perm					0.08		0.09			0.09		
v/c Ratio					0.26		0.15	0.42		0.16	0.26	
Uniform Delay, d1					21.3		7.0	8.5		7.1	7.6	
Progression Factor					1.00		1.54	1.44		1.70	2.98	
Incremental Delay, d2					1.2		0.7	0.6		0.9	0.3	
Delay (s)					22.5		11.5	12.9		12.8	23.0	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			22.5			12.8			22.2	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	448	108	67	0	0	34	0	386	67	14	170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1670				1418		3232			3296	
Flt Permitted	0.95	0.98				1.00		1.00			0.91	
Satd. Flow (perm)	1681	1670				1418		3232			3009	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	467	112	70	0	0	35	0	402	70	15	177	0
RTOR Reduction (vph)	0	12	0	0	0	13	0	18	0	0	0	0
Lane Group Flow (vph)	327	310	0	0	0	22	0	454	0	0	192	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1065				904		848			790	
v/s Ratio Prot								c0.14				
v/s Ratio Perm	c0.19	0.19				0.02					0.06	
v/c Ratio	0.31	0.29				0.02		0.54			0.24	
Uniform Delay, d1	6.5	6.5				5.3		25.3			23.2	
Progression Factor	1.00	1.00				1.00		1.00			0.98	
Incremental Delay, d2	0.7	0.7				0.1		2.4			0.7	
Delay (s)	7.3	7.1				5.4		27.7			23.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.2			5.4			27.7			23.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	72	112	175	54	402	0	0	559	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.92		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2990		1770	1863			1807	
Flt Permitted					0.99		0.31	1.00			1.00	
Satd. Flow (perm)					2990		569	1863			1807	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	77	120	188	58	432	0	0	601	78
RTOR Reduction (vph)	0	0	0	0	110	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	276	0	58	432	0	0	673	0
Confl. Peds. (#/hr)			42			69			275			212
Confl. Bikes (#/hr)									65			56
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					748		370	1211			1175	
v/s Ratio Prot								0.23			c0.37	
v/s Ratio Perm					0.09		0.10					
v/c Ratio					0.37		0.16	0.36			0.57	
Uniform Delay, d1					24.8		5.5	6.4			7.8	
Progression Factor					1.00		1.89	1.88			1.00	
Incremental Delay, d2					1.4		0.6	0.5			2.0	
Delay (s)					26.2		10.9	12.5			9.8	
Level of Service					C		B	B			A	
Approach Delay (s)		0.0			26.2			12.3			9.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	384	90	0	0	0	0	341	116	195	428	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.92						0.92		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.98						0.97		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2953						1401		1770	1863	
Flt Permitted		0.99						1.00		0.95	1.00	
Satd. Flow (perm)		2953						1401		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	118	400	94	0	0	0	0	355	121	203	446	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	0	594	0	0	0	0	0	461	0	203	446	0
Confl. Peds. (#/hr)			300			144			514			190
Confl. Bikes (#/hr)			5			9			38			43
Parking (#/hr)		5						10				
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)		22.0						34.0		15.0	52.0	
Effective Green, g (s)		21.0						33.0		14.0	51.0	
Actuated g/C Ratio		0.26						0.41		0.18	0.64	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		775						578		310	1188	
v/s Ratio Prot								c0.33		c0.11	0.24	
v/s Ratio Perm		0.20										
v/c Ratio		0.77						0.80		0.65	0.38	
Uniform Delay, d1		27.2						20.6		30.7	6.9	
Progression Factor		1.00						1.00		0.88	0.42	
Incremental Delay, d2		7.1						10.9		8.7	0.8	
Delay (s)		34.3						31.5		35.7	3.7	
Level of Service		C						C		D	A	
Approach Delay (s)		34.3			0.0			31.5			13.7	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

Description: Shafter Avenue/Keith Avenue/College Avenue

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	9	21	50	16	15	12	32	50	6	37	360	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.94					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					0.99	
Flt Protected			0.98			0.99					0.99	
Satd. Flow (prot)			1551			1376					1620	
Flt Permitted			0.89			0.96					0.91	
Satd. Flow (perm)			1404			1329					1478	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	10	23	55	18	16	13	35	55	7	41	396	18
RTOR Reduction (vph)	0	0	12	0	0	42	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	94	0	0	77	0	0	0	0	459	0
Confl. Peds. (#/hr)				53				31				115
Confl. Bikes (#/hr)												14
Parking (#/hr)			3			3					3	

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			328			310					542	
v/s Ratio Prot												
v/s Ratio Perm			c0.07			0.06					0.31	
v/c Ratio			0.29			0.25					0.85	
Uniform Delay, d1			18.9			18.7					17.5	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.2			1.9					15.1	
Delay (s)			21.1			20.6					32.6	
Level of Service			C			C					C	
Approach Delay (s)			21.1			20.6					32.6	
Approach LOS			C			C					C	

Intersection Summary			
HCM Average Control Delay	32.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	58	382	15	31	13	62	49	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.98				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.99				0.93		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1758				1495		
Flt Permitted		0.90				0.98		
Satd. Flow (perm)		1585				1495		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	64	420	16	34	14	68	54	40
RTOR Reduction (vph)	0	4	0	0	0	18	0	0
Lane Group Flow (vph)	0	530	0	0	0	158	0	0
Confl. Peds. (#/hr)			65	105				
Confl. Bikes (#/hr)			14	6				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		581				299		
v/s Ratio Prot								
v/s Ratio Perm		c0.33				0.11		
v/c Ratio		0.91				0.53		
Uniform Delay, d1		18.1				21.5		
Progression Factor		1.00				1.00		
Incremental Delay, d2		21.1				6.6		
Delay (s)		39.1				28.1		
Level of Service		D				C		
Approach Delay (s)		39.1				28.1		
Approach LOS		D				C		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	525	140	51	452	121	64	195	69	125	231	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.91			0.96			0.93			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1421			3273			1436			1315	
Flt Permitted		0.89			0.85			0.84			0.66	
Satd. Flow (perm)		1269			2788			1217			875	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	72	559	149	54	481	129	68	207	73	133	246	137
RTOR Reduction (vph)	0	6	0	0	27	0	0	12	0	0	16	0
Lane Group Flow (vph)	0	774	0	0	637	0	0	336	0	0	500	0
Confl. Peds. (#/hr)			196			92			382			490
Confl. Bikes (#/hr)			3			7			13			19
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		666			1464			319			356	
v/s Ratio Prot											c0.09	
v/s Ratio Perm		c0.61			0.23			0.28			c0.44	
v/c Ratio		1.16			0.44			1.05			1.40	
Uniform Delay, d1		19.0			11.7			29.5			25.0	
Progression Factor		1.00			1.00			0.68			1.00	
Incremental Delay, d2		89.1			0.9			50.2			197.9	
Delay (s)		108.1			12.6			70.2			222.9	
Level of Service		F			B			E			F	
Approach Delay (s)		108.1			12.6			70.2			222.9	
Approach LOS		F			B			E			F	

Intersection Summary			
HCM Average Control Delay	100.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	716	41	79	523	235	65	230	167	323	287	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.95		1.00	0.97	
Flt Protected		1.00			1.00			0.99		0.95	0.99	
Satd. Flow (prot)		3498			3342			3256		1610	3226	
Flt Permitted		0.85			0.73			0.99		0.95	0.99	
Satd. Flow (perm)		2994			2445			3256		1610	3226	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	770	44	85	562	253	70	247	180	347	309	87
RTOR Reduction (vph)	0	5	0	0	46	0	0	88	0	0	19	0
Lane Group Flow (vph)	0	855	0	0	854	0	0	409	0	246	478	0
Confl. Peds. (#/hr)			11			21			21			39
Confl. Bikes (#/hr)			4			8			9			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.49			0.49			0.18		0.19	0.19	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1480			1209			597		304	609	
v/s Ratio Prot								c0.13		c0.15	0.15	
v/s Ratio Perm		0.29			c0.35							
v/c Ratio		0.58			0.71			0.68		0.81	0.79	
Uniform Delay, d1		16.1			17.7			34.3		34.9	34.8	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		1.7			3.5			6.3		20.3	9.8	
Delay (s)		17.8			21.2			40.6		55.3	44.6	
Level of Service		B			C			D		E	D	
Approach Delay (s)		17.8			21.2			40.6			48.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	51	394	47	25	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1630		3251			3282
Flt Permitted	0.98		1.00			0.91
Satd. Flow (perm)	1630		3251			3005
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	55	428	51	27	422
RTOR Reduction (vph)	39	0	12	0	0	0
Lane Group Flow (vph)	60	0	467	0	0	449
Confl. Peds. (#/hr)	17	41		24		
Confl. Bikes (#/hr)		5		8		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	489		1951			1803
v/s Ratio Prot	c0.04		0.14			
v/s Ratio Perm						c0.15
v/c Ratio	0.12		0.24			0.25
Uniform Delay, d1	20.3		7.5			7.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		0.3			0.3
Delay (s)	20.9		7.8			7.9
Level of Service	C		A			A
Approach Delay (s)	20.9		7.8			7.9
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	273	128	28	233	80	173	533	35	106	751	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1748		1770	1569		1770	3280		1770	3176	
Flt Permitted	0.32	1.00		0.19	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	602	1748		349	1569		1770	3280		1770	3176	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	287	135	29	245	84	182	561	37	112	791	75
RTOR Reduction (vph)	0	20	0	0	14	0	0	4	0	0	6	0
Lane Group Flow (vph)	66	402	0	29	315	0	182	594	0	112	860	0
Confl. Peds. (#/hr)			25			22			22			41
Confl. Bikes (#/hr)			2			2			5			15
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	26.1	26.1		26.1	26.1		13.0	43.0		10.4	40.4	
Effective Green, g (s)	26.6	26.6		26.6	26.6		14.0	45.0		11.4	42.4	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.15	0.47		0.12	0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	169	489		98	439		261	1554		212	1417	
v/s Ratio Prot		c0.23			0.20		c0.10	c0.18		0.06	c0.27	
v/s Ratio Perm	0.11			0.08								
v/c Ratio	0.39	0.82		0.30	0.72		0.70	0.38		0.53	0.61	
Uniform Delay, d1	27.6	32.0		26.8	30.8		38.5	16.1		39.3	20.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	10.2		0.6	4.6		6.4	0.7		1.1	1.9	
Delay (s)	28.2	42.2		27.5	35.4		44.9	16.8		40.4	21.9	
Level of Service	C	D		C	D		D	B		D	C	
Approach Delay (s)		40.3			34.8			23.3			24.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	104	209	14	90	14	139	320	21	9	329	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.98			0.99			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			0.99			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1393			1790			1553			1351	
Flt Permitted		0.96			0.94			0.51			0.99	
Satd. Flow (perm)		1339			1701			801			1333	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	112	225	15	97	15	149	344	23	10	354	80
RTOR Reduction (vph)	0	65	0	0	6	0	0	2	0	0	10	0
Lane Group Flow (vph)	0	316	0	0	121	0	0	514	0	0	434	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		502			638			571			375	
v/s Ratio Prot								c0.18				
v/s Ratio Perm		c0.24			0.07			0.29			c0.33	
v/c Ratio		0.63			0.19			0.90			1.16	
Uniform Delay, d1		20.5			16.8			17.1			28.8	
Progression Factor		1.00			1.46			1.00			0.95	
Incremental Delay, d2		5.9			0.7			19.8			73.8	
Delay (s)		26.3			25.3			36.9			101.0	
Level of Service		C			C			D			F	
Approach Delay (s)		26.3			25.3			36.9			101.0	
Approach LOS		C			C			D			F	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	87	40	24	319	360	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	93	43	26	339	383	81
Pedestrians	17			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked						
vC, conflicting volume	661	252	481			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	661	252	481			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	76	94	98			
cM capacity (veh/h)	380	735	1063			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	135	139	226	255	209
Volume Left	93	26	0	0	0
Volume Right	43	0	0	0	81
cSH	449	1063	1700	1700	1700
Volume to Capacity	0.30	0.02	0.13	0.15	0.12
Queue Length 95th (ft)	31	2	0	0	0
Control Delay (s)	16.4	1.7	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.4	0.7		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	40.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	10	25	43	8	110	17	378	108	124	405	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	11	27	47	9	120	18	411	117	135	440	21
Pedestrians		266			123			2			161	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		22			10			0			13	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked												
vC, conflicting volume	1719	1674	719	1374	1626	754	727			651		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1719	1674	719	1374	1626	754	727			651		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	80	92	19	85	62	97			84		
cM capacity (veh/h)	18	54	333	58	58	318	682			839		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	175	18	528	135	461
Volume Left	1	47	18	0	135	0
Volume Right	27	120	0	117	0	21
cSH	114	131	682	1700	839	1700
Volume to Capacity	0.34	1.34	0.03	0.31	0.16	0.27
Queue Length 95th (ft)	34	283	2	0	14	0
Control Delay (s)	52.2	257.3	10.4	0.0	10.1	0.0
Lane LOS	F	F	B		B	
Approach Delay (s)	52.2	257.3	0.4		2.3	
Approach LOS	F	F				

Intersection Summary			
Average Delay	35.8		
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	93	6	55	2	5	16	72	226	6	14	335	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.90			1.00			0.98	
Flt Protected		0.97			1.00			0.99			1.00	
Satd. Flow (prot)		1698			1659			3485			3452	
Flt Permitted		0.80			0.98			0.80			0.94	
Satd. Flow (perm)		1401			1626			2822			3258	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	100	6	59	2	5	17	77	243	6	15	360	54
RTOR Reduction (vph)	0	26	0	0	14	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	139	0	0	10	0	0	326	0	0	420	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		10.7			10.7			36.4			36.4	
Effective Green, g (s)		10.7			10.7			36.4			36.4	
Actuated g/C Ratio		0.18			0.18			0.60			0.60	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		248			288			1701			1963	
v/s Ratio Prot												
v/s Ratio Perm		c0.10			0.01			0.12			c0.13	
v/c Ratio		0.56			0.03			0.19			0.21	
Uniform Delay, d1		22.7			20.6			5.4			5.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			0.0			0.3			0.2	
Delay (s)		25.6			20.6			5.6			5.7	
Level of Service		C			C			A			A	
Approach Delay (s)		25.6			20.6			5.6			5.7	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	60.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	8
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1706	
Flt Permitted		0.97	
Satd. Flow (perm)		1706	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	9
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	21	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.3	
Effective Green, g (s)		1.3	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		37	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.57	
Uniform Delay, d1		29.3	
Progression Factor		1.00	
Incremental Delay, d2		18.4	
Delay (s)		47.7	
Level of Service		D	
Approach Delay (s)		47.7	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	303	101	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.85				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1270				
Flt Permitted			0.98				0.29	1.00				
Satd. Flow (perm)			1459				545	1270				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	344	115	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			186				208	485				
v/s Ratio Prot								0.37				
v/s Ratio Perm			0.04				0.11					
v/c Ratio			0.31				0.28	0.96				
Uniform Delay, d1			43.6				23.5	33.2				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			4.3				3.3	32.6				
Delay (s)			47.9				26.8	65.8				
Level of Service			D				C	E				
Approach Delay (s)			47.9					61.5				
Approach LOS			D					E				

Intersection Summary			
HCM Average Control Delay	87.8	HCM Level of Service	F
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	318	127	4	4	170	212	9	35	3	176	245	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1269					3132					3176	
Flt Permitted	0.90					0.98					0.98	
Satd. Flow (perm)	1140					3132					3176	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	361	144	5	5	193	241	10	40	3	200	278	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	3	0
Lane Group Flow (vph)	533	0	0	0	0	483	0	0	0	0	522	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	435					541					549	
v/s Ratio Prot						c0.15					c0.16	
v/s Ratio Perm	c0.47											
v/c Ratio	1.23					0.89					0.95	
Uniform Delay, d1	34.0					44.5					45.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	120.3					19.7					27.9	
Delay (s)	154.3					64.2					72.9	
Level of Service	F					E					E	
Approach Delay (s)	154.3					64.2					72.9	
Approach LOS	F					E					E	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	24
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	27
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	9	24	6	111	44	47	39	15	52	473	87	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.97					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.98			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1588			1465					3211		
Flt Permitted		0.94			0.83					0.83		
Satd. Flow (perm)		1504			1246					2693		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	10	26	6	118	47	50	41	16	55	503	93	29
RTOR Reduction (vph)	0	5	0	0	9	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	37	0	0	247	0	0	0	0	653	0	0
Confl. Peds. (#/hr)			18				48				8	
Confl. Bikes (#/hr)			7				24				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		17.3			17.3					41.3		
Effective Green, g (s)		17.3			17.3					42.3		
Actuated g/C Ratio		0.22			0.22					0.53		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		325			269					1424		
v/s Ratio Prot												
v/s Ratio Perm		0.02			c0.20					c0.24		
v/c Ratio		0.11			0.92					0.46		
Uniform Delay, d1		25.2			30.7					11.7		
Progression Factor		1.00			1.00					0.50		
Incremental Delay, d2		0.1			33.4					1.0		
Delay (s)		25.3			64.0					6.9		
Level of Service		C			E					A		
Approach Delay (s)		25.3			64.0					6.9		
Approach LOS		C			E					A		

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		

Description: Claremont Avenue/Forest Street

c Critical Lane Group

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	485	10	9	6	42	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	0.99				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3282				1514	
Flt Permitted	0.90				0.97	
Satd. Flow (perm)	2970				1514	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	516	11	10	6	45	44
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	566	0	0	0	95	0
Confl. Peds. (#/hr)		4	10			
Confl. Bikes (#/hr)		11	17			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	41.3				8.4	
Effective Green, g (s)	42.3				8.4	
Actuated g/C Ratio	0.53				0.11	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1570				159	
v/s Ratio Prot					c0.06	
v/s Ratio Perm	0.19					
v/c Ratio	0.36				0.60	
Uniform Delay, d1	11.0				34.2	
Progression Factor	1.00				1.00	
Incremental Delay, d2	0.6				4.0	
Delay (s)	11.6				38.2	
Level of Service	B				D	
Approach Delay (s)	11.6				38.2	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	69	48	45	615	47	32	146	463
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.89	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1751		1770	3267		1770	2876	
Flt Permitted					1.00		0.37	1.00		0.34	1.00	
Satd. Flow (perm)					1751		688	3267		638	2876	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	75	52	49	668	51	35	159	503
RTOR Reduction (vph)	0	0	0	0	27	0	0	7	0	0	201	0
Lane Group Flow (vph)	0	0	0	0	111	0	49	712	0	35	461	0
Confl. Peds. (#/hr)			3			4			11			8
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					525		413	1960		383	1726	
v/s Ratio Prot								c0.22			0.16	
v/s Ratio Perm					0.06		0.07			0.05		
v/c Ratio					0.21		0.12	0.36		0.09	0.27	
Uniform Delay, d1					20.9		6.9	8.2		6.8	7.6	
Progression Factor					1.00		0.83	0.82		1.35	1.72	
Incremental Delay, d2					0.9		0.6	0.5		0.4	0.3	
Delay (s)					21.8		6.3	7.2		9.6	13.4	
Level of Service					C		A	A		A	B	
Approach Delay (s)		0.0			21.8			7.1			13.2	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	523	74	78	0	0	28	0	140	21	23	134	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1656				1418		3235			3285	
Flt Permitted	0.95	0.97				1.00		1.00			0.90	
Satd. Flow (perm)	1681	1656				1418		3235			2979	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	581	82	87	0	0	31	0	156	23	26	149	0
RTOR Reduction (vph)	0	14	0	0	0	11	0	15	0	0	0	0
Lane Group Flow (vph)	378	358	0	0	0	20	0	164	0	0	175	0
Confl. Peds. (#/hr)			7						18			5
Confl. Bikes (#/hr)									9			10
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1056				904		849			782	
v/s Ratio Prot								0.05				
v/s Ratio Perm	c0.22	0.22				0.01					c0.06	
v/c Ratio	0.35	0.34				0.02		0.19			0.22	
Uniform Delay, d1	6.8	6.7				5.3		22.9			23.1	
Progression Factor	1.00	1.00				1.00		1.00			0.85	
Incremental Delay, d2	0.9	0.9				0.0		0.5			0.6	
Delay (s)	7.7	7.6				5.4		23.4			20.3	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.6			5.4			23.4			20.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	77	90	147	45	367	0	0	504	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.97		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3149		1770	1863			1823	
Flt Permitted					0.99		0.33	1.00			1.00	
Satd. Flow (perm)					3149		612	1863			1823	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	83	97	158	48	395	0	0	542	49
RTOR Reduction (vph)	0	0	0	0	111	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	227	0	48	395	0	0	585	0
Confl. Peds. (#/hr)			22			26			169			183
Confl. Bikes (#/hr)			2			2			33			35
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					945		347	1056			1033	
v/s Ratio Prot								0.21			c0.32	
v/s Ratio Perm					0.07		0.08					
v/c Ratio					0.24		0.14	0.37			0.57	
Uniform Delay, d1					15.8		6.1	7.1			8.3	
Progression Factor					1.00		1.98	1.89			1.00	
Incremental Delay, d2					0.6		0.7	0.8			2.3	
Delay (s)					16.4		12.8	14.3			10.6	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			16.4			14.1			10.6	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	117	76	0	0	0	0	342	61	165	417	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.87						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.96						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2712						1504		1770	1863	
Flt Permitted		0.99						1.00		0.95	1.00	
Satd. Flow (perm)		2712						1504		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	77	129	84	0	0	0	0	376	67	181	458	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	227	0	0	0	0	0	432	0	181	458	0
Confl. Peds. (#/hr)			240			61			281			225
Confl. Bikes (#/hr)			3			5			14			24
Parking (#/hr)		5						10				
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)		16.0						27.0		8.0	38.0	
Effective Green, g (s)		15.0						26.0		7.0	37.0	
Actuated g/C Ratio		0.25						0.43		0.12	0.62	
Clearance Time (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		678						652		207	1149	
v/s Ratio Prot								c0.29		c0.10	0.25	
v/s Ratio Perm		0.08										
v/c Ratio		0.33						0.66		0.87	0.40	
Uniform Delay, d1		18.4						13.5		26.1	5.8	
Progression Factor		1.00						0.87		1.42	0.36	
Incremental Delay, d2		1.3						4.9		33.0	0.9	
Delay (s)		19.7						16.6		70.1	3.0	
Level of Service		B						B		E	A	
Approach Delay (s)		19.7			0.0			16.6			22.0	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	15	8	5	8	6	18	30	4	19	288	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.99			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1550			1442					1637	
Flt Permitted			0.86			0.97					0.96	
Satd. Flow (perm)			1374			1410					1570	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	4	16	9	5	9	6	19	32	4	20	310	5
RTOR Reduction (vph)	0	0	4	0	0	25	0	0	0	0	1	0
Lane Group Flow (vph)	0	0	30	0	0	41	0	0	0	0	338	0
Confl. Peds. (#/hr)				29				1				82
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			321			329					654	
v/s Ratio Prot												
v/s Ratio Perm			0.02			c0.03					0.22	
v/c Ratio			0.09			0.13					0.52	
Uniform Delay, d1			18.0			18.2					13.0	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			0.6			0.8					2.9	
Delay (s)			18.6			19.0					15.9	
Level of Service			B			B					B	
Approach Delay (s)			18.6			19.0					15.9	
Approach LOS			B			B					B	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	40	349	21	35	9	25	27	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.98				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.91		
Flt Protected		1.00				0.98		
Satd. Flow (prot)		1755				1475		
Flt Permitted		0.95				0.98		
Satd. Flow (perm)		1670				1475		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	43	375	23	38	10	27	29	47
RTOR Reduction (vph)	0	5	0	0	0	40	0	0
Lane Group Flow (vph)	0	474	0	0	0	73	0	0
Confl. Peds. (#/hr)			58	80				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		696				221		
v/s Ratio Prot								
v/s Ratio Perm		c0.28				0.05		
v/c Ratio		0.68				0.33		
Uniform Delay, d1		14.2				22.8		
Progression Factor		0.63				1.00		
Incremental Delay, d2		5.0				4.0		
Delay (s)		14.0				26.8		
Level of Service		B				C		
Approach Delay (s)		14.0				26.8		
Approach LOS		B				C		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	78	0	304	372	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	84	0	327	400	33
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked						
vC, conflicting volume	586	223	439			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	586	223	439			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	439	777	1111			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	84	109	218	267	167
Volume Left	0	0	0	0	0
Volume Right	84	0	0	0	33
cSH	777	1111	1700	1700	1700
Volume to Capacity	0.11	0.00	0.13	0.16	0.10
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	23.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	650	79	23	528	140	80	254	59	130	305	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.98			0.95			0.95			0.96	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1549			3264			1483			1423	
Flt Permitted		0.98			0.92			0.79			0.74	
Satd. Flow (perm)		1524			2998			1191			1072	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	684	83	24	556	147	84	267	62	137	321	71
RTOR Reduction (vph)	0	5	0	0	24	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	777	0	0	703	0	0	407	0	0	523	0
Confl. Peds. (#/hr)			102			81			269			224
Confl. Bikes (#/hr)			1			8			32			59
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			41.0			41.0	
Effective Green, g (s)		46.0			46.0			41.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.43			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		738			1452			514			463	
v/s Ratio Prot												
v/s Ratio Perm		c0.51			0.23			0.34			c0.49	
v/c Ratio		1.05			0.48			0.79			1.13	
Uniform Delay, d1		24.5			16.5			23.3			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		48.1			0.1			7.7			82.6	
Delay (s)		72.6			16.6			31.0			109.6	
Level of Service		E			B			C			F	
Approach Delay (s)		72.6			16.6			31.0			109.6	
Approach LOS		E			B			C			F	

Intersection Summary			
HCM Average Control Delay	56.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	267	195	5	122	23	140	295	24	41	363	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.91			0.97		1.00	0.97		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1428			1766		1770	1535		1770	1338	
Flt Permitted		0.95			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1360			1742		1770	1535		1770	1338	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	281	205	5	128	24	147	311	25	43	382	92
RTOR Reduction (vph)	0	0	0	0	8	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	549	0	0	149	0	147	332	0	43	463	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		30.0			30.0		10.0	31.0		5.0	25.5	
Effective Green, g (s)		31.0			31.0		10.5	32.0		6.0	26.5	
Actuated g/C Ratio		0.39			0.39		0.13	0.40		0.08	0.33	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		527			675		232	614		133	443	
v/s Ratio Prot							c0.08	0.22		0.02	c0.35	
v/s Ratio Perm		c0.40			0.09							
v/c Ratio		1.04			0.22		0.63	0.54		0.32	1.05	
Uniform Delay, d1		24.5			16.4		32.9	18.4		35.1	26.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		50.5			0.8		12.5	3.4		6.3	55.2	
Delay (s)		75.0			17.2		45.4	21.8		41.4	82.0	
Level of Service		E			B		D	C		D	F	
Approach Delay (s)		75.0			17.2			29.0			78.6	
Approach LOS		E			B			C			E	

Intersection Summary			
HCM Average Control Delay	57.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	233	64	38	531	361	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	1.00			1.00	0.98	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.97			1.00	0.97	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1732			3527	3338	
Flt Permitted	0.96			0.90	1.00	
Satd. Flow (perm)	1732			3196	3338	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	251	69	41	571	388	111
RTOR Reduction (vph)	16	0	0	0	24	0
Lane Group Flow (vph)	304	0	0	612	475	0
Confl. Peds. (#/hr)		10				40
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	15.6			37.2	37.2	
Effective Green, g (s)	15.6			37.2	37.2	
Actuated g/C Ratio	0.26			0.61	0.61	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	444			1955	2042	
v/s Ratio Prot	c0.18				0.14	
v/s Ratio Perm				c0.19		
v/c Ratio	0.68			0.31	0.23	
Uniform Delay, d1	20.4			5.7	5.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	4.3			0.4	0.3	
Delay (s)	24.7			6.1	5.6	
Level of Service	C			A	A	
Approach Delay (s)	24.7			6.1	5.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	60.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	299	123	3	12	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.81				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.96				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1207				1340
Flt Permitted			0.98				0.36	1.00				0.99
Satd. Flow (perm)			1474				676	1207				1322
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	318	131	3	13	357
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	481
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				47.0	47.0				47.0
Effective Green, g (s)			6.0				48.0	48.0				48.0
Actuated g/C Ratio			0.05				0.44	0.44				0.44
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			80				295	527				577
v/s Ratio Prot								c0.37				
v/s Ratio Perm			0.04				0.08					0.36
v/c Ratio			0.81				0.18	0.86				0.83
Uniform Delay, d1			51.4				18.9	27.9				27.5
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			57.8				1.3	16.4				13.3
Delay (s)			109.3				20.2	44.3				40.7
Level of Service			F				C	D				D
Approach Delay (s)			109.3					41.8				40.7
Approach LOS			F					D				D

Intersection Summary			
HCM Average Control Delay	56.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	103	1	1	119	357	14	41	2	192	215	7	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3159					3167		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3159					3167		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	110	1	1	127	380	15	44	2	204	229	7	18
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	561	0	0	0	0	458	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					20.0		
Effective Green, g (s)					20.0					20.0		
Actuated g/C Ratio					0.18					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					574					576		
v/s Ratio Prot					c0.18					c0.14		
v/s Ratio Perm												
v/c Ratio					0.98					0.79		
Uniform Delay, d1					44.8					43.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					32.5					10.8		
Delay (s)					77.3					53.8		
Level of Service					E					D		
Approach Delay (s)					77.3					53.8		
Approach LOS					E					D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	525	140	51	452	121	64	195	69	125	231	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.95			0.96			0.93			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1474			3273			1437			1315	
Flt Permitted		0.89			0.85			0.82			0.77	
Satd. Flow (perm)		1316			2778			1188			1028	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	72	559	149	54	481	129	68	207	73	133	246	137
RTOR Reduction (vph)	0	7	0	0	26	0	0	10	0	0	17	0
Lane Group Flow (vph)	0	773	0	0	638	0	0	338	0	0	499	0
Confl. Peds. (#/hr)			196			92			382			490
Confl. Bikes (#/hr)			3			7			13			19
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		41.0			41.0			31.0			31.0	
Effective Green, g (s)		41.0			41.0			31.0			31.0	
Actuated g/C Ratio		0.51			0.51			0.39			0.39	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		674			1424			460			398	
v/s Ratio Prot												
v/s Ratio Perm		c0.59			0.23			0.28			c0.49	
v/c Ratio		1.15			0.45			0.73			1.25	
Uniform Delay, d1		19.5			12.3			21.0			24.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		82.9			0.1			5.2			133.8	
Delay (s)		102.4			12.4			26.1			158.3	
Level of Service		F			B			C			F	
Approach Delay (s)		102.4			12.4			26.1			158.3	
Approach LOS		F			B			C			F	

Intersection Summary			
HCM Average Control Delay	77.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	104	209	14	90	14	139	320	21	9	329	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.98		1.00	0.99		1.00	0.91	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1393			1790		1770	1563		1770	1346	
Flt Permitted		0.95			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1337			1698		1770	1563		1770	1346	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	112	225	15	97	15	149	344	23	10	354	80
RTOR Reduction (vph)	0	65	0	0	6	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	316	0	0	121	0	149	364	0	10	424	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		26.0			26.0		10.5	35.0		5.0	29.0	
Effective Green, g (s)		27.0			27.0		11.0	36.0		6.0	30.0	
Actuated g/C Ratio		0.34			0.34		0.14	0.45		0.08	0.38	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		451			573		243	703		133	505	
v/s Ratio Prot							c0.08	0.23		0.01	c0.32	
v/s Ratio Perm		c0.24			0.07							
v/c Ratio		0.70			0.21		0.61	0.52		0.08	0.84	
Uniform Delay, d1		23.0			18.9		32.5	15.8		34.4	22.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.8			0.8		11.0	2.7		1.1	15.4	
Delay (s)		31.8			19.7		43.5	18.5		35.5	38.2	
Level of Service		C			B		D	B		D	D	
Approach Delay (s)		31.8			19.7			25.7			38.1	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	87	40	24	319	360	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.97	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1716			3527	3412	
Flt Permitted	0.97			0.92	1.00	
Satd. Flow (perm)	1716			3242	3412	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	43	26	339	383	81
RTOR Reduction (vph)	30	0	0	0	12	0
Lane Group Flow (vph)	106	0	0	365	452	0
Confl. Peds. (#/hr)		3				17
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	7.6			42.0	42.0	
Effective Green, g (s)	7.6			42.0	42.0	
Actuated g/C Ratio	0.13			0.73	0.73	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	226			2364	2488	
v/s Ratio Prot	c0.06				c0.13	
v/s Ratio Perm				0.11		
v/c Ratio	0.47			0.15	0.18	
Uniform Delay, d1	23.1			2.4	2.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.5			0.1	0.2	
Delay (s)	24.7			2.5	2.6	
Level of Service	C			A	A	
Approach Delay (s)	24.7			2.5	2.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	57.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	303	101	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.85				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1271				
Flt Permitted			0.98				0.34	1.00				
Satd. Flow (perm)			1459				636	1271				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	344	115	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				48.0	48.0				
Effective Green, g (s)			6.0				49.0	49.0				
Actuated g/C Ratio			0.05				0.45	0.45				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			80				283	566				
v/s Ratio Prot								0.37				
v/s Ratio Perm			0.04				0.09					
v/c Ratio			0.72				0.20	0.83				
Uniform Delay, d1			51.2				18.6	26.7				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			43.8				1.6	12.9				
Delay (s)			95.0				20.2	39.6				
Level of Service			F				C	D				
Approach Delay (s)			95.0					37.5				
Approach LOS			F					D				

Intersection Summary			
HCM Average Control Delay	57.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	318	127	4	4	170	212	9	35	3	176	245	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1270					3132					3176	
Flt Permitted	0.97					0.98					0.98	
Satd. Flow (perm)	1235					3132					3176	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	361	144	5	5	193	241	10	40	3	200	278	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	3	0
Lane Group Flow (vph)	533	0	0	0	0	483	0	0	0	0	522	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	48.0					19.0					20.0	
Effective Green, g (s)	49.0					19.0					20.0	
Actuated g/C Ratio	0.45					0.17					0.18	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	550					541					577	
v/s Ratio Prot						c0.15					c0.16	
v/s Ratio Perm	c0.43											
v/c Ratio	0.97					0.89					0.90	
Uniform Delay, d1	29.8					44.5					44.1	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	31.5					19.7					20.1	
Delay (s)	61.2					64.2					64.1	
Level of Service	E					E					E	
Approach Delay (s)	61.2					64.2					64.1	
Approach LOS	E					E					E	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	24
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	27
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	299	163	9	153	86	109	232	31	112	292	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.93			0.97			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.95			0.99			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1463			1649			1507			1340	
Flt Permitted		0.94			0.98			0.65			0.81	
Satd. Flow (perm)		1380			1619			995			1096	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	315	172	9	161	91	115	244	33	118	307	92
RTOR Reduction (vph)	0	0	0	0	24	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	550	0	0	237	0	0	388	0	0	507	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		518			607			625			308	
v/s Ratio Prot								c0.12				
v/s Ratio Perm		c0.40			0.15			0.20			c0.46	
v/c Ratio		1.06			0.39			0.62			1.65	
Uniform Delay, d1		25.0			18.3			13.4			28.8	
Progression Factor		1.00			1.28			1.00			1.00	
Incremental Delay, d2		57.0			1.9			4.6			304.9	
Delay (s)		82.0			25.3			18.0			333.6	
Level of Service		F			C			B			F	
Approach Delay (s)		82.0			25.3			18.0			333.6	
Approach LOS		F			C			B			F	

Intersection Summary			
HCM Average Control Delay	134.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	233	174	136	531	361	103
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	251	187	146	571	388	111
Pedestrians	40			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.95					
vC, conflicting volume	1062	290	539			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	953	290	539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	73	85			
cM capacity (veh/h)	201	682	991			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	438	337	381	259	240
Volume Left	251	146	0	0	0
Volume Right	187	0	0	0	111
cSH	287	991	1700	1700	1700
Volume to Capacity	1.52	0.15	0.22	0.15	0.14
Queue Length 95th (ft)	632	13	0	0	0
Control Delay (s)	285.2	4.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	285.2	2.3		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	76.5		
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	13	18	24	343	418	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	13	18	24	350	427	12
Pedestrians	207					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	17					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked						
vC, conflicting volume	1039	640	646			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1039	640	646			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	95	97			
cM capacity (veh/h)	205	394	777			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	32	374	439
Volume Left	13	24	0
Volume Right	18	0	12
cSH	284	777	1700
Volume to Capacity	0.11	0.03	0.26
Queue Length 95th (ft)	9	2	0
Control Delay (s)	19.3	1.0	0.0
Lane LOS	C	A	
Approach Delay (s)	19.3	1.0	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	4	4	18	152	429	8	33	376	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.98	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.90			1.00			0.96	
Flt Protected		0.96			0.99			0.99			1.00	
Satd. Flow (prot)		1736			1656			3483			3350	
Flt Permitted		0.75			0.96			0.67			0.89	
Satd. Flow (perm)		1361			1598			2350			3001	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	9	56	4	4	20	169	477	9	37	418	140
RTOR Reduction (vph)	0	10	0	0	14	0	0	0	0	0	29	0
Lane Group Flow (vph)	0	285	0	0	14	0	0	655	0	0	566	0
Confl. Peds. (#/hr)			19			1			29			21
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm					
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2					
Actuated Green, G (s)		17.6			17.6			30.6			30.6	
Effective Green, g (s)		17.6			17.6			30.6			30.6	
Actuated g/C Ratio		0.28			0.28			0.49			0.49	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		380			446			1141			1458	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.28			0.19	
v/c Ratio		0.75			0.03			0.57			2.46dr	
Uniform Delay, d1		20.7			16.5			11.6			10.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		7.9			0.0			2.1			0.8	
Delay (s)		28.6			16.5			13.7			11.0	
Level of Service		C			B			B			B	
Approach Delay (s)		28.6			16.5			13.7			11.0	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	63.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	10	0	14	1
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.92		
Flt Protected		0.98		
Satd. Flow (prot)		1677		
Flt Permitted		0.98		
Satd. Flow (perm)		1677		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	0	16	1
RTOR Reduction (vph)	0	1	0	0
Lane Group Flow (vph)	0	27	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		2.8		
Effective Green, g (s)		2.8		
Actuated g/C Ratio		0.04		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		75		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.36		
Uniform Delay, d1		29.2		
Progression Factor		1.00		
Incremental Delay, d2		2.9		
Delay (s)		32.2		
Level of Service		C		
Approach Delay (s)		32.2		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	238	184	3	12	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.71				0.86
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.93				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1039				1356
Flt Permitted			0.98				0.35	1.00				0.98
Satd. Flow (perm)			1474				646	1039				1335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	253	196	3	13	335
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	444
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			188				247	397				510
v/s Ratio Prot								c0.43				
v/s Ratio Perm			0.04				0.08					0.33
v/c Ratio			0.35				0.21	1.14				0.87
Uniform Delay, d1			43.8				22.9	34.0				31.5
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			5.0				1.9	88.6				18.1
Delay (s)			48.8				24.8	122.6				49.6
Level of Service			D				C	F				D
Approach Delay (s)			48.8					112.5				49.6
Approach LOS			D					F				D

Intersection Summary			
HCM Average Control Delay	79.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	89	1	1	95	381	14	41	2	213	229	7	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3166					3166		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3166					3166		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	95	1	1	101	405	15	44	2	227	244	7	20
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	560	0	0	0	0	498	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					547					547		
v/s Ratio Prot					c0.18					c0.16		
v/s Ratio Perm												
v/c Ratio					1.02					0.91		
Uniform Delay, d1					45.5					44.7		
Progression Factor					1.00					1.00		
Incremental Delay, d2					44.8					21.6		
Delay (s)					90.3					66.3		
Level of Service					F					E		
Approach Delay (s)					90.3					66.3		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	72	0	592	380	61
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	76	0	623	400	64
Pedestrians	21					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.87					
vC, conflicting volume	765	253	485			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	438	253	485			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	469	733	1055			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	76	208	415	267	198
Volume Left	0	0	0	0	0
Volume Right	76	0	0	0	64
cSH	733	1055	1700	1700	1700
Volume to Capacity	0.10	0.00	0.24	0.16	0.12
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	10.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.5	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	27.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	145	168	19	124	89	105	245	31	91	247	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.94			0.98			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.95			0.99			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1441			1658			1533			1338	
Flt Permitted		0.94			0.96			0.69			0.82	
Satd. Flow (perm)		1363			1593			1078			1104	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	156	181	20	133	96	113	263	33	98	266	80
RTOR Reduction (vph)	0	41	0	0	28	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	340	0	0	221	0	0	405	0	0	434	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		511			597			657			311	
v/s Ratio Prot								c0.12				
v/s Ratio Perm		c0.25			0.14			0.20			c0.39	
v/c Ratio		0.67			0.37			0.62			1.40	
Uniform Delay, d1		20.8			18.1			13.3			28.8	
Progression Factor		1.00			1.27			1.00			0.94	
Incremental Delay, d2		6.7			1.8			4.3			179.7	
Delay (s)		27.6			24.8			17.6			206.7	
Level of Service		C			C			B			F	
Approach Delay (s)		27.6			24.8			17.6			206.7	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	78.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	87	173	138	319	360	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	93	184	147	339	383	81
Pedestrians	17			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked						
vC, conflicting volume	904	252	481			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	904	252	481			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	61	75	86			
cM capacity (veh/h)	235	735	1063			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	277	260	226	255	209
Volume Left	93	147	0	0	0
Volume Right	184	0	0	0	81
cSH	429	1063	1700	1700	1700
Volume to Capacity	0.64	0.14	0.13	0.15	0.12
Queue Length 95th (ft)	110	12	0	0	0
Control Delay (s)	27.3	5.6	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	27.3	3.0		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	25	20	379	406	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	27	22	412	441	26
Pedestrians	266			2		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	22			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked						
vC, conflicting volume	1176	722	733			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1176	722	733			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	92	97			
cM capacity (veh/h)	159	331	678			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	39	434	467
Volume Left	12	22	0
Volume Right	27	0	26
cSH	249	678	1700
Volume to Capacity	0.16	0.03	0.27
Queue Length 95th (ft)	14	2	0
Control Delay (s)	22.1	0.9	0.0
Lane LOS	C	A	
Approach Delay (s)	22.1	0.9	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	2	5	16	180	225	6	14	376	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			0.96	
Flt Protected		0.97			1.00			0.98			1.00	
Satd. Flow (prot)		1722			1661			3454			3363	
Flt Permitted		0.77			0.98			0.61			0.94	
Satd. Flow (perm)		1378			1628			2159			3172	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	224	6	83	2	5	17	194	242	6	15	404	153
RTOR Reduction (vph)	0	16	0	0	12	0	0	0	0	0	35	0
Lane Group Flow (vph)	0	297	0	0	12	0	0	442	0	0	537	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm					
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2					
Actuated Green, G (s)		16.2			16.2			25.6			25.6	
Effective Green, g (s)		16.2			16.2			25.6			25.6	
Actuated g/C Ratio		0.29			0.29			0.47			0.47	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		406			480			1005			1476	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.01			c0.20			0.17	
v/c Ratio		0.73			0.03			0.44			2.32dr	
Uniform Delay, d1		17.4			13.8			9.9			9.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		6.6			0.0			1.4			0.7	
Delay (s)		24.1			13.8			11.3			10.2	
Level of Service		C			B			B			B	
Approach Delay (s)		24.1			13.8			11.3			10.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	8
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1706	
Flt Permitted		0.97	
Satd. Flow (perm)		1706	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	9
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	21	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.2	
Effective Green, g (s)		1.2	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		37	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.57	
Uniform Delay, d1		26.6	
Progression Factor		1.00	
Incremental Delay, d2		18.4	
Delay (s)		45.1	
Level of Service		D	
Approach Delay (s)		45.1	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	231	173	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.74				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1085				
Flt Permitted			0.98				0.32	1.00				
Satd. Flow (perm)			1459				600	1085				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	262	197	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			186				229	414				
v/s Ratio Prot								c0.43				
v/s Ratio Perm			0.04				0.10					
v/c Ratio			0.31				0.25	1.13				
Uniform Delay, d1			43.6				23.3	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			4.3				2.6	83.9				
Delay (s)			47.9				25.9	117.9				
Level of Service			D				C	F				
Approach Delay (s)			47.9					107.7				
Approach LOS			D					F				

Intersection Summary			
HCM Average Control Delay	93.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	293	110	4	4	135	247	9	35	3	201	262	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1284					3145					3175	
Flt Permitted	0.89					0.98					0.98	
Satd. Flow (perm)	1150					3145					3175	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	333	125	5	5	153	281	10	40	3	228	298	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	3	0
Lane Group Flow (vph)	486	0	0	0	0	483	0	0	0	0	574	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	439					543					548	
v/s Ratio Prot						c0.15					c0.18	
v/s Ratio Perm	0.42											
v/c Ratio	1.11					0.89					1.05	
Uniform Delay, d1	34.0					44.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	75.3					19.3					51.3	
Delay (s)	109.3					63.8					96.8	
Level of Service	F					E					F	
Approach Delay (s)	109.3					63.8					96.8	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	27
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	31
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	103	0	415	396	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	111	0	446	426	77
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	1.00	1.00	1.00			
vC, conflicting volume	694	258	509			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	689	252	504			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	85	100			
cM capacity (veh/h)	377	743	1049			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	111	149	297	284	219
Volume Left	0	0	0	0	0
Volume Right	111	0	0	0	77
cSH	743	1049	1700	1700	1700
Volume to Capacity	0.15	0.00	0.17	0.17	0.13
Queue Length 95th (ft)	13	0	0	0	0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.7	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	299	163	9	153	86	109	232	31	112	292	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.93		1.00	0.95		1.00	0.88	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.95		1.00	0.98		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1463			1649		1770	1495		1770	1303	
Flt Permitted		0.93			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1375			1620		1770	1495		1770	1303	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	315	172	9	161	91	115	244	33	118	307	92
RTOR Reduction (vph)	0	0	0	0	24	0	0	6	0	0	14	0
Lane Group Flow (vph)	0	550	0	0	237	0	115	271	0	118	386	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		31.0			31.0		9.5	24.0		11.0	25.0	
Effective Green, g (s)		32.0			32.0		10.0	25.0		12.0	26.0	
Actuated g/C Ratio		0.40			0.40		0.12	0.31		0.15	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		550			648		221	467		266	423	
v/s Ratio Prot							c0.06	0.18		0.07	c0.30	
v/s Ratio Perm		c0.40			0.15							
v/c Ratio		1.00			0.37		0.52	0.58		0.44	0.91	
Uniform Delay, d1		24.0			16.9		32.8	23.1		31.0	25.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		38.4			1.6		8.5	5.2		5.3	26.3	
Delay (s)		62.4			18.5		41.3	28.3		36.2	52.2	
Level of Service		E			B		D	C		D	D	
Approach Delay (s)		62.4			18.5			32.1			48.6	
Approach LOS		E			B			C			D	

Intersection Summary			
HCM Average Control Delay	44.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	233	174	136	531	361	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.97	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.97	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1689			3504	3331	
Flt Permitted	0.97			0.75	1.00	
Satd. Flow (perm)	1689			2661	3331	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	251	187	146	571	388	111
RTOR Reduction (vph)	40	0	0	0	27	0
Lane Group Flow (vph)	398	0	0	717	472	0
Confl. Peds. (#/hr)		10				40
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	20.6			38.4	38.4	
Effective Green, g (s)	20.6			38.4	38.4	
Actuated g/C Ratio	0.31			0.57	0.57	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	519			1525	1909	
v/s Ratio Prot	c0.24				0.14	
v/s Ratio Perm				c0.27		
v/c Ratio	0.77			0.47	0.25	
Uniform Delay, d1	21.0			8.4	7.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	6.7			1.0	0.3	
Delay (s)	27.7			9.4	7.4	
Level of Service	C			A	A	
Approach Delay (s)	27.7			9.4	7.4	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	67.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	238	184	3	12	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.71				0.86
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.93				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1043				1357
Flt Permitted			0.98				0.39	1.00				0.98
Satd. Flow (perm)			1474				721	1043				1337
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	253	196	3	13	335
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	444
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				47.0	47.0				47.0
Effective Green, g (s)			6.0				48.0	48.0				48.0
Actuated g/C Ratio			0.05				0.44	0.44				0.44
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			80				315	455				583
v/s Ratio Prot								c0.43				
v/s Ratio Perm			0.04				0.07					0.33
v/c Ratio			0.81				0.17	0.99				0.76
Uniform Delay, d1			51.4				18.8	30.8				26.2
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			57.8				1.1	40.6				9.1
Delay (s)			109.3				20.0	71.4				35.3
Level of Service			F				B	E				D
Approach Delay (s)			109.3					66.1				35.3
Approach LOS			F					E				D

Intersection Summary			
HCM Average Control Delay	62.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	89	1	1	95	381	14	41	2	213	229	7	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3166					3166		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3166					3166		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	95	1	1	101	405	15	44	2	227	244	7	20
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	560	0	0	0	0	498	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					20.0		
Effective Green, g (s)					20.0					20.0		
Actuated g/C Ratio					0.18					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					576					576		
v/s Ratio Prot					c0.18					c0.16		
v/s Ratio Perm												
v/c Ratio					0.97					0.86		
Uniform Delay, d1					44.7					43.7		
Progression Factor					1.00					1.00		
Incremental Delay, d2					31.3					15.8		
Delay (s)					76.1					59.4		
Level of Service					E					E		
Approach Delay (s)					76.1					59.4		
Approach LOS					E					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	145	168	19	124	89	105	245	31	91	247	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.94		1.00	0.97		1.00	0.88	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.95		1.00	0.98		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1441			1658		1770	1533		1770	1300	
Flt Permitted		0.94			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1363			1593		1770	1533		1770	1300	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	156	181	20	133	96	113	263	33	98	266	80
RTOR Reduction (vph)	0	41	0	0	28	0	0	6	0	0	13	0
Lane Group Flow (vph)	0	340	0	0	221	0	113	290	0	98	333	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		29.0			29.0		10.5	28.0		9.0	26.0	
Effective Green, g (s)		30.0			30.0		11.0	29.0		10.0	27.0	
Actuated g/C Ratio		0.38			0.38		0.14	0.36		0.12	0.34	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		511			597		243	556		221	439	
v/s Ratio Prot							c0.06	0.19		0.06	c0.26	
v/s Ratio Perm		c0.25			0.14							
v/c Ratio		0.67			0.37		0.47	0.52		0.44	0.76	
Uniform Delay, d1		20.8			18.1		31.8	20.1		32.4	23.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.7			1.8		6.3	3.5		6.3	11.6	
Delay (s)		27.6			19.9		38.1	23.5		38.8	35.2	
Level of Service		C			B		D	C		D	D	
Approach Delay (s)		27.6			19.9			27.5			36.0	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	87	173	138	319	360	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.91			1.00	0.97	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1650			3486	3411	
Flt Permitted	0.98			0.72	1.00	
Satd. Flow (perm)	1650			2566	3411	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	184	147	339	383	81
RTOR Reduction (vph)	122	0	0	0	14	0
Lane Group Flow (vph)	155	0	0	486	450	0
Confl. Peds. (#/hr)		3				17
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	10.4			40.2	40.2	
Effective Green, g (s)	10.4			40.2	40.2	
Actuated g/C Ratio	0.18			0.69	0.69	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	293			1760	2340	
v/s Ratio Prot	c0.09				0.13	
v/s Ratio Perm				c0.19		
v/c Ratio	0.53			0.28	0.19	
Uniform Delay, d1	21.9			3.6	3.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.7			0.4	0.2	
Delay (s)	23.6			4.0	3.5	
Level of Service	C			A	A	
Approach Delay (s)	23.6			4.0	3.5	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	231	173	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.74				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1085				
Flt Permitted			0.98				0.35	1.00				
Satd. Flow (perm)			1459				654	1085				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	262	197	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.0	45.0				
Effective Green, g (s)			6.0				46.0	46.0				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			80				273	454				
v/s Ratio Prot								c0.43				
v/s Ratio Perm			0.04				0.09					
v/c Ratio			0.72				0.21	1.03				
Uniform Delay, d1			51.2				20.4	32.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			43.8				1.8	49.8				
Delay (s)			95.0				22.2	81.8				
Level of Service			F				C	F				
Approach Delay (s)			95.0					75.2				
Approach LOS			F					E				

Intersection Summary			
HCM Average Control Delay	63.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	293	110	4	4	135	247	9	35	3	201	262	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1284					3145					3175	
Flt Permitted	0.97					0.98					0.98	
Satd. Flow (perm)	1245					3145					3175	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	333	125	5	5	153	281	10	40	3	228	298	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	4	0
Lane Group Flow (vph)	486	0	0	0	0	483	0	0	0	0	573	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.0					20.0					22.0	
Effective Green, g (s)	46.0					20.0					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	521					572					635	
v/s Ratio Prot						c0.15					c0.18	
v/s Ratio Perm	0.39											
v/c Ratio	0.93					0.84					0.90	
Uniform Delay, d1	30.5					43.5					43.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	25.9					14.2					18.5	
Delay (s)	56.4					57.7					61.4	
Level of Service	E					E					E	
Approach Delay (s)	56.4					57.7					61.4	
Approach LOS	E					E					E	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	27
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	31
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	267	195	9	153	86	109	232	24	41	363	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.91			0.93			0.97			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.95			0.99			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1428			1649			1523			1350	
Flt Permitted		0.94			0.98			0.55			0.94	
Satd. Flow (perm)		1347			1619			848			1273	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	281	205	9	161	91	115	244	25	43	382	92
RTOR Reduction (vph)	0	0	0	0	24	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	549	0	0	237	0	0	381	0	0	507	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		505			607			580			358	
v/s Ratio Prot								c0.13				
v/s Ratio Perm		c0.41			0.15			0.21			c0.40	
v/c Ratio		1.09			0.39			0.66			1.42	
Uniform Delay, d1		25.0			18.3			13.8			28.8	
Progression Factor		1.00			1.28			1.00			1.00	
Incremental Delay, d2		65.7			1.9			5.7			203.0	
Delay (s)		90.7			25.2			19.5			231.7	
Level of Service		F			C			B			F	
Approach Delay (s)		90.7			25.2			19.5			231.7	
Approach LOS		F			C			B			F	

Intersection Summary			
HCM Average Control Delay	107.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	104.5%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	233	64	136	531	361	103
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	251	69	146	571	388	111
Pedestrians	40			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.95					
vC, conflicting volume	1062	290	539			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	950	290	539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	90	85			
cM capacity (veh/h)	201	682	991			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	319	337	381	259	240
Volume Left	251	146	0	0	0
Volume Right	69	0	0	0	111
cSH	237	991	1700	1700	1700
Volume to Capacity	1.35	0.15	0.22	0.15	0.14
Queue Length 95th (ft)	430	13	0	0	0
Control Delay (s)	221.3	4.9	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	221.3	2.3		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	47.1		
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	7	18	0	0	0	24	343	85	103	418	12
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	6	7	18	0	0	0	24	350	87	105	427	12
Pedestrians		207			99						206	
Lane Width (ft)		12.0			0.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		17			0						17	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked												
vC, conflicting volume	1455	1435	640	1200	1397	698	646			536		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1455	1435	640	1200	1397	698	646			536		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	93	95	100	100	100	97			90		
cM capacity (veh/h)	58	96	394	114	101	365	777			1032		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	32	24	437	105	439
Volume Left	6	24	0	105	0
Volume Right	18	0	87	0	12
cSH	140	777	1700	1032	1700
Volume to Capacity	0.23	0.03	0.26	0.10	0.26
Queue Length 95th (ft)	21	2	0	8	0
Control Delay (s)	38.2	9.8	0.0	8.9	0.0
Lane LOS	E	A		A	
Approach Delay (s)	38.2	0.5		1.7	
Approach LOS	E				

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	4	4	18	67	429	8	33	341	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.90			1.00			0.98	
Flt Protected		0.96			0.99			0.99			1.00	
Satd. Flow (prot)		1736			1655			3503			3434	
Flt Permitted		0.75			0.96			0.84			0.89	
Satd. Flow (perm)		1361			1594			2962			3071	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	9	56	4	4	20	74	477	9	37	379	57
RTOR Reduction (vph)	0	10	0	0	15	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	285	0	0	13	0	0	560	0	0	462	0
Confl. Peds. (#/hr)			19			1			29			21
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.6			32.6	
Effective Green, g (s)		16.1			16.1			32.6			32.6	
Actuated g/C Ratio		0.25			0.25			0.51			0.51	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		345			404			1521			1577	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.19			0.15	
v/c Ratio		0.83			0.03			0.37			0.29	
Uniform Delay, d1		22.4			17.8			9.3			8.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.9			0.0			0.7			0.5	
Delay (s)		37.3			17.9			10.0			9.3	
Level of Service		D			B			A			A	
Approach Delay (s)		37.3			17.9			10.0			9.3	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	63.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	10	0	14	1
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.92		
Flt Protected		0.98		
Satd. Flow (prot)		1677		
Flt Permitted		0.98		
Satd. Flow (perm)		1677		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	0	16	1
RTOR Reduction (vph)	0	1	0	0
Lane Group Flow (vph)	0	27	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		2.8		
Effective Green, g (s)		2.8		
Actuated g/C Ratio		0.04		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		74		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.37		
Uniform Delay, d1		29.5		
Progression Factor		1.00		
Incremental Delay, d2		3.0		
Delay (s)		32.5		
Level of Service		C		
Approach Delay (s)		32.5		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	299	123	3	12	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.81				0.86
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.96				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1204				1356
Flt Permitted			0.98				0.35	1.00				0.98
Satd. Flow (perm)			1474				646	1204				1335
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	318	131	3	13	335
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	444
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			188				247	460				510
v/s Ratio Prot								c0.38				
v/s Ratio Perm			0.04				0.08					0.33
v/c Ratio			0.35				0.21	0.98				0.87
Uniform Delay, d1			43.8				22.9	33.6				31.5
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			5.0				1.9	37.9				18.1
Delay (s)			48.8				24.8	71.5				49.6
Level of Service			D				C	E				D
Approach Delay (s)			48.8					66.7				49.6
Approach LOS			D					E				D

Intersection Summary			
HCM Average Control Delay	69.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	89	1	1	119	357	14	41	2	213	229	7	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3159					3166		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3159					3166		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	95	1	1	127	380	15	44	2	227	244	7	20
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	561	0	0	0	0	498	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					546					547		
v/s Ratio Prot					c0.18					c0.16		
v/s Ratio Perm												
v/c Ratio					1.03					0.91		
Uniform Delay, d1					45.5					44.7		
Progression Factor					1.00					1.00		
Incremental Delay, d2					45.8					21.6		
Delay (s)					91.3					66.3		
Level of Service					F					E		
Approach Delay (s)					91.3					66.3		
Approach LOS					F					E		

Intersection Summary

HCM Unsignalized Intersection Capacity Analysis
17: South Driveway & Claremont Avenue

Safeway on College Avenue
Existing Plus Project PM - Alternative 4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	70	0	504	378	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	74	0	531	398	28
Pedestrians	21					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.89	0.99	0.99			
vC, conflicting volume	698	234	447			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	392	220	434			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	512	766	1097			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	177	354	265	161
Volume Left	0	0	0	0	0
Volume Right	74	0	0	0	28
cSH	766	1097	1700	1700	1700
Volume to Capacity	0.10	0.00	0.21	0.16	0.09
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	104	209	19	124	89	105	245	21	9	329	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.94			0.99			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.95			0.99			0.98	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1393			1658			1546			1351	
Flt Permitted		0.94			0.96			0.59			0.99	
Satd. Flow (perm)		1317			1593			922			1337	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	112	225	20	133	96	113	263	23	10	354	80
RTOR Reduction (vph)	0	65	0	0	28	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	316	0	0	221	0	0	396	0	0	434	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		494			597			609			376	
v/s Ratio Prot								c0.13				
v/s Ratio Perm		c0.24			0.14			0.21			c0.32	
v/c Ratio		0.64			0.37			0.65			1.15	
Uniform Delay, d1		20.6			18.1			13.7			28.8	
Progression Factor		1.00			1.27			1.00			0.95	
Incremental Delay, d2		6.2			1.8			5.3			72.4	
Delay (s)		26.8			24.8			19.0			99.6	
Level of Service		C			C			B			F	
Approach Delay (s)		26.8			24.8			19.0			99.6	
Approach LOS		C			C			B			F	

Intersection Summary			
HCM Average Control Delay	46.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	87	40	138	319	360	76
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	93	43	147	339	383	81
Pedestrians	17			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked						
vC, conflicting volume	904	252	481			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	904	252	481			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	61	94	86			
cM capacity (veh/h)	235	735	1063			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	135	260	226	255	209
Volume Left	93	147	0	0	0
Volume Right	43	0	0	0	81
cSH	299	1063	1700	1700	1700
Volume to Capacity	0.45	0.14	0.13	0.15	0.12
Queue Length 95th (ft)	56	12	0	0	0
Control Delay (s)	26.6	5.6	0.0	0.0	0.0
Lane LOS	D	A			
Approach Delay (s)	26.6	3.0		0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	10	25	0	0	0	20	379	107	123	406	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	11	27	0	0	0	22	412	116	134	441	26
Pedestrians		266			123			2			161	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		22			0			0			13	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked												
vC, conflicting volume	1604	1682	722	1380	1637	754	733			651		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1604	1682	722	1380	1637	754	733			651		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	82	92	100	100	100	97			86		
cM capacity (veh/h)	41	61	331	70	65	354	678			935		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	22	528	134	467
Volume Left	1	22	0	134	0
Volume Right	27	0	116	0	26
cSH	137	678	1700	935	1700
Volume to Capacity	0.29	0.03	0.31	0.14	0.27
Queue Length 95th (ft)	28	2	0	12	0
Control Delay (s)	41.6	10.5	0.0	9.5	0.0
Lane LOS	E	B		A	
Approach Delay (s)	41.6	0.4		2.1	
Approach LOS	E				

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	2	5	16	73	225	6	14	334	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.90			1.00			0.98	
Flt Protected		0.97			1.00			0.99			1.00	
Satd. Flow (prot)		1721			1660			3484			3450	
Flt Permitted		0.77			0.98			0.79			0.94	
Satd. Flow (perm)		1377			1627			2802			3254	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	224	6	83	2	5	17	78	242	6	15	359	55
RTOR Reduction (vph)	0	15	0	0	13	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	298	0	0	11	0	0	326	0	0	418	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.2			32.2	
Effective Green, g (s)		16.1			16.1			32.2			32.2	
Actuated g/C Ratio		0.26			0.26			0.52			0.52	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		360			425			1465			1701	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.01			0.12			c0.13	
v/c Ratio		0.83			0.03			0.22			0.25	
Uniform Delay, d1		21.4			16.9			7.9			8.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.5			0.0			0.4			0.3	
Delay (s)		35.9			16.9			8.3			8.4	
Level of Service		D			B			A			A	
Approach Delay (s)		35.9			16.9			8.3			8.4	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	8
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1706	
Flt Permitted		0.97	
Satd. Flow (perm)		1706	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	9
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	21	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.3	
Effective Green, g (s)		1.3	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		36	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.58	
Uniform Delay, d1		29.9	
Progression Factor		1.00	
Incremental Delay, d2		21.8	
Delay (s)		51.7	
Level of Service		D	
Approach Delay (s)		51.7	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	5	11	1	24	11	33	18	303	101	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.85				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1270				
Flt Permitted			0.98				0.32	1.00				
Satd. Flow (perm)			1459				600	1270				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	344	115	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			186				229	485				
v/s Ratio Prot								0.37				
v/s Ratio Perm			0.04				0.10					
v/c Ratio			0.31				0.25	0.96				
Uniform Delay, d1			43.6				23.3	33.2				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			4.3				2.6	32.6				
Delay (s)			47.9				25.9	65.8				
Level of Service			D				C	E				
Approach Delay (s)			47.9					61.4				
Approach LOS			D					E				

Intersection Summary			
HCM Average Control Delay	82.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	293	110	4	4	170	212	9	35	3	201	262	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1284					3132					3175	
Flt Permitted	0.89					0.98					0.98	
Satd. Flow (perm)	1150					3132					3175	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	333	125	5	5	193	241	10	40	3	228	298	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	3	0
Lane Group Flow (vph)	486	0	0	0	0	483	0	0	0	0	574	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	439					541					548	
v/s Ratio Prot						c0.15					c0.18	
v/s Ratio Perm	c0.42											
v/c Ratio	1.11					0.89					1.05	
Uniform Delay, d1	34.0					44.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	75.3					19.7					51.3	
Delay (s)	109.3					64.2					96.8	
Level of Service	F					E					F	
Approach Delay (s)	109.3					64.2					96.8	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	27
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	31
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	102	0	304	393	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	110	0	327	423	33
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.99	0.99	0.99			
vC, conflicting volume	609	234	462			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	586	208	438			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	435	787	1102			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	110	109	218	282	174
Volume Left	0	0	0	0	0
Volume Right	110	0	0	0	33
cSH	787	1102	1700	1700	1700
Volume to Capacity	0.14	0.00	0.13	0.17	0.10
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	10.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	267	195	9	153	86	109	232	24	41	363	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.91			0.93		1.00	0.96		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1428			1649		1770	1519		1770	1338	
Flt Permitted		0.93			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1343			1620		1770	1519		1770	1338	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	281	205	9	161	91	115	244	25	43	382	92
RTOR Reduction (vph)	0	0	0	0	24	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	549	0	0	237	0	115	265	0	43	463	0
Confl. Peds. (#/hr)			97			82			175			212
Confl. Bikes (#/hr)			4			1			22			39
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		31.0			31.0		9.5	29.0		6.0	25.0	
Effective Green, g (s)		32.0			32.0		10.0	30.0		7.0	26.0	
Actuated g/C Ratio		0.40			0.40		0.12	0.38		0.09	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		537			648		221	570		155	435	
v/s Ratio Prot							c0.06	c0.17		0.02	c0.35	
v/s Ratio Perm		c0.41			0.15							
v/c Ratio		1.02			0.37		0.52	0.46		0.28	1.06	
Uniform Delay, d1		24.0			16.9		32.8	18.9		34.1	27.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		44.6			1.6		8.5	2.7		4.4	61.4	
Delay (s)		68.6			18.5		41.3	21.6		38.5	88.4	
Level of Service		E			B		D	C		D	F	
Approach Delay (s)		68.6			18.5			27.5			84.3	
Approach LOS		E			B			C			F	

Intersection Summary			
HCM Average Control Delay	56.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	233	64	136	531	361	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	1.00			1.00	0.97	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.97			1.00	0.97	
Flt Protected	0.96			0.99	1.00	
Satd. Flow (prot)	1734			3504	3330	
Flt Permitted	0.96			0.75	1.00	
Satd. Flow (perm)	1734			2663	3330	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	251	69	146	571	388	111
RTOR Reduction (vph)	14	0	0	0	26	0
Lane Group Flow (vph)	306	0	0	717	473	0
Confl. Peds. (#/hr)		1				40
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	17.0			43.2	43.2	
Effective Green, g (s)	17.0			43.2	43.2	
Actuated g/C Ratio	0.25			0.63	0.63	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	432			1687	2109	
v/s Ratio Prot	c0.18				0.14	
v/s Ratio Perm				c0.27		
v/c Ratio	0.71			0.43	0.22	
Uniform Delay, d1	23.3			6.3	5.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	5.2			0.8	0.2	
Delay (s)	28.6			7.1	5.6	
Level of Service	C			A	A	
Approach Delay (s)	28.6			7.1	5.6	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	68.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	5	15	5	31	6	36	13	299	123	3	12	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.81				0.86
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.96				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1474				1770	1207				1357
Flt Permitted			0.98				0.39	1.00				0.98
Satd. Flow (perm)			1474				721	1207				1337
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	5	16	5	33	6	38	14	318	131	3	13	335
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	65	0	0	0	52	452	0	0	0	444
Confl. Peds. (#/hr)									171	171		
Confl. Bikes (#/hr)									64	64		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				47.0	47.0				47.0
Effective Green, g (s)			6.0				48.0	48.0				48.0
Actuated g/C Ratio			0.05				0.44	0.44				0.44
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			80				315	527				583
v/s Ratio Prot								c0.37				
v/s Ratio Perm			0.04				0.07					0.33
v/c Ratio			0.81				0.17	0.86				0.76
Uniform Delay, d1			51.4				18.8	27.9				26.2
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			57.8				1.1	16.4				9.1
Delay (s)			109.3				20.0	44.3				35.3
Level of Service			F				B	D				D
Approach Delay (s)			109.3					41.8				35.3
Approach LOS			F					D				D

Intersection Summary			
HCM Average Control Delay	56.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	89	1	1	119	357	14	41	2	213	229	7	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3159					3166		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3159					3166		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	95	1	1	127	380	15	44	2	227	244	7	20
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	561	0	0	0	0	498	0	0
Confl. Peds. (#/hr)	179	180					43					55
Confl. Bikes (#/hr)	50	59					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					20.0		
Effective Green, g (s)					20.0					20.0		
Actuated g/C Ratio					0.18					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					574					576		
v/s Ratio Prot					c0.18					c0.16		
v/s Ratio Perm												
v/c Ratio					0.98					0.86		
Uniform Delay, d1					44.8					43.7		
Progression Factor					1.00					1.00		
Incremental Delay, d2					32.5					15.8		
Delay (s)					77.3					59.4		
Level of Service					E					E		
Approach Delay (s)					77.3					59.4		
Approach LOS					E					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	104	209	19	124	89	105	245	21	9	329	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.94		1.00	0.98		1.00	0.91	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1393			1658		1770	1552		1770	1346	
Flt Permitted		0.94			0.96		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1316			1592		1770	1552		1770	1346	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	44	112	225	20	133	96	113	263	23	10	354	80
RTOR Reduction (vph)	0	65	0	0	28	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	316	0	0	221	0	113	282	0	10	424	0
Confl. Peds. (#/hr)			53			56			97			222
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		27.0			27.0		10.5	33.0		6.0	28.0	
Effective Green, g (s)		28.0			28.0		11.0	34.0		7.0	29.0	
Actuated g/C Ratio		0.35			0.35		0.14	0.42		0.09	0.36	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		461			557		243	660		155	488	
v/s Ratio Prot							c0.06	0.18		0.01	c0.31	
v/s Ratio Perm		c0.24			0.14							
v/c Ratio		0.69			0.40		0.47	0.43		0.06	0.87	
Uniform Delay, d1		22.2			19.6		31.8	16.2		33.5	23.7	
Progression Factor		1.00			1.00		1.00	1.00		0.88	1.05	
Incremental Delay, d2		8.1			2.1		6.3	2.0		0.1	2.1	
Delay (s)		30.3			21.7		38.1	18.2		29.5	27.0	
Level of Service		C			C		D	B		C	C	
Approach Delay (s)		30.3			21.7			23.8			27.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	87	40	138	319	360	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	1.00			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.97	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1716			3486	3420	
Flt Permitted	0.97			0.75	1.00	
Satd. Flow (perm)	1716			2639	3420	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	93	43	147	339	383	81
RTOR Reduction (vph)	26	0	0	0	21	0
Lane Group Flow (vph)	110	0	0	486	443	0
Confl. Peds. (#/hr)		3				17
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.3			20.0	20.0	
Effective Green, g (s)	6.3			20.0	20.0	
Actuated g/C Ratio	0.18			0.58	0.58	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	315			1539	1994	
v/s Ratio Prot	c0.06				0.13	
v/s Ratio Perm				c0.18		
v/c Ratio	0.35			0.32	0.22	
Uniform Delay, d1	12.2			3.7	3.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.7			0.1	0.1	
Delay (s)	12.9			3.8	3.5	
Level of Service	B			A	A	
Approach Delay (s)	12.9			3.8	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	34.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations			✥				↰	↱				
Volume (vph)	5	11	1	24	11	33	18	303	101	7	16	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.85				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.91				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1459				1770	1271				
Flt Permitted			0.98				0.35	1.00				
Satd. Flow (perm)			1459				654	1271				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	6	12	1	27	12	38	20	344	115	8	18	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	58	0	0	0	58	467	0	0	0	0
Confl. Peds. (#/hr)									148	144		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.0	45.0				
Effective Green, g (s)			6.0				46.0	46.0				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			80				273	532				
v/s Ratio Prot								0.37				
v/s Ratio Perm			0.04				0.09					
v/c Ratio			0.72				0.21	0.88				
Uniform Delay, d1			51.2				20.4	29.4				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			43.8				1.8	18.3				
Delay (s)			95.0				22.2	47.7				
Level of Service			F				C	D				
Approach Delay (s)			95.0					44.9				
Approach LOS			F					D				

Intersection Summary			
HCM Average Control Delay	56.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	293	110	4	4	170	212	9	35	3	201	262	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1284					3132					3175	
Flt Permitted	0.97					0.98					0.98	
Satd. Flow (perm)	1245					3132					3175	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	333	125	5	5	193	241	10	40	3	228	298	17
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	4	0
Lane Group Flow (vph)	486	0	0	0	0	483	0	0	0	0	573	0
Confl. Peds. (#/hr)		219	228					45				
Confl. Bikes (#/hr)		17	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.0					20.0					22.0	
Effective Green, g (s)	46.0					20.0					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	521					569					635	
v/s Ratio Prot						c0.15					c0.18	
v/s Ratio Perm	c0.39											
v/c Ratio	0.93					0.85					0.90	
Uniform Delay, d1	30.5					43.5					43.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	25.9					14.7					18.5	
Delay (s)	56.4					58.2					61.4	
Level of Service	E					E					E	
Approach Delay (s)	56.4					58.2					61.4	
Approach LOS	E					E					E	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	27
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	31
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	19
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Appendix G
Land Use Assumptions Memorandum

FEHR PEERS

FEHR & PEERS
TRANSPORTATION CONSULTANTS

MEMORANDUM

Date: June 15, 2010

To: Peterson Vollman, City of Oakland
Darin Ranelletti, City of Oakland

From: Sam Tabibnia and Ellen Robinson

Subject: ***Safeway on College Avenue and 51st and Broadway Center – ACCMA Travel Demand Model Land Use Assumptions***

WC07-2483 & WC10-2728

This memorandum summarizes Fehr & Peers' approach in developing land use assumptions for forecasting future traffic volumes in preparing the EIRs for the Safeway on College Avenue and 51st and Broadway Center projects. Previously, we used a similar methodology for the Alta Bates Summit Medical Center, Summit Campus Master Plan EIR. We have reviewed the land use database in the most recent Alameda County Congestion Management Authority's (ACCMA) Travel Demand Model, which was released in February 2009. The land use database is based on the Association of Bay Area Governments' *Projections 2007*. Our review methodology and recommendations for modifying the land use database are summarized below.

MODEL LAND USE REVIEW

The land use assumptions as modified for the Alta Bates Summit Medical Center Summit Campus Seismic Upgrade and Master Plan Project EIR were the starting point for development of land use assumptions for the EIRs for the Safeway on College Avenue and 51st Street and Broadway Center projects. The changes made from the original land uses for the Summit Campus project were documented in a memorandum by Fehr & Peers dated May 7, 2009 (see Appendix A).

Consistent with the methodology for the Summit Campus land use adjustments, Fehr & Peers reviewed the model land uses in the project area. The number and growth of households and employment by type in the project area from the year 2005 to 2035 are summarized in Table 1. The transportation analysis zones (TAZs) included in the project area are shown on Figure 1.

Fehr and Peers compared the projected growth in households and employment in each project-area TAZ to the development included in the City's Active Major Projects list. The most recent version of the Active Major Projects list, dated October – November 2009, was used for this comparison. The project square footage measurements from the list were converted to employment numbers by assuming one employee per 500 square feet for retail space and one employee per 300 square feet of office (service) space.

The Active Major Projects list identified pending, planned, proposed and recently completed development of households, retail employment and service employment in the project area. The total growth of these development types in the model and the Active Major Projects list are compared in Table 2.

FEHR & PEERS
TRANSPORTATION CONSULTANTS

TABLE 1
ACCMA TRAVEL DEMAND MODEL
PROJECT VICINITY AREA[1] LAND USE GROWTH ASSUMPTIONS

Land Use Variable	2005	2035	2005 – 2035 Growth
Households (HH)	25,505	29,363	3,858
Agricultural Employment (AFM)	52	82	30
Manufacturing Employment (MFG)	1,347	1,607	260
Retail Employment (RET)	4,270	5,885	1,615
Service Employment (SVC)	13,823	20,486	6,663
Trade Employment (TRD)	793	926	133
Other Employment (OTH)	2,972	3,513	541
Total Employment	23,257	32,500	9,243

1. See Figure 1 for a map of the project vicinity area.
Source: ACCMA model as summarized by Fehr & Peers, 2010

TABLE 2
PROJECT VICINITY AREA[1] LAND USE GROWTH COMPARISON

Land Use Variable	ACCMA Model 2005-2035 [2]	Pending, Planned, Proposed and Completed Projects [3]	Difference
Households (HH)	3,858	1,325	2,533
Retail Employment (RET)	1,615	319	1,296
Service Employment (SVC)	6,663	2,191	4,472

1. See Figure 1 for a map of the project vicinity area.
2. Latest ACCMA model based on ABAG *Projection 2009*.
3. Includes projects from City of Oakland's Active Major Projects list, October – November 2009, and proposed Safeway projects

As shown in Table 2, the 2035 model assumes more total development in the project area than is identified in the Active Major Projects list. However, the model land use growth for many individual TAZs was not high enough to include specific projects in the Active Major Projects list. In these cases, Fehr & Peers shifted development growth to the project TAZ from other TAZs in the study area. In this way, the model land uses are modified to better match foreseeable development, while maintain the overall household and employment growth in the model. Appendix A documents the changes in 2035 land use assumptions by TAZ, and the resulting recommended modifications to 2035 model land uses.

Several development projects have been completed in the project area since 2005. Because the 2005 model will be used to represent existing traffic volumes for the purposes of forecasting traffic growth, projects identified as recently completed on the Active Major Projects list were added to the 2005 model land use assumptions. Appendix B documents the changes in 2005 land use assumptions by TAZ, and the resulting recommended modifications to 2005 model land uses.

Please contact us with questions or comments.

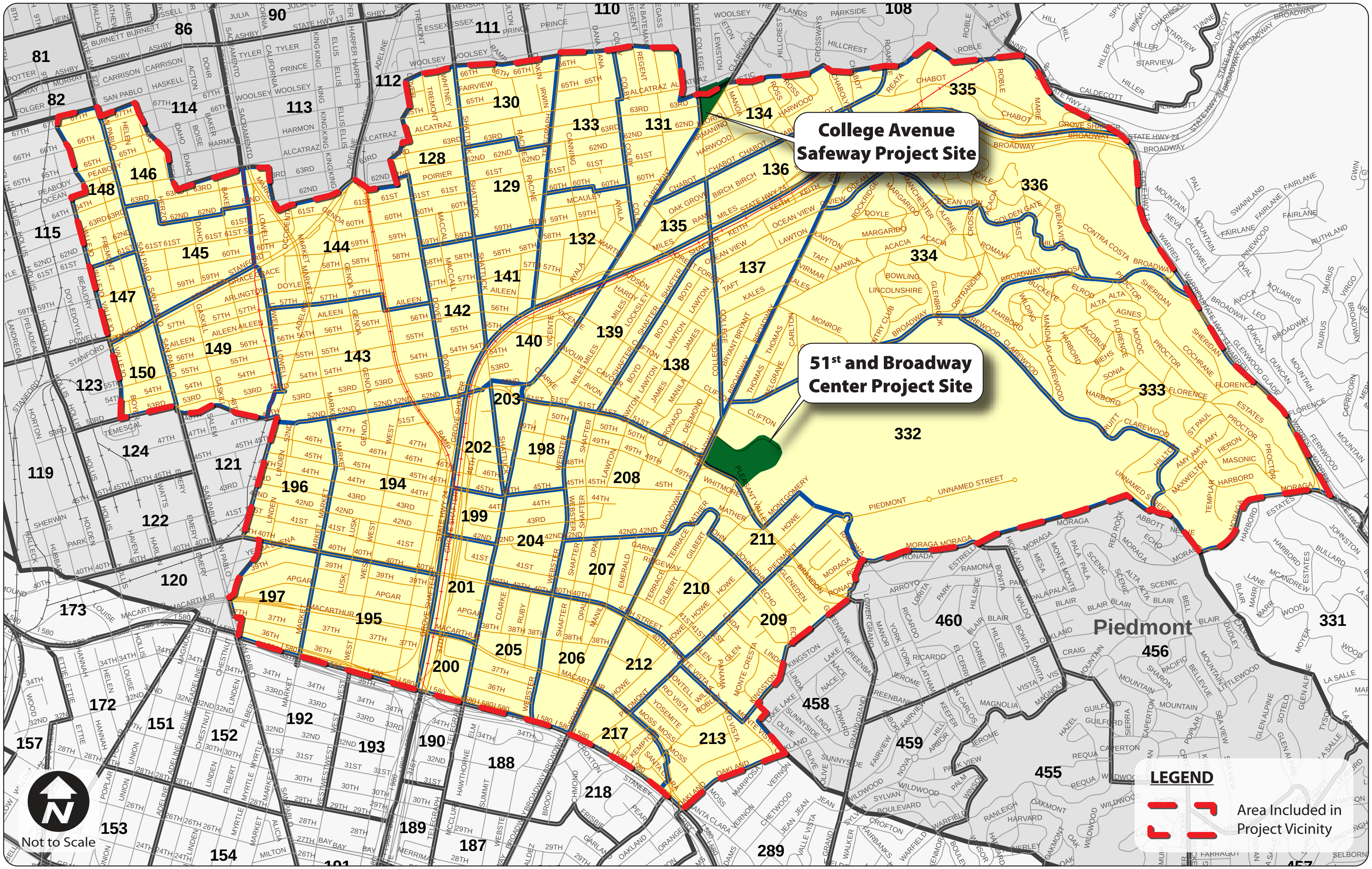
Attachments:

Figure 1 – Project Area TAZ Map

Appendix A – ABSMC Summit Campus Master Plan EIR – ACCMA Travel Demand Model Land Use Assumptions Memorandum

Appendix B – Adjustments to 2035 Model Land Use Assumptions

Appendix C – Adjustments to 2005 Model Land Use Assumptions



Safeway on College Avenue and 51st and Broadway Center

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June 2010
WC07-2483_1_Taz

PROJECT AREA TAZ MAP

FIGURE 1

FEHR & PEERS
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APPENDIX A

100 Pringle Avenue, Suite 600 Walnut Creek, CA 94596 (925) 930-7100 Fax (925) 933-7090
www.fehrandpeers.com

FEHR & PEERS
TRANSPORTATION CONSULTANTS

FINAL MEMORANDUM

Date: May 7, 2009

To: Scott Gregory, Lamphier-Gregory

From: Sam Tabibnia and Ellen Robinson

Subject: ***Alta Bates Summit Medical Center Summit Campus Master Plan EIR – ACCMA Travel Demand Model Land Use Assumptions***

WC08-2611

This memorandum summarizes Fehr & Peers proposed approach to developing land use assumptions for forecasting future traffic volumes. We have reviewed the land use database in the most recent Alameda County Congestion Management Authority's (ACCMA) Travel Demand Model, which was released in February 2009. The land use database is based on the Association of Bay Area Governments' *Projections 2007*. Our review methodology and recommendations for modifying the land use database are summarized below.

MODEL LAND USE REVIEW

The number of households and employment by type for City of Oakland assumed in the ACCMA model under 2005 and 2035 conditions are summarized in Table 1. The ACCMA model represents potential trip origins and destinations with transportation analysis zones, or TAZs. Each TAZ represents an area of several blocks, and is assigned land use characteristics, including the number of households and the number of jobs of varied types (agricultural, manufacturing, retail, service, trade and other) in the zone. Since the ACCMA model is a regional forecasting model, the distribution of future developments may not be very accurate at the TAZ level.

TABLE 1
ACCMA TRAVEL DEMAND MODEL
CITYWIDE LAND USE GROWTH ASSUMPTIONS

Land Use Variable	2005	2035	2005 – 2035 Growth
Households (HH)	154,570	207,249	52,679
Agricultural Employment (AFM)	289	383	94
Manufacturing Employment (MFG)	16,952	29,667	12,716
Retail Employment (RET)	24,161	40,753	16,592
Service Employment (SVC)	84,947	131,689	46,742
Trade Employment (TRD)	6,910	6,982	72
Other Employment (OTH)	68,457	75,702	7,245
Total Employment	201,715	285,176	83,461

Source: ACCMA model as summarized by Fehr & Peers, 2009

The land uses in the area surrounding the Alta Bates Summit Medical Center would most affect traffic patterns at the study intersections. Thus, we have reviewed in detail the land use growth assumptions for TAZs in the project vicinity area as presented on Figure 1. Fehr & Peers reviewed the years 2005 and 2035 model land use assumptions for the TAZs in the project vicinity area, and calculated the household and employment growth projected for each zone. Table 2 summarizes the growth in number of households and employment types in the project vicinity area.

TABLE 2
ACCMA TRAVEL DEMAND MODEL
PROJECT VICINITY AREA[1] LAND USE GROWTH ASSUMPTIONS

Land Use Variable	2005	2035	2005 – 2035 Growth
Households (HH)	35,669	51,314	15,647
Agricultural Employment (AFM)	0	0	0
Manufacturing Employment (MFG)	2,226	4,133	1,906
Retail Employment (RET)	5,867	10,275	4,410
Service Employment (SVC)	31,361	49,631	18,271
Trade Employment (TRD)	1,223	1,290	64
Other Employment (OTH)	17,062	18,645	1,585
Total Employment	57,739	83,973	26,235

1. See Figure 1 for a map of the project vicinity area.
Source: ACCMA model as summarized by Fehr & Peers, 2009

The land use growth assumptions in the project vicinity area were compared to planned, approved and pending projects, including those listed on the City of Oakland's Active Major Development Projects matrix (updated in November 2008), as well as the Summit Campus project and the Upper Broadway Retail Specific Plan. Appendix A presents the number of households and the number of retail and service jobs by TAZ in the project vicinity area. Appendix A also compares the land use growth assumed in the model with the expected land use growth. Since the model land use is based on employment numbers and information regarding specific development projects available in square footages, the project square footage measurements were converted to employment numbers by assuming one employee per 500 square feet for retail space and one employee per 300 square feet of office (service) space. Only service and retail employment were included in the comparison, as these employment types are the majority of employment growth in the project vicinity area, as shown in Table 2.

In addition to the project vicinity area, the model land use database was checked to assure that the following major projects in other parts of Oakland were also accounted for: Oak to Ninth Mixed Use Project, Wood Street Mixed Use Project and Jack London Square Redevelopment Project

As shown in Appendix A, the model land use assumptions for individual TAZs do not match the growth expected from pending, planned, and proposed projects. Table 3 compares the overall growth in the project vicinity areas as assumed in the model with the growth from pending, planned, and proposed projects. Overall, the model assumes more household, and retail and service employment growth in the project vicinity areas than is expected from pending, planned, and proposed projects, though growth in several individual TAZs is lower than expected. Note that this comparison does not account for existing uses that are currently occupied by most of the pending, planned, and proposed projects. Although these existing uses would be eliminated, this comparison does not account for it to present a more conservative analysis.

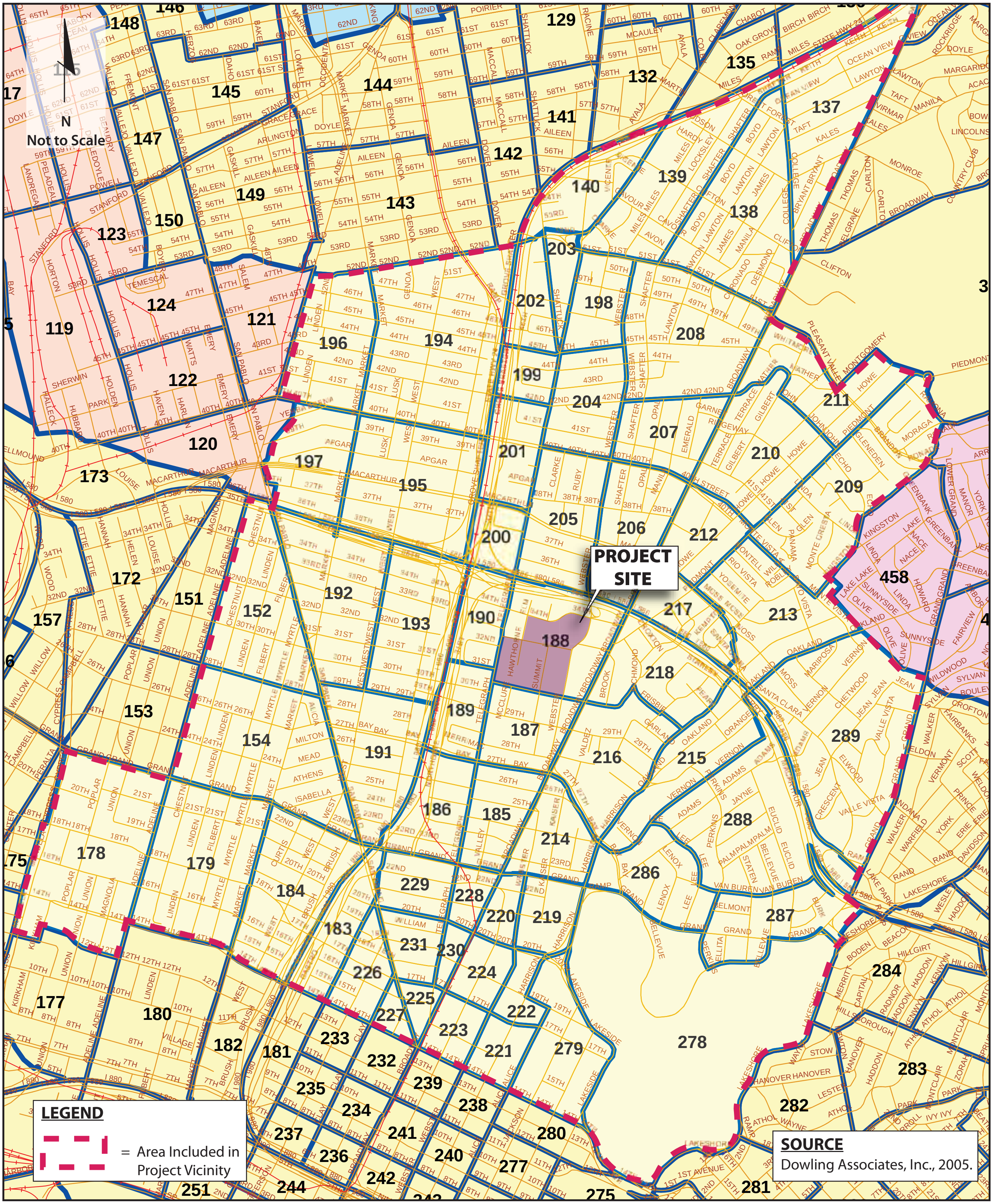
TABLE 3
PROJECT VICINITY AREA[1] LAND USE GROWTH COMPARISON

Land Use Variable	ACCMA Model 2005-2035 [2]	Pending, Planned, and Proposed Projects [2]	Difference
Households (HH)	15,647	9,187	6,460
Retail Employment (RET)	4,410	4,066	344
Service Employment (SVC)	18,271	10,818	7,453

1. See Figure 1 for a map of the project vicinity area.
2. Latest ACCMA model based on ABAG *Projection 2009*.

RECOMMENDED MODIFICATIONS

Appendix A presents our recommended modifications to the land uses in TAZs in the project vicinity area based on the growth expected from pending, planned, and proposed projects. For household and retail and service employment growth in TAZs where pending, planned, and proposed projects include more growth than is assumed in the TAZ, we recommend increasing the corresponding land uses and then reducing the land use growth in the rest of the TAZs in the project vicinity area so that the overall growth in number of households and service jobs is consistent with the ACCMA for the project vicinity area.



Alta Bates Summit Medical Center Master Plan EIR

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May 2009
WC08-2611_1 TAZ

TAZ MAP – PROJECT VICINITY

FIGURE 1

APPENDIX A
Adjustments to Land Use Assumptions in Project Vicinity TAZs

TAZ	ABAG P'07 Model: 2005 HH	2005 RET	2005 SVC	2005 Total Emp	2035 HH	2035 RET	2035 SVC	2035 Total Emp	2005 - 2035 Growth HH	Growth RET	Growth SVC	Growth Total Emp	Pending, Planned and Proposed Projects HH	Projects RET	Projects SVC	Projects Total Emp	Recommended Modifications: Adjustments HH	Adjustments RET	Adjustments SVC	Adjustments Total Emp	Net Growth HH	Net Growth RET	Net Growth SVC	Net Growth Total Emp	Notes
137	708	232	347	709	708	261	386	779	0	29	39	70						(25)	(9)	(34)	0	4	30	36	
138	848	371	283	814	848	459	320	950	0	88	37	136						(77)	(8)	(85)	0	11	29	51	
139	594	26	189	346	594	44	307	484	0	18	118	138	188		36	36	188	(16)	(26)	(42)	188	2	92	96	The Creekside MXD - 120 DU, 7.7 ksf commercial; Civiq - 68 DU, 3 ksf commercial
140	345	106	134	327	345	127	218	435	0	21	83	109						(18)	(19)	(37)	0	3	64	72	
152	743	65	96	312	763	121	132	350	20	56	36	39					(4)	(49)	(8)	(57)	16	7	28	(18)	
154	573	82	326	600	804	172	387	732	231	89	61	132					(44)	(78)	(14)	(91)	187	11	47	41	
178	170	28	268	960	171	315	1,060	2,438	1	287	791	1,479	1,577	300	500	800	1,576	13	(176)	(163)	1,577	300	615	1,316	Mandela Grand MXD - 1577 DU, 300 ksf non-residential
179	1,054	26	144	413	1,440	83	199	898	386	56	56	484					(73)	(49)	(12)	(61)	313	7	44	423	
183	197	17	109	219	197	17	109	219	0	0	0	0									0	0	0	0	
184	455	22	128	215	781	65	245	360	326	43	117	145	146				(61)	(38)	(26)	(64)	265	5	91	81	2116 Brush St. - 146 DU
185	190	244	176	575	993	277	205	649	803	33	29	74	524	17	30	47	(151)	(16)	(6)	(22)	652	17	23	52	459 23rd St. - 60 DU, ground floor retail; 2538 Telegraph - 97 DU, 9 ksf commercial; Broadway West Grand - 367 DU, 8.5 ksf retail
186	555	46	218	339	1,610	113	260	449	1,055	66	42	110					(199)	(58)	(9)	(67)	856	8	33	43	
187	296	185	863	1,143	516	306	1,084	1,488	221	121	221	345	145	94	17	111	(42)	(27)	(49)	(76)	179	94	172	269	Broadway Retail - 145 DU, 52 ksf retail
188	64	140	2,724	2,982	64	333	5,738	6,189	0	193	3,014	3,207	480	304	759	1,063	480	111	(672)	(561)	480	304	2,342	2,646	Broadway Retail - 480 DU, 164.6 ksf retail; ABSMC Summit - 234 ksf MOB, 50 ksf admin, +275 university enrollment
189	180	10	98	138	189	10	98	138	9	0	0	0	40				31				40	0	0	0	557 Merrimac - 40 Condos
190	275	18	43	114	275	47	99	203	0	29	57	89	142	6		6	142	(23)	(13)	(36)	142	6	44	53	Courthouse Condominiums - 142 DU, 3 ksf retail
191	385	18	218	403	428	208	251	567	43	190	33	163					(8)	(166)	(7)	(174)	35	24	26	(11)	
192	561	8	150	227	604	61	188	306	43	54	38	79					(8)	(47)	(8)	(56)	35	7	30	23	
193	548	3	3	6	613	3	22	25	66	0	19	19					(12)		(4)	(4)	54	0	15	15	
194	987	66	1,837	2,084	990	89	2,446	2,727	3	24	609	642					(1)	(21)	(136)	(157)	2	3	473	485	
195	647	39	155	255	1,058	100	204	344	411	61	49	89	74				(77)	(53)	(11)	(64)	334	8	38	25	3860 & 3880 MLK Jr. Way - 74 DU
196	450	58	228	623	560	83	490	1,295	109	25	261	672					(21)	(22)	(58)	(80)	88	3	203	592	
197	307	51	118	408	493	115	259	916	186	64	140	508					(35)	(56)	(31)	(87)	151	8	109	421	
198	271	83	167	343	271	94	181	370	0	11	15	26						(10)	(3)	(13)	0	1	12	13	
199	109	61	9	93	109	61	9	93	0	1	0	1						(1)		(1)	0	0	0	0	
200	79	10	31	111	79	10	32	113	0	0	0	2									0	0	0	2	
201	180	46	103	266	2,213	422	247	787	2,033	376	143	521	540	30	50	80	(383)	(329)	(32)	(361)	1,650	47	111	160	MacArthur BART Transit Village - 540 DU, 30 ksf retail/commercial
202	158	17	26	56	158	60	40	114	0	43	14	58	44				44	(38)	(3)	(41)	44	5	11	17	4801 Shattuck Ave. - 44 DU
203	63	128	70	309	70	178	87	381	7	50	17	72					(1)	(44)	(4)	(48)	6	6	13	24	
204	440	32	93	262	440	37	104	279	0	6	11	17						(5)	(2)	(8)	0	1	9	9	
205	664	24	137	242	664	47	162	293	0	23	26	51						(20)	(6)	(26)	0	3	20	25	
206	317	106	560	858	317	106	561	858	0	0	1	0			484				483	483	0	0	484	483	Kaiser Medical Center - 484 service jobs
207	392	166	177	430	392	166	177	432	0	1	1	2						(1)		(1)	0	0	1	1	
208	491	4	407	499	694	168	1,340	1,607	203	164	933	1,109					(38)	(143)	(208)	(352)	165	21	725	757	
209	1,642	422	383	946	1,642	463	407	1,013	0	41	24	66						(36)	(5)	(41)	0	5	19	25	
210	930	172	548	921	930	174	552	928	0	1	5	8						(1)	(1)	(2)	0	0	4	6	
211	784	73	183	357	819	161	280	546	35	87	97	189					(7)	(76)	(22)	(98)	28	11	75	91	
212	205	144	2,717	2,973	211	319	2,266	2,768	6	176	(450)	(205)			(2,656)		(1)	(154)	(2,206)	(2,360)	5	22	(2,656)	(2,565)	Kaiser Medical Center Relocation - minus 2656 service jobs
213	1,593	175	318	624	1,593	255	265	653	0	80	(53)	28						(70)		(70)	0	10	(53)	(42)	
214	137	213	599	1,385	4,531	338	661	1,577	4,394	125	62	192	2,739	2,556	473	3,029	(828)	2,431	411	2,842	3,566	2,556	473	3,034	Broadway Retail - 2217 DU, 1408 ksf retail; Valdez & 23rd St. - 281 DU, 12 ksf retail; 100 Grand - 241 DU
215	1,218	50	72	163	1,218	70	99	211	0	20	27	49						(17)	(6)	(24)	0	3	21	25	

TAZ	ABAG P'07 Model												Pending, Planned and Proposed Projects				Recommended Modifications								Notes
	2005				2035				2005 - 2035 Growth								Adjustments				Net Growth				
	HH	RET	SVC	Total Emp	HH	RET	SVC	Total Emp	HH	RET	SVC	Total Emp	HH	RET	SVC	Total Emp	HH	RET	SVC	Total Emp	HH	RET	SVC	Total Emp	
216	1,262	79	198	333	1,805	218	307	584	543	138	109	251	460	544	101	644	(102)	406	(8)	397	441	544	101	648	Broadway Retail - 460 DU, 302 ksf retail
217	390	34	314	380	390	45	4,077	4,168	0	11	3,763	3,789			4,095			(10)	332	322	0	1	4,095	4,111	Kaiser Medical Center - 4,095 Service Jobs
218	652	19	77	162	652	20	79	167	0	1	3	5						(1)	(1)	(2)	0	0	2	3	
219	1	221	2,733	7,468	1	407	4,031	9,200	0	185	1,298	1,732		40	3,557	3,597		(145)	2,259	2,114	0	40	3,557	3,846	Kaiser Center - 1,345 ksf office, 22 ksf retail; demo 280 ksf
220	1	72	273	687	1	210	1,021	2,134	0	138	749	1,447						(121)	(167)	(288)	0	17	582	1,159	
221	823	134	392	1,421	1,174	173	469	1,544	351	39	76	123					(66)	(34)	(17)	(51)	285	5	59	72	
222	2	117	2,619	4,396	2	152	2,615	4,396	0	34	(5)	0						(30)		(30)	0	4	(5)	(30)	
223	23	293	1,207	2,595	226	397	3,530	5,394	203	104	2,322	2,799	69	9	592	601	(38)	(91)	(518)	(609)	165	13	1,804	2,190	1538 Broadway - 69 DU, ground floor food sales; 1640 Broadway - 177.6 ksf office, 4.7 ksf retail, alt. 254 DU with ground floor retail
224	44	158	1,782	2,560	44	295	3,085	4,389	0	138	1,303	1,829	220	153	2,793	2,947	220	15	1,490	1,506	220	153	2,793	3,335	1930 Broadway - 85.2 ksf retail/fitness club, 829.5 ksf office, 220 DU
225	45	66	652	1,215	45	179	1,109	1,996	0	113	456	781						(99)	(102)	(201)	0	14	354	580	
226	719	37	433	1,996	935	134	493	2,321	216	97	60	326	157				(41)	(85)	(13)	(98)	175	12	47	228	1530 MLK Jr. Way - 121 Condos; ~1417 -1431 Jefferson St. - 36 DU, commercial
227	1	0	74	858	1	57	127	1,038	0	57	54	180						(50)	(12)	(62)	0	7	42	118	
228	0	59	758	1,183	0	108	884	1,354	0	49	125	170						(43)	(28)	(71)	0	6	97	99	
229	429	33	323	709	2,237	80	181	681	1,808	46	(142)	(29)	88				(341)	(40)		(40)	1,467	6	(142)	(69)	630 Thomas Berkley Square Housing - 88 DU, 3 commercial spaces
230	0	294	265	714	0	417	797	1,393	0	122	531	679						(107)	(118)	(225)	0	15	413	454	
231	26	28	120	167	1,778	226	387	646	1,752	199	267	479	1,139	14	(16)	(2)	(330)	(174)	(60)	(234)	1,422	25	207	245	Fox Courts - 80 DU, 2.5 ksf childcare, art space; 1755 Broadway - 24 DU (replace office with live/work condos); Uptown Project - 665 DU, 14 ksf retail/commercial; Uptown Parcel 4 - 370 DU;
278	0	0	373	394	0	24	400	451	0	24	28	57						(21)	(6)	(27)	0	3	22	30	
279	2,578	78	1,252	2,275	2,761	116	1,536	2,571	183	37	284	297	415		3	3	232	(32)	(63)	(96)	415	5	221	201	Emerald Views - 370 DU, 933 SF Café; Jackson Courtyard Condominiums - 45 DU
286	1,908	45	461	630	1,908	127	645	906	0	83	185	276						(73)	(41)	(114)	0	10	144	162	
287	1,210	57	758	1,062	1,210	57	762	1,067	0	0	3	5							(1)	(1)	0	0	2	4	
288	2,573	15	289	445	2,573	15	313	468	0	0	24	23							(5)	(5)	0	0	19	18	
289	2,178	240	552	1,040	2,178	283	607	1,141	0	43	55	101						(38)	(12)	(50)	0	5	43	51	
Project Vicinity Total	35,669	5,867	31,361	57,739	51,314	10,275	49,631	83,973	15,647	4,410	18,271	26,235	9,187	4,066	10,818	12,962	0	0	0	0	15,647	4,410	18,271	26,235	

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APPENDIX B

APPENDIX B - Adjustments to 2035 Model Land Use Assumptions

ABAG P'07 Model

TAZ	2035 HH	2035 AFM	2035 MFG	2035 RET	2035 SVC	2035 TRD	2035 OTH	2035 Total Emp	2005 - 2035 Growth HH	Growth AFM	Growth MFG	Growth RET	Growth SVC	Growth TRD	Growth OTH	Growth Total Emp
128	639	0	0	41	115	4	4	164	0	0	0	5	5	0	0	10
129	263	0	4	34	112	0	31	182	0	0	0	5	11	0	1	17
130	631	5	11	29	148	0	51	243	0	1	0	10	16	0	1	28
131	742	0	22	178	169	2	42	413	0	0	0	26	13	0	0	40
132	490	0	15	39	275	22	66	417	19	0	0	12	30	0	1	44
133	590	0	21	71	206	2	34	334	0	0	1	17	20	0	1	39
134	446	0	216	386	526	33	134	1,294	0	0	6	10	14	0	4	33
135	197	0	119	117	108	17	30	391	0	0	108	13	25	0	1	145
136	219	0	99	64	170	0	1	333	0	0	99	16	30	0	1	145
137	708	0	54	261	386	22	56	779	0	0	1	29	39	0	1	70
138	848	0	40	459	320	27	104	950	0	0	2	88	37	2	7	136
139	594	0	17	44	307	5	112	484	0	0	0	18	118	0	2	138
140	345	0	17	127	218	29	45	435	0	0	1	21	83	1	2	109
141	325	0	0	34	46	0	9	89	0	0	0	7	6	0	0	13
142	397	0	0	8	47	0	11	67	0	0	0	0	8	0	0	8
143	880	0	44	14	495	26	35	615	3	0	14	4	185	8	11	222
144	940	27	71	31	541	0	18	687	5	11	19	11	189	0	5	234
145	626	0	0	28	170	11	27	236	167	0	0	8	15	0	0	24
146	852	0	0	45	150	0	10	205	280	0	0	14	14	0	0	28
147	216	0	25	33	74	61	24	218	0	0	0	6	15	(2)	0	18
148	425	50	3	62	326	114	181	736	218	18	(212)	32	106	22	34	0
149	1,003	0	118	12	166	34	47	377	161	0	0	7	23	(1)	1	31
150	218	0	12	5	50	12	11	91	0	0	0	5	13	0	0	19
194	990	0	81	89	2,446	13	98	2,727	3	0	4	24	609	1	6	642
195	1,058	0	0	100	204	9	32	344	411	0	(21)	61	49	0	1	89
196	560	0	365	83	490	62	296	1,295	109	0	204	25	261	16	166	672
197	493	0	61	115	259	168	314	916	186	0	30	64	140	85	188	508
198	271	0	0	94	181	0	95	370	0	0	0	11	15	0	1	26
199	109	0	0	61	9	15	9	93	0	0	0	1	0	0	0	1
200	79	0	0	10	32	0	71	113	0	0	0	0	0	0	1	2
201	2,213	0	0	422	247	6	112	787	2,033	0	0	376	143	(1)	3	521
202	158	0	0	60	40	4	9	114	0	0	0	43	14	0	1	58
203	70	0	0	178	87	30	86	381	7	0	0	50	17	1	3	72
204	440	0	32	37	104	20	86	279	0	0	0	6	11	(1)	1	17
205	664	0	20	47	162	13	50	293	0	0	0	23	26	0	2	51
206	317	0	11	106	561	62	118	858	0	0	0	0	1	(1)	0	0
207	392	0	22	166	177	0	66	432	0	0	0	1	1	0	0	2
208	694	0	0	168	1,340	11	89	1,607	203	0	0	164	933	1	11	1,109
209	1,642	0	14	463	407	13	115	1,013	0	0	0	41	24	0	2	66
210	930	0	16	174	552	26	160	928	0	0	0	1	5	0	1	8
211	819	0	26	161	280	15	65	546	35	0	1	87	97	0	4	189
212	211	0	12	319	2,266	0	170	2,768	6	0	5	176	(450)	0	65	(205)
213	1,593	0	2	255	265	4	127	653	0	0	0	80	(53)	0	2	28
217	390	0	0	45	4,077	8	38	4,168	0	0	0	11	3,763	2	12	3,789
332	263	0	0	449	446	0	123	1,018	0	0	0	5	9	0	0	14
333	1,091	0	20	148	281	8	30	487	3	0	0	1	16	0	0	17
334	912	0	4	4	282	19	47	355	10	0	0	0	14	(1)	0	13
335	46	0	4	1	91	0	7	103	0	0	0	0	3	0	0	3
336	365	0	10	6	76	0	18	110	0	0	0	0	0	0	0	0
Safeway Project Area Total	29,363	82	1,607	5,885	20,486	926	3,513	32,500	3,859	30	262	1,615	6,663	132	543	9,243

Pending, Planned and Proposed Projects / Recommended Modifications

TAZ	Pending HH	Pending RET	Pending SVC	Pending TRD	Pending OTH	Pending Total Emp	ABSMC Adjustments to Growth HH	ABSMC RET	ABSMC SVC	ABSMC TRD	ABSMC OTH	ABSMC Total Emp	Additional Safeway Adjustments to Growth HH	Safeway RET	Safeway SVC	Safeway TRD	Safeway OTH	Safeway Total Emp
128														(7)				(7)
129														(7)				(7)
130														(13)				(13)
131														(34)				(34)
132													(4)	(16)				(16)
133														(22)				(22)
134		81												71				71
135														(17)				(17)
136														(21)				(21)
137								(25)	(9)			(34)						
138								(77)	(8)			(85)						
139	188		36			36	188	(16)	(26)			(42)						
140								(18)	(19)			(37)						
141														(9)				(9)
142																		
143	61		21			21							58	(5)				(5)
144													(1)	(14)				(14)
145													(35)	(11)				(11)
146													(58)	(18)				(18)
147														(8)				(8)
148													(164)	(42)				(42)
149													(33)	(9)				(9)
150														(7)				(7)
194							(1)	(21)	(136)			(157)						
195							(77)	(53)	(11)			(64)	(74)					
196	48						(21)	(22)	(58)			(80)	(62)					
197	25						(35)	(56)	(31)			(87)						
198								(10)	(3)			(13)						
199								(1)				(1)						
200																		
201	654	43	71			113	(383)	(329)	(32)			(361)						
202	44						44	(38)	(3)			(41)						
203							(1)	(44)	(4)			(48)						
204								(5)	(2)			(8)						
205								(20)	(6)			(26)						
206									483			483			(484)			(484)
207								(1)				(1)						
208							(38)	(143)	(208)			(352)						
209								(36)	(5)			(41)						
210								(1)	(1)			(2)						
211							(7)	(76)	(22)			(98)						
212			(2,656)				(1)	(154)	(2,206)			(2,360)						
213								(70)				(70)						
217			4,095					(10)	332			322						
332		196	140											191	131			322
333														(1)	(131)			(133)
334													(2)					
335																		
336																		
Safeway Project Area Total	1,020	319	1,707	0	0	170	0	(1,226)	(1,975)	0	0	(3,201)	(239)	(0)	(484)	0	0	(484)

Recommended Modifications (continued)

TAZ	2005 Adjusted Totals HH	2005 Adj. RET	2005 Adj. SVC	2005 Adj. TRD	2005 Adj. OTH	2005 Adj. Total Emp	Adjusted Net Growth HH	Net Growth RET	Net Growth SVC	Net Growth TRD	Net Growth OTH	Net Growth Total Emp	2035 Adjusted Totals HH	2035 Adj. RET	2035 Adj. SVC	2035 Adj. TRD	2035 Adj. OTH	2035 Adj. Total Emp	Notes
128	639	36	111	4	4	155	0	(2)	5	0	0	3	639	35	116	4	4	158	
129	263	29	102	0	31	165	0	(2)	11	0	1	10	263	27	113	0	32	176	
130	631	19	132	0	50	215	0	(3)	16	0	1	15	631	16	148	0	51	230	
131	742	152	156	2	42	373	0	(8)	13	0	0	6	742	143	169	2	42	379	
132	471	27	245	21	65	374	19	(4)	30	0	1	28	490	24	275	21	66	402	
133	590	54	186	2	33	295	0	(5)	20	0	1	17	590	49	206	2	34	312	
134	446	375	512	33	130	1,261	0	81	14	0	4	104	446	456	526	33	134	1,365	Safeway on College - 40.5 ksf new retail
135	197	105	83	17	29	246	0	(4)	25	0	1	128	197	100	108	17	30	374	
136	219	48	140	0	0	188	0	(5)	30	0	1	124	219	43	170	0	1	312	
137	708	232	347	22	55	709	0	4	30	0	1	36	708	236	377	22	56	745	
138	848	371	283	26	97	814	0	11	29	2	7	51	848	382	311	28	104	864	
139	594	26	189	5	110	346	188	2	92	0	2	96	782	28	281	5	112	442	The Creekside MXD - 120 DU, 7.7 ksf commercial; Civiq - 68 DU, 3 ksf commercial
140	345	106	134	27	43	327	0	3	64	1	2	72	345	108	199	28	45	399	
141	325	27	41	0	9	77	0	(2)	6	0	0	4	325	25	47	0	9	80	
142	397	8	39	0	11	59	0	0	8	0	0	8	397	8	47	0	11	67	
143	954	16	310	18	24	399	61	(1)	185	8	11	217	1,015	14	495	26	35	615	Bakery Lofts - 61 DU, 3.2 ksf commercial; 46th Street Lofts - 79 DU, 3ksf commercial (completed)
144	935	20	353	0	13	453	4	(3)	189	0	5	220	939	16	542	0	18	673	
145	459	20	154	11	27	212	132	(3)	15	0	0	13	591	18	169	11	27	225	
146	572	31	135	0	10	177	222	(4)	14	0	0	10	794	27	149	0	10	186	
147	216	27	58	64	25	200	0	(2)	15	(2)	0	10	216	25	73	62	25	210	
148	371	30	220	92	147	736	54	(10)	106	22	34	(42)	425	20	326	114	181	694	66th & San Pablo - 72 DU (completed); City Limits Project - 92 DU (completed)
149	842	4	143	35	46	346	128	(2)	23	(1)	1	22	970	2	166	34	47	368	
150	218	0	37	12	11	72	0	(2)	13	0	0	12	218	(2)	50	12	11	84	
194	987	66	1,837	12	92	2,084	2	3	473	1	6	485	989	69	2,310	13	98	2,570	
195	721	39	155	9	31	255	260	8	38	0	1	25	980	46	193	9	32	280	3860 & 3880 MLK Jr. Way - 74 DU (completed)
196	512	58	228	46	131	623	26	3	203	16	166	592	539	61	431	62	297	1,215	989 41st Street - 48 DU; Green City Loft Project - 62 DU (completed)
197	307	51	118	82	125	408	151	8	109	85	188	421	458	59	227	167	313	829	1032 39th Street - 25 DU
198	271	83	167	0	93	343	0	1	12	0	1	13	271	84	178	0	94	356	
199	109	61	9	15	9	93	0	0	0	0	0	0	109	61	9	15	9	93	
200	79	10	31	0	70	111	0	0	0	0	1	2	79	10	31	0	71	113	
201	180	46	103	7	110	266	1,650	47	111	(1)	3	160	1,830	93	215	6	113	426	MacArthur BART Transit Village - 624 DU, 42.5 ksf retail/commercial; 3884 MLK Way - 30 DU
202	158	17	26	4	8	56	44	5	11	0	1	17	202	22	37	4	9	73	4801 Shattuck Ave. - 44 DU
203	63	128	70	29	82	309	6	6	13	1	3	24	68	135	83	30	85	334	
204	440	32	93	21	85	262	0	1	9	(1)	1	9	440	32	101	20	86	272	
205	664	24	137	13	49	242	0	3	20	0	2	25	664	27	157	13	51	267	
206	317	106	1,044	63	117	858	0	0	0	(1)	0	(1)	317	106	1,044	62	117	857	Kaiser Medical Center - 484 service jobs (completed)
207	392	166	177	0	66	430	0	0	1	0	0	1	392	166	178	0	66	431	
208	491	4	407	10	78	499	165	21	725	1	11	757	656	24	1,132	11	89	1,256	
209	1,642	422	383	13	114	946	0	5	19	0	2	25	1,642	427	402	13	116	971	
210	930	172	548	26	159	921	0	0	4	0	1	6	930	173	551	26	160	927	
211	784	73	183	15	61	357	28	11	75	0	4	91	812	84	258	15	65	448	
212	205	144	2,717	0	105	2,973	5	22	(2,656)	0	65	(2,565)	210	166	61	0	170	408	Kaiser Medical Center Relocation - minus 2656 service jobs
213	1,593	175	318	4	125	624	0	10	(53)	0	2	(42)	1,593	185	265	4	127	582	
217	390	34	314	6	26	380	0	1	4,095	2	12	4,111	390	35	4,409	8	38	4,491	Kaiser Medical Center - 4,095 Service Jobs
332	263	444	437	0	123	1,004	0	196	140	0	0	336	263	640	577	0	123	1,340	51st & Broadway Center - 97.9 ksf new retail, 42.1 ksf new office
333	1,088	147	265	8	29	470	3	(0)	(115)	0	0	(116)	1,091	147	150	8	29	354	
334	903	4	268	20	47	342	8	0	14	(1)	0	13	910	4	282	19	47	355	
335	46	1	88	0	7	100	0	0	3	0	0	3	46	1	91	0	7	103	
336	365	6	76	0	18	110	0	0	0	0	0	0	365	6	76	0	18	110	
Safeway Project Area Total	25,881	4,276	14,307	793	2,972	23,263	3,155	389	4,204	132	543	5,558	29,037	4,665	18,510	925	3,515	28,821	

FEHR & PEERS
TRANSPORTATION CONSULTANTS

APPENDIX C

APPENDIX C - Adjustments to 2005 Model Land Use Assumptions

	ABAG P'07 Model 2005								Completed Projects						Recommended Modifications: Safeway Adjustments to 2005						Recommended Modifications: 2005 Adjusted Totals						
TAZ	HH	AFM	MFG	RET	SVC	TRD	OTH	Total Emp	HH	RET	SVC	TRD	OTH	Total Emp	HH	RET	SVC	TRD	OTH	Total Emp	HH	RET	SVC	TRD	OTH	Total Emp	Notes
128	639	0	0	36	111	4	4	155													639	36	111	4	4	155	
129	263	0	4	29	102	0	31	165													263	29	102	0	31	165	
130	631	4	10	19	132	0	50	215													631	19	132	0	50	215	
131	742	0	22	152	156	2	42	373													742	152	156	2	42	373	
132	471	0	15	27	245	21	65	374													471	27	245	21	65	374	
133	590	0	21	54	186	2	33	295													590	54	186	2	33	295	
134	446	0	210	375	512	33	130	1,261													446	375	512	33	130	1,261	Safeway on College - 40.5 ksf new retail
135	197	0	12	105	83	17	29	246													197	105	83	17	29	246	
136	219	0	0	48	140	0	0	188													219	48	140	0	0	188	
137	708	0	53	232	347	22	55	709													708	232	347	22	55	709	
138	848	0	38	371	283	26	97	814													848	371	283	26	97	814	
139	594	0	16	26	189	5	110	346													594	26	189	5	110	346	The Creekside MXD - 120 DU, 7.7 ksf commercial; Civiq - 68 DU, 3 ksf commercial
140	345	0	16	106	134	27	43	327													345	106	134	27	43	327	
141	325	0	0	27	41	0	9	77													325	27	41	0	9	77	
142	397	0	0	8	39	0	11	59													397	8	39	0	11	59	
143	878	0	31	10	310	18	24	393	76	6					76	6				6	954	16	310	18	24	399	Bakery Lofts - 61 DU, 3.2 ksf commercial; 46th Street Lofts - 79 DU, 3ksf commercial (completed)
144	935	16	52	20	353	0	13	453													935	20	353	0	13	453	
145	459	0	0	20	154	11	27	212													459	20	154	11	27	212	
146	572	0	0	31	135	0	10	177													572	31	135	0	10	177	
147	216	0	26	27	58	64	25	200													216	27	58	64	25	200	
148	207	32	215	30	220	92	147	736	164						164						371	30	220	92	147	736	66th & San Pablo - 72 DU (completed); City Limits Project - 92 DU (completed)
149	842	0	117	4	143	35	46	346													842	4	143	35	46	346	
150	218	0	12	0	37	12	11	72													218	0	37	12	11	72	
194	987	0	77	66	1,837	12	92	2,084													987	66	1,837	12	92	2,084	
195	647	0	21	39	155	9	31	255	74						74						721	39	155	9	31	255	3860 & 3880 MLK Jr. Way - 74 DU (completed)
196	450	0	161	58	228	46	131	623	62						62						512	58	228	46	131	623	989 41st Street - 48 DU; Green City Loft Project - 62 DU (completed)
197	307	0	32	51	118	82	125	408													307	51	118	82	125	408	1032 39th Street - 25 DU
198	271	0	0	83	167	0	93	343													271	83	167	0	93	343	
199	109	0	0	61	9	15	9	93													109	61	9	15	9	93	
200	79	0	0	10	31	0	70	111													79	10	31	0	70	111	
201	180	0	0	46	103	7	110	266													180	46	103	7	110	266	MacArthur BART Transit Village - 624 DU, 42.5 ksf retail/commercial; 3884 MLK Way - 30 DU
202	158	0	0	17	26	4	8	56													158	17	26	4	8	56	4801 Shattuck Ave. - 44 DU
203	63	0	0	128	70	29	82	309													63	128	70	29	82	309	
204	440	0	32	32	93	21	85	262													440	32	93	21	85	262	
205	664	0	20	24	137	13	49	242													664	24	137	13	49	242	
206	317	0	11	106	560	63	117	858			484						484				317	106	1,044	63	117	858	Kaiser Medical Center - 484 service jobs (completed)
207	392	0	22	166	177	0	66	430													392	166	177	0	66	430	
208	491	0	0	4	407	10	78	499													491	4	407	10	78	499	
209	1,642	0	14	422	383	13	114	946													1,642	422	383	13	114	946	
210	930	0	16	172	548	26	159	921													930	172	548	26	159	921	
211	784	0	25	73	183	15	61	357													784	73	183	15	61	357	
212	205	0	7	144	2,717	0	105	2,973													205	144	2,717	0	105	2,973	Kaiser Medical Center Relocation - minus 2656 service jobs
213	1,593	0	2	175	318	4	125	624													1,593	175	318	4	125	624	
217	390	0	0	34	314	6	26	380													390	34	314	6	26	380	Kaiser Medical Center - 4,095 Service Jobs
332	263	0	0	444	437	0	123	1,004													263	444	437	0	123	1,004	51st & Broadway Center - 97.9 ksf new retail, 42.1 ksf new office
333	1,088	0	20	147	265	8	29	470													1,088	147	265	8	29	470	
334	903	0	4	4	268	20	47	342													903	4	268	20	47	342	
335	46	0	4	1	88	0	7	100													46	1	88	0	7	100	
336	365	0	10	6	76	0	18	110													365	6	76	0	18	110	
Safeway Project Area Total	25,505	52	1,347	4,270	13,823	793	2,972	23,257	376	6	484	0	0	0	376	6	484	0	0	6	25,881	4,276	14,307	793	2,972	23,263	

Appendix H
LOS Analysis Worksheets – 2015 Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	650	80	20	550	140	80	260	60	130	300	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.97			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1528			3268			1483			1419	
Flt Permitted		0.97			0.92			0.82			0.65	
Satd. Flow (perm)		1488			3023			1229			928	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	684	84	21	579	147	84	274	63	137	316	74
RTOR Reduction (vph)	0	5	0	0	23	0	0	7	0	0	6	0
Lane Group Flow (vph)	0	784	0	0	724	0	0	414	0	0	521	0
Confl. Peds. (#/hr)			105			83			277			231
Confl. Bikes (#/hr)			1			8			33			61
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		721			1464			375			442	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.53			0.24			0.34			c0.41	
v/c Ratio		1.09			0.49			1.10			1.18	
Uniform Delay, d1		24.5			16.6			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		59.9			1.2			77.6			101.5	
Delay (s)		84.4			17.8			110.6			128.5	
Level of Service		F			B			F			F	
Approach Delay (s)		84.4			17.8			110.6			128.5	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	78.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	650	50	120	560	240	80	410	210	280	250	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.96		1.00	0.98	
Flt Protected		0.99			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3478			3358			3333		1610	3212	
Flt Permitted		0.64			0.65			0.99		0.95	0.99	
Satd. Flow (perm)		2239			2200			3333		1610	3212	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	684	53	126	589	253	84	432	221	295	263	53
RTOR Reduction (vph)	0	5	0	0	36	0	0	48	0	0	11	0
Lane Group Flow (vph)	0	837	0	0	932	0	0	689	0	201	399	0
Confl. Peds. (#/hr)			13			10			5			50
Confl. Bikes (#/hr)			4			2			5			6
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.52			0.52			0.16		0.17	0.17	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1175			1155			550		274	546	
v/s Ratio Prot								c0.21		c0.12	0.12	
v/s Ratio Perm		0.37			c0.42							
v/c Ratio		0.71			0.81			1.25		0.73	0.73	
Uniform Delay, d1		18.0			19.6			41.8		39.4	39.3	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		3.7			6.1			128.4		16.0	8.4	
Delay (s)		21.7			25.7			170.2		55.3	47.7	
Level of Service		C			C			F		E	D	
Approach Delay (s)		21.7			25.7			170.2			50.2	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM Average Control Delay	63.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	80	710	120	50	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.98			1.00
Flt Protected	0.98		1.00			0.99
Satd. Flow (prot)	1644		3207			3274
Flt Permitted	0.98		1.00			0.81
Satd. Flow (perm)	1644		3207			2664
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	83	740	125	52	448
RTOR Reduction (vph)	51	0	17	0	0	0
Lane Group Flow (vph)	105	0	848	0	0	500
Confl. Peds. (#/hr)	37	33		41		
Confl. Bikes (#/hr)		7		25		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	493		1924			1598
v/s Ratio Prot	c0.06		c0.26			
v/s Ratio Perm						0.19
v/c Ratio	0.21		0.44			0.31
Uniform Delay, d1	20.9		8.7			7.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.0		0.7			0.5
Delay (s)	21.9		9.4			8.4
Level of Service	C		A			A
Approach Delay (s)	21.9		9.4			8.4
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	450	140	40	320	110	220	790	80	210	950	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1774		1770	1550		1770	3226		1770	3150	
Flt Permitted	0.26	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	485	1774		229	1550		1770	3226		1770	3150	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	469	146	42	333	115	229	823	83	219	990	94
RTOR Reduction (vph)	0	12	0	0	13	0	0	8	0	0	7	0
Lane Group Flow (vph)	73	603	0	42	435	0	229	898	0	219	1077	0
Confl. Peds. (#/hr)			28			50			49			64
Confl. Bikes (#/hr)			10			25			43			50
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	33.0	33.0		33.0	33.0		14.4	32.4		14.1	32.1	
Effective Green, g (s)	32.5	32.5		32.5	32.5		15.4	34.4		15.1	34.1	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.36		0.16	0.36	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	166	607		78	530		287	1168		281	1131	
v/s Ratio Prot		c0.34			0.28		c0.13	0.28		0.12	c0.34	
v/s Ratio Perm	0.15			0.18								
v/c Ratio	0.44	0.99		0.54	0.82		0.80	0.77		0.78	0.95	
Uniform Delay, d1	24.2	31.1		25.2	28.6		38.3	26.8		38.4	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	34.7		3.5	9.4		13.4	4.9		11.7	17.5	
Delay (s)	24.9	65.8		28.7	38.0		51.7	31.7		50.1	47.1	
Level of Service	C	E		C	D		D	C		D	D	
Approach Delay (s)		61.5			37.2			35.7			47.6	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	320	190	10	170	30	140	280	30	50	340	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.97			0.97			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.97	
Flt Protected		0.99			1.00			0.98			0.99	
Satd. Flow (prot)		1449			1768			1519			1336	
Flt Permitted		0.94			0.97			0.50			0.91	
Satd. Flow (perm)		1373			1722			778			1218	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	337	200	11	179	32	147	295	32	53	358	95
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	600	0	0	215	0	0	471	0	0	496	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		515			646			557			343	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		c0.44			0.12			0.27			c0.41	
v/c Ratio		1.17			0.33			0.85			1.45	
Uniform Delay, d1		25.0			17.8			16.2			28.8	
Progression Factor		1.00			1.34			1.00			1.00	
Incremental Delay, d2		93.8			1.4			14.6			216.4	
Delay (s)		118.8			25.3			30.8			245.2	
Level of Service		F			C			C			F	
Approach Delay (s)		118.8			25.3			30.8			245.2	
Approach LOS		F			C			C			F	

Intersection Summary			
HCM Average Control Delay	119.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	112.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	270	100	70	600	390	120
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	290	108	75	645	419	129
Pedestrians	41			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked	0.99					
vC, conflicting volume	998	316	589			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	977	316	589			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	84	92			
cM capacity (veh/h)	218	656	948			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	398	290	430	280	269
Volume Left	290	75	0	0	0
Volume Right	108	0	0	0	129
cSH	266	948	1700	1700	1700
Volume to Capacity	1.49	0.08	0.25	0.16	0.16
Queue Length 95th (ft)	574	6	0	0	0
Control Delay (s)	276.1	3.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	276.1	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	66.4		
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (veh/h)	10	3	20	3	2	24	30	410	11	53	440	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	3	20	3	2	24	31	418	11	54	449	20
Pedestrians		213			102						212	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		18			9						18	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	1503	1373	672	1176	1378	738	682			532		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1504	1339	448	1089	1345	738	461			532		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	72	96	95	97	97	92	96			94		
cM capacity (veh/h)	36	82	395	96	81	315	712			948		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	34	30	460	523
Volume Left	10	3	31	54
Volume Right	20	24	11	20
cSH	91	220	712	948
Volume to Capacity	0.37	0.13	0.04	0.06
Queue Length 95th (ft)	37	11	3	5
Control Delay (s)	66.5	23.9	1.2	1.6
Lane LOS	F	C	A	A
Approach Delay (s)	66.5	23.9	1.2	1.6
Approach LOS	F	C		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	7	17	20	2	50	6	570	10	40	410	42
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	74	8	19	22	2	56	7	633	11	44	456	47
Pedestrians		22			30			20			1	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			3			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	977	1278	293	1042	1295	353	524			674		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	769	1100	293	840	1120	81	524			435		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	67	96	97	89	99	93	99			96		
cM capacity (veh/h)	222	174	679	196	169	851	1020			991		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	101	80	323	328	272	274
Volume Left	74	22	7	0	44	0
Volume Right	19	56	0	11	0	47
cSH	248	417	1020	1700	991	1700
Volume to Capacity	0.41	0.19	0.01	0.19	0.04	0.16
Queue Length 95th (ft)	47	18	0	0	4	0
Control Delay (s)	29.1	15.7	0.2	0.0	1.8	0.0
Lane LOS	D	C	A		A	
Approach Delay (s)	29.1	15.7	0.1		0.9	
Approach LOS	D	C				

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	310	140	10	20	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.78				0.84
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.95				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1166				1324
Flt Permitted			0.98				0.32	1.00				0.88
Satd. Flow (perm)			1483				595	1166				1165
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	330	149	11	21	351
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	490	0	0	0	489
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				227	445				445
v/s Ratio Prot								c0.42				
v/s Ratio Perm			0.07				0.11					0.42
v/c Ratio			0.51				0.28	1.10				1.10
Uniform Delay, d1			44.8				23.6	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			9.6				3.1	73.0				72.2
Delay (s)			54.4				26.6	107.0				106.2
Level of Service			D				C	F				F
Approach Delay (s)			54.4					97.7				106.2
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	102.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	100	10	10	110	410	20	50	10	190	250	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3148					3161		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3148					3161		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	106	11	11	117	436	21	53	11	202	266	11	21
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	632	0	0	0	0	509	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					544					546		
v/s Ratio Prot					c0.20					c0.16		
v/s Ratio Perm												
v/c Ratio					1.16					0.93		
Uniform Delay, d1					45.5					44.9		
Progression Factor					1.00					1.00		
Incremental Delay, d2					91.8					24.8		
Delay (s)					137.3					69.7		
Level of Service					F					E		
Approach Delay (s)					137.3					69.7		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	20	80	10	120	70	60	60	40	50	620	130	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		1.00			0.94					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1606			1425					3204		
Flt Permitted		0.90			0.82					0.80		
Satd. Flow (perm)		1463			1186					2561		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	83	10	125	73	62	62	42	52	646	135	42
RTOR Reduction (vph)	0	5	0	0	11	0	0	0	0	18	0	0
Lane Group Flow (vph)	0	109	0	0	311	0	0	0	0	857	0	0
Confl. Peds. (#/hr)			24				79				6	
Confl. Bikes (#/hr)			12				49				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					34.7		
Effective Green, g (s)		18.0			18.0					35.7		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		329			267					1143		
v/s Ratio Prot												
v/s Ratio Perm		0.07			c0.26					c0.33		
v/c Ratio		0.33			1.17					0.75		
Uniform Delay, d1		26.0			31.0					18.4		
Progression Factor		1.00			1.00					0.80		
Incremental Delay, d2		0.2			107.3					4.2		
Delay (s)		26.2			138.3					18.9		
Level of Service		C			F					B		
Approach Delay (s)		26.2			138.3					18.9		
Approach LOS		C			F					B		

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	510	10	10	10	130	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	0.99				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3281				1524		
Flt Permitted	0.84				0.97		
Satd. Flow (perm)	2781				1524		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	531	10	10	10	135	83	10
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	593	0	0	0	238	0	0
Confl. Peds. (#/hr)		1	16				
Confl. Bikes (#/hr)		5	16				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	34.7				14.3		
Effective Green, g (s)	35.7				14.3		
Actuated g/C Ratio	0.45				0.18		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1241				272		
v/s Ratio Prot					c0.16		
v/s Ratio Perm	0.21						
v/c Ratio	0.48				0.88		
Uniform Delay, d1	15.6				32.0		
Progression Factor	1.00				1.00		
Incremental Delay, d2	1.3				24.7		
Delay (s)	16.9				56.6		
Level of Service	B				E		
Approach Delay (s)	16.9				56.6		
Approach LOS	B				E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	80	90	70	750	90	50	200	490
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.98		1.00	0.89	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1717		1770	3247		1770	2902	
Flt Permitted					0.99		0.35	1.00		0.28	1.00	
Satd. Flow (perm)					1717		651	3247		529	2902	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	82	92	71	765	92	51	204	500
RTOR Reduction (vph)	0	0	0	0	41	0	0	12	0	0	200	0
Lane Group Flow (vph)	0	0	0	0	153	0	71	845	0	51	504	0
Confl. Peds. (#/hr)			2			8			8			11
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		391	1948		317	1741	
v/s Ratio Prot								c0.26			0.17	
v/s Ratio Perm					0.09		0.11			0.10		
v/c Ratio					0.30		0.18	0.43		0.16	0.29	
Uniform Delay, d1					21.5		7.2	8.7		7.1	7.7	
Progression Factor					1.00		1.61	1.53		1.78	3.19	
Incremental Delay, d2					1.5		0.9	0.7		0.8	0.3	
Delay (s)					23.0		12.5	13.9		13.4	25.1	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			23.0			13.8			24.3	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	110	70	0	0	40	0	420	70	30	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1669				1418		3236			3287	
Flt Permitted	0.95	0.98				1.00		1.00			0.85	
Satd. Flow (perm)	1681	1669				1418		3236			2826	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	469	115	73	0	0	42	0	438	73	31	198	0
RTOR Reduction (vph)	0	13	0	0	0	15	0	17	0	0	0	0
Lane Group Flow (vph)	328	316	0	0	0	27	0	494	0	0	229	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			20
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1064				904		849			742	
v/s Ratio Prot								c0.15				
v/s Ratio Perm	c0.20	0.19				0.02					0.08	
v/c Ratio	0.31	0.30				0.03		0.58			0.31	
Uniform Delay, d1	6.5	6.5				5.4		25.7			23.7	
Progression Factor	1.00	1.00				1.00		1.00			0.94	
Incremental Delay, d2	0.7	0.7				0.1		2.9			1.0	
Delay (s)	7.3	7.2				5.4		28.6			23.4	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.2			5.4			28.6			23.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	130	200	60	410	0	0	550	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.92		1.00	1.00			0.98	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2985		1770	1863			1801	
Flt Permitted					0.99		0.31	1.00			1.00	
Satd. Flow (perm)					2985		571	1863			1801	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	86	140	215	65	441	0	0	591	86
RTOR Reduction (vph)	0	0	0	0	104	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	337	0	65	441	0	0	670	0
Confl. Peds. (#/hr)			43			71			283			218
Confl. Bikes (#/hr)									67			58
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					746		371	1211			1171	
v/s Ratio Prot								0.24			c0.37	
v/s Ratio Perm					0.11		0.11					
v/c Ratio					0.45		0.18	0.36			0.57	
Uniform Delay, d1					25.4		5.5	6.4			7.8	
Progression Factor					1.00		2.00	2.03			1.00	
Incremental Delay, d2					2.0		0.8	0.7			2.0	
Delay (s)					27.3		11.9	13.7			9.8	
Level of Service					C		B	B			A	
Approach Delay (s)		0.0			27.3			13.4			9.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	390	90	0	0	0	0	360	120	200	430	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.90						0.86		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.97						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1427						1552		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1427						1552		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	125	406	94	0	0	0	0	375	125	208	448	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	125	490	0	0	0	0	0	485	0	208	448	0
Confl. Peds. (#/hr)			309			148			529			196
Confl. Bikes (#/hr)			5			9			39			44
Parking (#/hr)		5										
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)	22.0	22.0						34.0		15.0	52.0	
Effective Green, g (s)	21.0	21.0						33.0		14.0	51.0	
Actuated g/C Ratio	0.26	0.26						0.41		0.18	0.64	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	465	375						640		310	1188	
v/s Ratio Prot		c0.34						c0.31		c0.12	0.24	
v/s Ratio Perm	0.07											
v/c Ratio	0.27	1.31						0.76		0.67	0.38	
Uniform Delay, d1	23.4	29.5						20.1		30.8	6.9	
Progression Factor	1.00	1.00						1.00		0.88	0.48	
Incremental Delay, d2	1.4	155.7						8.2		9.2	0.8	
Delay (s)	24.8	185.2						28.2		36.3	4.1	
Level of Service	C	F						C		D	A	
Approach Delay (s)		153.1			0.0			28.2			14.3	
Approach LOS		F			A			C			B	

Intersection Summary			
HCM Average Control Delay	66.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	20	50	20	20	20	40	50	10	40	380	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.97			0.94					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.97			0.91					0.99	
Flt Protected			0.99			0.99					0.99	
Satd. Flow (prot)			1537			1394					1616	
Flt Permitted			0.89			0.95					0.89	
Satd. Flow (perm)			1386			1333					1448	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	22	55	22	22	22	44	55	11	44	418	22
RTOR Reduction (vph)	0	0	15	0	0	38	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	95	0	0	105	0	0	0	0	492	0
Confl. Peds. (#/hr)				55				32				118
Confl. Bikes (#/hr)												14
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			323			311					531	
v/s Ratio Prot												
v/s Ratio Perm			0.07			c0.08					0.34	
v/c Ratio			0.29			0.34					0.93	
Uniform Delay, d1			18.9			19.1					18.2	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.3			2.9					24.7	
Delay (s)			21.2			22.1					42.9	
Level of Service			C			C					D	
Approach Delay (s)			21.2			22.1					42.9	
Approach LOS			C			C					D	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	60	380	20	30	20	70	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.99				0.93		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1751				1500		
Flt Permitted		0.88				0.98		
Satd. Flow (perm)		1551				1500		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	66	418	22	33	22	77	55	44
RTOR Reduction (vph)	0	4	0	0	0	17	0	0
Lane Group Flow (vph)	0	535	0	0	0	181	0	0
Confl. Peds. (#/hr)			67	108				
Confl. Bikes (#/hr)			14	6				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		569				300		
v/s Ratio Prot								
v/s Ratio Perm		c0.35				0.12		
v/c Ratio		0.94				0.60		
Uniform Delay, d1		18.4				21.8		
Progression Factor		1.00				1.00		
Incremental Delay, d2		25.6				8.7		
Delay (s)		44.0				30.6		
Level of Service		D				C		
Approach Delay (s)		44.0				30.6		
Approach LOS		D				C		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	25	420	43	5	460
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	6	26	442	45	5	484
Pedestrians	102					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	9					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			219			433
pX, platoon unblocked	0.99					
vC, conflicting volume	1061	567			589	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1056	567			589	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	95			99	
cM capacity (veh/h)	224	479			902	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	33	487	489
Volume Left	6	0	5
Volume Right	26	45	0
cSH	392	1700	902
Volume to Capacity	0.08	0.29	0.01
Queue Length 95th (ft)	7	0	0
Control Delay (s)	15.0	0.0	0.2
Lane LOS	C		A
Approach Delay (s)	15.0	0.0	0.2
Approach LOS	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: South Driveway/College Avenue			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	34	22	570	430	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	18	36	23	600	453	18
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295		
pX, platoon unblocked	0.86					
vC, conflicting volume	830	257	493			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	479	257	493			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	95	98			
cM capacity (veh/h)	426	728	1048			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	223	400	302	169
Volume Left	18	23	0	0	0
Volume Right	36	0	0	0	18
cSH	589	1048	1700	1700	1700
Volume to Capacity	0.09	0.02	0.24	0.18	0.10
Queue Length 95th (ft)	7	2	0	0	0
Control Delay (s)	11.7	1.1	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.7	0.4		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	530	140	50	470	130	60	190	70	130	220	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.91			0.95			0.92			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1418			3262			1430			1298	
Flt Permitted		0.88			0.85			0.85			0.65	
Satd. Flow (perm)		1257			2794			1222			851	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	564	149	53	500	138	64	202	74	138	234	149
RTOR Reduction (vph)	0	6	0	0	28	0	0	13	0	0	18	0
Lane Group Flow (vph)	0	781	0	0	663	0	0	327	0	0	503	0
Confl. Peds. (#/hr)			202			95			393			505
Confl. Bikes (#/hr)			3			7			13			20
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		660			1467			321			347	
v/s Ratio Prot											c0.09	
v/s Ratio Perm		c0.62			0.24			0.27			c0.45	
v/c Ratio		1.18			0.45			1.02			1.45	
Uniform Delay, d1		19.0			11.8			29.5			25.0	
Progression Factor		1.00			1.00			0.72			1.00	
Incremental Delay, d2		97.6			1.0			42.6			217.7	
Delay (s)		116.6			12.8			63.9			242.7	
Level of Service		F			B			E			F	
Approach Delay (s)		116.6			12.8			63.9			242.7	
Approach LOS		F			B			E			F	

Intersection Summary			
HCM Average Control Delay	106.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	720	60	90	530	240	80	240	180	330	300	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.95		1.00	0.97	
Flt Protected		1.00			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3484			3341			3249		1610	3219	
Flt Permitted		0.81			0.69			0.99		0.95	0.99	
Satd. Flow (perm)		2839			2312			3249		1610	3219	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	774	65	97	570	258	86	258	194	355	323	97
RTOR Reduction (vph)	0	7	0	0	45	0	0	87	0	0	21	0
Lane Group Flow (vph)	0	886	0	0	880	0	0	451	0	256	498	0
Confl. Peds. (#/hr)			11			22			22			40
Confl. Bikes (#/hr)			4			8			9			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			15.5		16.0	16.0	
Actuated g/C Ratio		0.49			0.49			0.17		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1404			1143			560		286	572	
v/s Ratio Prot								c0.14		c0.16	0.15	
v/s Ratio Perm		0.31			c0.38							
v/c Ratio		0.63			0.77			0.81		0.90	0.87	
Uniform Delay, d1		16.7			18.6			35.8		36.2	36.0	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.2			5.0			11.7		32.0	16.6	
Delay (s)		18.9			23.6			47.5		68.2	52.6	
Level of Service		B			C			D		E	D	
Approach Delay (s)		18.9			23.6			47.5			57.7	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	60	440	50	30	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.96		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1619		3254			3281
Flt Permitted	0.98		1.00			0.90
Satd. Flow (perm)	1619		3254			2962
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	65	478	54	33	467
RTOR Reduction (vph)	46	0	11	0	0	0
Lane Group Flow (vph)	63	0	521	0	0	500
Confl. Peds. (#/hr)	18	42		25		
Confl. Bikes (#/hr)		5		8		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	486		1952			1777
v/s Ratio Prot	c0.04		0.16			
v/s Ratio Perm						c0.17
v/c Ratio	0.13		0.27			0.28
Uniform Delay, d1	20.4		7.6			7.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.5		0.3			0.4
Delay (s)	20.9		8.0			8.1
Level of Service	C		A			A
Approach Delay (s)	20.9		8.0			8.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	280	130	30	250	90	180	540	40	100	760	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1749		1770	1565		1770	3274		1770	3167	
Flt Permitted	0.29	1.00		0.18	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	547	1749		341	1565		1770	3274		1770	3167	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	295	137	32	263	95	189	568	42	105	800	84
RTOR Reduction (vph)	0	20	0	0	15	0	0	5	0	0	7	0
Lane Group Flow (vph)	74	412	0	32	343	0	189	605	0	105	877	0
Confl. Peds. (#/hr)			26			23			23			42
Confl. Bikes (#/hr)			2			2			5			15
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	26.6	26.6		26.6	26.6		13.2	44.1		8.8	39.7	
Effective Green, g (s)	26.1	26.1		26.1	26.1		14.2	46.1		9.8	41.7	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.15	0.49		0.10	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	150	481		94	430		265	1589		183	1390	
v/s Ratio Prot		c0.24			0.22		c0.11	0.18		0.06	c0.28	
v/s Ratio Perm	0.14			0.09								
v/c Ratio	0.49	0.86		0.34	0.80		0.71	0.38		0.57	0.63	
Uniform Delay, d1	28.9	32.7		27.6	32.0		38.5	15.4		40.6	20.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	13.6		0.8	9.3		7.4	0.7		2.7	2.2	
Delay (s)	29.8	46.2		28.4	41.3		45.8	16.1		43.3	22.9	
Level of Service	C	D		C	D		D	B		D	C	
Approach Delay (s)		43.8			40.2			23.2			25.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	120	200	20	120	20	130	314	30	10	300	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.98			0.98			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.93			0.98			0.99			0.97	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1409			1784			1543			1325	
Flt Permitted		0.94			0.93			0.56			0.98	
Satd. Flow (perm)		1331			1671			875			1304	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	129	215	22	129	22	140	338	32	11	323	86
RTOR Reduction (vph)	0	53	0	0	6	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	345	0	0	167	0	0	507	0	0	409	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		499			627			593			367	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		c0.26			0.10			0.28			c0.31	
v/c Ratio		0.69			0.27			0.86			1.11	
Uniform Delay, d1		21.1			17.4			16.4			28.8	
Progression Factor		1.00			1.40			1.00			0.95	
Incremental Delay, d2		7.7			1.0			14.6			54.9	
Delay (s)		28.7			25.3			31.0			82.3	
Level of Service		C			C			C			F	
Approach Delay (s)		28.7			25.3			31.0			82.3	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM Average Control Delay	44.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	90	60	40	379	385	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	96	64	43	403	410	96
Pedestrians	18			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked						
vC, conflicting volume	762	274	523			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	762	274	523			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	70	91	96			
cM capacity (veh/h)	322	711	1024			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	160	177	269	273	232
Volume Left	96	43	0	0	0
Volume Right	64	0	0	0	96
cSH	412	1024	1700	1700	1700
Volume to Capacity	0.39	0.04	0.16	0.16	0.14
Queue Length 95th (ft)	45	3	0	0	0
Control Delay (s)	19.1	2.4	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	19.1	0.9		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	4	30	2	3	29	20	440	19	57	440	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	4	33	2	3	32	22	478	21	62	478	22
Pedestrians		274			127			2			166	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		23			11			0			14	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.79	0.79	0.79	0.79	0.79		0.79					
vC, conflicting volume	1618	1556	765	1309	1557	782	774			626		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1649	1571	572	1259	1572	782	583			626		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	57	92	90	96	94	90	96			93		
cM capacity (veh/h)	25	54	317	62	54	304	606			855		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	48	37	521	562
Volume Left	11	2	22	62
Volume Right	33	32	21	22
cSH	77	185	606	855
Volume to Capacity	0.62	0.20	0.04	0.07
Queue Length 95th (ft)	69	18	3	6
Control Delay (s)	108.1	29.2	1.0	1.9
Lane LOS	F	D	A	A
Approach Delay (s)	108.1	29.2	1.0	1.9
Approach LOS	F	D		

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	4	33	20	2	30	9	340	10	20	390	36
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	51	4	35	22	2	32	10	366	11	22	419	39
Pedestrians		6			14			14				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			1				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked												
vC, conflicting volume	723	897	249	709	911	202	464			390		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	723	897	249	709	911	202	464			390		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	98	95	92	99	96	99			98		
cM capacity (veh/h)	288	266	738	285	261	796	1088			1151		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	90	56	192	194	231	248
Volume Left	51	22	10	0	22	0
Volume Right	35	32	0	11	0	39
cSH	376	450	1088	1700	1151	1700
Volume to Capacity	0.24	0.12	0.01	0.11	0.02	0.15
Queue Length 95th (ft)	23	11	1	0	1	0
Control Delay (s)	17.6	14.1	0.5	0.0	0.9	0.0
Lane LOS	C	B	A		A	
Approach Delay (s)	17.6	14.1	0.2		0.4	
Approach LOS	C	B				

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	300	90	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.85				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1284				
Flt Permitted			0.98				0.30	1.00				
Satd. Flow (perm)			1482				555	1284				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	341	102	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	454	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				212	490				
v/s Ratio Prot								0.35				
v/s Ratio Perm			0.07				0.12					
v/c Ratio			0.54				0.32	0.93				
Uniform Delay, d1			45.0				24.0	32.5				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			10.6				4.0	26.0				
Delay (s)			55.6				27.9	58.5				
Level of Service			E				C	E				
Approach Delay (s)			55.6					54.5				
Approach LOS			E					D				

Intersection Summary			
HCM Average Control Delay	101.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	310	120	10	10	160	230	10	40	10	170	260	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.98	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1269					3126					3165	
Flt Permitted	0.82					0.98					0.98	
Satd. Flow (perm)	1043					3126					3165	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	352	136	11	11	182	261	11	45	11	193	295	23
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	4	0
Lane Group Flow (vph)	533	0	0	0	0	503	0	0	0	0	552	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	398					540					547	
v/s Ratio Prot						c0.16					c0.17	
v/s Ratio Perm	c0.51											
v/c Ratio	1.34					0.93					1.01	
Uniform Delay, d1	34.0					44.9					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	168.8					25.1					40.7	
Delay (s)	202.8					70.0					86.2	
Level of Service	F					E					F	
Approach Delay (s)	202.8					70.0					86.2	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	30
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	34
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	10	30	10	120	50	50	60	20	60	470	90	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.96					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.97			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1573			1453					3207		
Flt Permitted		0.93			0.85					0.80		
Satd. Flow (perm)		1485			1260					2593		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	32	11	128	53	53	64	21	64	500	96	32
RTOR Reduction (vph)	0	9	0	0	12	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	45	0	0	286	0	0	0	0	667	0	0
Confl. Peds. (#/hr)			19				49				8	
Confl. Bikes (#/hr)			7				25				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		18.0			18.0					39.7		
Effective Green, g (s)		18.0			18.0					40.7		
Actuated g/C Ratio		0.22			0.22					0.51		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		334			284					1319		
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.23					c0.26		
v/c Ratio		0.14			1.01					0.51		
Uniform Delay, d1		24.8			31.0					13.0		
Progression Factor		1.00			1.00					0.56		
Incremental Delay, d2		0.1			54.8					1.3		
Delay (s)		24.9			85.8					8.6		
Level of Service		C			F					A		
Approach Delay (s)		24.9			85.8					8.6		
Approach LOS		C			F					A		

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	510	10	10	10	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	0.99				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3282				1515	
Flt Permitted	0.90				0.97	
Satd. Flow (perm)	2949				1515	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	543	11	11	11	53	53
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	597	0	0	0	117	0
Confl. Peds. (#/hr)		4	10			
Confl. Bikes (#/hr)		11	18			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	39.7				9.3	
Effective Green, g (s)	40.7				9.3	
Actuated g/C Ratio	0.51				0.12	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1500				176	
v/s Ratio Prot					c0.08	
v/s Ratio Perm	0.20					
v/c Ratio	0.40				0.66	
Uniform Delay, d1	12.1				33.9	
Progression Factor	1.00				1.00	
Incremental Delay, d2	0.8				7.1	
Delay (s)	12.9				41.0	
Level of Service	B				D	
Approach Delay (s)	12.9				41.0	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	70	50	50	620	50	30	170	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.89	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1749		1770	3265		1770	2888	
Flt Permitted					1.00		0.35	1.00		0.34	1.00	
Satd. Flow (perm)					1749		649	3265		631	2888	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	76	54	54	674	54	33	185	522
RTOR Reduction (vph)	0	0	0	0	28	0	0	7	0	0	209	0
Lane Group Flow (vph)	0	0	0	0	113	0	54	721	0	33	498	0
Confl. Peds. (#/hr)			3			4			11			8
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					525		389	1959		379	1733	
v/s Ratio Prot								c0.22			0.17	
v/s Ratio Perm					0.06		0.08			0.05		
v/c Ratio					0.22		0.14	0.37		0.09	0.29	
Uniform Delay, d1					21.0		7.0	8.2		6.8	7.7	
Progression Factor					1.00		0.82	0.82		1.54	2.13	
Incremental Delay, d2					0.9		0.7	0.5		0.4	0.4	
Delay (s)					21.9		6.4	7.2		10.8	16.8	
Level of Service					C		A	A		B	B	
Approach Delay (s)		0.0			21.9			7.2			16.6	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	520	80	80	0	0	30	0	170	30	40	140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1657				1418		3220			3273	
Flt Permitted	0.95	0.97				1.00		1.00			0.85	
Satd. Flow (perm)	1681	1657				1418		3220			2824	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	578	89	89	0	0	33	0	189	33	44	156	0
RTOR Reduction (vph)	0	14	0	0	0	12	0	18	0	0	0	0
Lane Group Flow (vph)	381	361	0	0	0	21	0	204	0	0	200	0
Confl. Peds. (#/hr)			7						19			5
Confl. Bikes (#/hr)									9			10
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1056				904		845			741	
v/s Ratio Prot								0.06				
v/s Ratio Perm	c0.23	0.22				0.01					c0.07	
v/c Ratio	0.36	0.34				0.02		0.24			0.27	
Uniform Delay, d1	6.8	6.7				5.3		23.2			23.4	
Progression Factor	1.00	1.00				1.00		1.00			0.87	
Incremental Delay, d2	0.9	0.9				0.0		0.7			0.9	
Delay (s)	7.7	7.6				5.4		23.9			21.3	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.7			5.4			23.9			21.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	12.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↱		↰	↑			↱	
Volume (vph)	0	0	0	80	110	160	50	370	0	0	490	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.97		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3156		1770	1863			1818	
Flt Permitted					0.99		0.34	1.00			1.00	
Satd. Flow (perm)					3156		625	1863			1818	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	86	118	172	54	398	0	0	527	54
RTOR Reduction (vph)	0	0	0	0	120	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	256	0	54	398	0	0	575	0
Confl. Peds. (#/hr)			23			27			174			188
Confl. Bikes (#/hr)			2			2			34			36
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					947		354	1056			1030	
v/s Ratio Prot								0.21			c0.32	
v/s Ratio Perm					0.08		0.09					
v/c Ratio					0.27		0.15	0.38			0.56	
Uniform Delay, d1					16.0		6.2	7.2			8.2	
Progression Factor					1.00		1.98	1.86			1.00	
Incremental Delay, d2					0.7		0.8	0.9			2.2	
Delay (s)					16.7		13.0	14.2			10.4	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			16.7			14.1			10.4	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	120	80	0	0	0	0	350	70	160	410	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.81						0.94		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.94						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1240						1717		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1240						1717		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	77	132	88	0	0	0	0	385	77	176	451	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	77	180	0	0	0	0	0	450	0	176	451	0
Confl. Peds. (#/hr)			247			63			289			232
Confl. Bikes (#/hr)			3			5			14			25
Parking (#/hr)		5										
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)	16.0	16.0						27.0		8.0	38.0	
Effective Green, g (s)	15.0	15.0						26.0		7.0	37.0	
Actuated g/C Ratio	0.25	0.25						0.43		0.12	0.62	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	443	310						744		207	1149	
v/s Ratio Prot		c0.15						c0.26		c0.10	0.24	
v/s Ratio Perm	0.04											
v/c Ratio	0.17	0.58						0.60		0.85	0.39	
Uniform Delay, d1	17.6	19.7						13.1		26.0	5.8	
Progression Factor	1.00	1.00						0.84		1.42	0.38	
Incremental Delay, d2	0.9	7.7						3.3		29.7	0.9	
Delay (s)	18.5	27.5						14.3		66.5	3.1	
Level of Service	B	C						B		E	A	
Approach Delay (s)		25.2			0.0			14.3			20.9	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	20	10	10	10	10	20	30	10	20	300	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.97			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1530			1456					1629	
Flt Permitted			0.83			0.97					0.94	
Satd. Flow (perm)			1313			1418					1535	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	22	11	11	11	11	22	32	11	22	323	11
RTOR Reduction (vph)	0	0	8	0	0	25	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	47	0	0	51	0	0	0	0	365	0
Confl. Peds. (#/hr)				30				1				84
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			306			331					640	
v/s Ratio Prot												
v/s Ratio Perm			0.04			c0.04					0.24	
v/c Ratio			0.15			0.16					0.57	
Uniform Delay, d1			18.3			18.3					13.4	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			1.1			1.0					3.7	
Delay (s)			19.3			19.3					17.1	
Level of Service			B			B					B	
Approach Delay (s)			19.3			19.3					17.1	
Approach LOS			B			B					B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	40	350	20	40	10	30	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.91		
Flt Protected		1.00				0.98		
Satd. Flow (prot)		1750				1476		
Flt Permitted		0.95				0.98		
Satd. Flow (perm)		1661				1476		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	43	376	22	43	11	32	32	54
RTOR Reduction (vph)	0	6	0	0	0	43	0	0
Lane Group Flow (vph)	0	478	0	0	0	86	0	0
Confl. Peds. (#/hr)			60	82				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		692				221		
v/s Ratio Prot								
v/s Ratio Perm		c0.29				0.06		
v/c Ratio		0.69				0.39		
Uniform Delay, d1		14.3				23.0		
Progression Factor		0.62				1.00		
Incremental Delay, d2		5.2				5.1		
Delay (s)		14.1				28.1		
Level of Service		B				C		
Approach Delay (s)		14.1				28.1		
Approach LOS		B				C		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	4	20	460	47	6	460
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	4	22	495	51	6	495
Pedestrians	127					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	11					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			219			433
pX, platoon unblocked						
vC, conflicting volume	1154	647			672	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1154	647			672	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	95			99	
cM capacity (veh/h)	193	421			821	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	26	545	501
Volume Left	4	0	6
Volume Right	22	51	0
cSH	352	1700	821
Volume to Capacity	0.07	0.32	0.01
Queue Length 95th (ft)	6	0	1
Control Delay (s)	16.0	0.0	0.2
Lane LOS	C		A
Approach Delay (s)	16.0	0.0	0.2
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
Description: South Driveway/College Avenue			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	55	16	340	430	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	18	59	17	366	462	18
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295		
pX, platoon unblocked						
vC, conflicting volume	695	246	487			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	695	246	487			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	92	98			
cM capacity (veh/h)	369	750	1067			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	77	139	244	308	172
Volume Left	18	17	0	0	0
Volume Right	59	0	0	0	18
cSH	603	1067	1700	1700	1700
Volume to Capacity	0.13	0.02	0.14	0.18	0.10
Queue Length 95th (ft)	11	1	0	0	0
Control Delay (s)	11.9	1.2	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.9	0.4		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	650	85	25	550	140	84	272	64	130	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.97			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1524			3269			1481			1421	
Flt Permitted		0.97			0.91			0.82			0.64	
Satd. Flow (perm)		1484			2996			1223			922	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	684	89	26	579	147	88	286	67	137	328	74
RTOR Reduction (vph)	0	5	0	0	22	0	0	7	0	0	6	0
Lane Group Flow (vph)	0	789	0	0	730	0	0	434	0	0	533	0
Confl. Peds. (#/hr)			105			83			277			231
Confl. Bikes (#/hr)			1			8			33			61
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		719			1451			373			440	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.53			0.24			0.35			c0.42	
v/c Ratio		1.10			0.50			1.16			1.21	
Uniform Delay, d1		24.5			16.7			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		63.5			1.2			99.1			114.3	
Delay (s)		88.0			18.0			132.1			141.3	
Level of Service		F			B			F			F	
Approach Delay (s)		88.0			18.0			132.1			141.3	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	86.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰↑↱			↰↑↱			↰↑↱		↰	↰↑↱	
Volume (vph)	100	650	50	124	560	240	80	413	214	280	253	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.95		1.00	0.98	
Flt Protected		0.99			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3478			3359			3332		1610	3213	
Flt Permitted		0.64			0.64			0.99		0.95	0.99	
Satd. Flow (perm)		2234			2174			3332		1610	3213	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	684	53	131	589	253	84	435	225	295	266	53
RTOR Reduction (vph)	0	5	0	0	35	0	0	48	0	0	11	0
Lane Group Flow (vph)	0	837	0	0	938	0	0	696	0	204	399	0
Confl. Peds. (#/hr)			13			10			5			50
Confl. Bikes (#/hr)			4			2			5			6
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.52			0.52			0.16		0.17	0.17	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1173			1141			550		274	546	
v/s Ratio Prot								c0.21		c0.13	0.12	
v/s Ratio Perm		0.37			c0.43							
v/c Ratio		0.71			0.82			1.26		0.74	0.73	
Uniform Delay, d1		18.0			19.8			41.8		39.4	39.3	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		3.7			6.7			133.1		16.7	8.4	
Delay (s)		21.8			26.6			174.8		56.2	47.7	
Level of Service		C			C			F		E	D	
Approach Delay (s)		21.8			26.6			174.8			50.5	
Approach LOS		C			C			F			D	

Intersection Summary			
HCM Average Control Delay	64.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	72	80	718	122	50	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.98			1.00
Flt Protected	0.98		1.00			0.99
Satd. Flow (prot)	1646		3207			3275
Flt Permitted	0.98		1.00			0.81
Satd. Flow (perm)	1646		3207			2664
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	75	83	748	127	52	456
RTOR Reduction (vph)	50	0	17	0	0	0
Lane Group Flow (vph)	108	0	858	0	0	508
Confl. Peds. (#/hr)	37	33		41		
Confl. Bikes (#/hr)		7		25		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	494		1924			1598
v/s Ratio Prot	c0.07		c0.27			
v/s Ratio Perm						0.19
v/c Ratio	0.22		0.45			0.32
Uniform Delay, d1	21.0		8.7			7.9
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.0		0.8			0.5
Delay (s)	22.0		9.5			8.4
Level of Service	C		A			A
Approach Delay (s)	22.0		9.5			8.4
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	456	140	41	326	114	220	790	81	215	950	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1775		1770	1549		1770	3224		1770	3150	
Flt Permitted	0.25	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	460	1775		229	1549		1770	3224		1770	3150	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	475	146	43	340	119	229	823	84	224	990	94
RTOR Reduction (vph)	0	12	0	0	13	0	0	8	0	0	7	0
Lane Group Flow (vph)	73	609	0	43	446	0	229	899	0	224	1077	0
Confl. Peds. (#/hr)			28			50			49			64
Confl. Bikes (#/hr)			10			25			43			50
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	33.0	33.0		33.0	33.0		14.4	32.3		14.2	32.1	
Effective Green, g (s)	32.5	32.5		32.5	32.5		15.4	34.3		15.2	34.1	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.36		0.16	0.36	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	157	607		78	530		287	1164		283	1131	
v/s Ratio Prot		c0.34			0.29		c0.13	0.28		0.13	c0.34	
v/s Ratio Perm	0.16			0.19								
v/c Ratio	0.46	1.00		0.55	0.84		0.80	0.77		0.79	0.95	
Uniform Delay, d1	24.4	31.2		25.3	28.9		38.3	26.9		38.4	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	37.4		4.7	11.1		13.4	5.0		13.1	17.5	
Delay (s)	25.2	68.7		30.0	40.0		51.7	31.9		51.5	47.1	
Level of Service	C	E		C	D		D	C		D	D	
Approach Delay (s)		64.1			39.1			35.9			47.9	
Approach LOS		E			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	320	202	10	170	30	152	304	30	50	366	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.97			0.97			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.98			0.99			0.98	
Flt Protected		0.99			1.00			0.98			1.00	
Satd. Flow (prot)		1440			1768			1523			1345	
Flt Permitted		0.94			0.97			0.46			0.91	
Satd. Flow (perm)		1367			1722			713			1224	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	337	213	11	179	32	160	320	32	53	385	95
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	613	0	0	215	0	0	509	0	0	523	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		513			646			536			344	
v/s Ratio Prot								c0.19				
v/s Ratio Perm		c0.45			0.12			0.31			c0.43	
v/c Ratio		1.19			0.33			0.95			1.52	
Uniform Delay, d1		25.0			17.8			18.0			28.8	
Progression Factor		1.00			1.34			1.00			1.00	
Incremental Delay, d2		105.6			1.4			28.3			248.5	
Delay (s)		130.6			25.2			46.3			277.2	
Level of Service		F			C			D			F	
Approach Delay (s)		130.6			25.2			46.3			277.2	
Approach LOS		F			C			D			F	

Intersection Summary			
HCM Average Control Delay	136.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	118.5%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	270	100	70	610	400	120
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	290	108	75	656	430	129
Pedestrians	41			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.92					
vC, conflicting volume	1014	322	600			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	852	322	600			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	83	92			
cM capacity (veh/h)	245	651	940			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	398	294	437	287	272
Volume Left	290	75	0	0	0
Volume Right	108	0	0	0	129
cSH	295	940	1700	1700	1700
Volume to Capacity	1.35	0.08	0.26	0.17	0.16
Queue Length 95th (ft)	506	7	0	0	0
Control Delay (s)	212.3	3.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	212.3	1.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	50.5		
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	7	20	35	6	95	30	375	86	103	428	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	7	20	36	6	97	31	383	88	105	437	20
Pedestrians		213			102						212	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		18			9						18	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	1626	1504	660	1261	1470	741	670			572		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1647	1504	519	1221	1465	741	531			572		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	52	89	95	54	91	69	96			89		
cM capacity (veh/h)	21	66	392	77	70	314	730			915		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	139	31	470	105	457
Volume Left	10	36	31	0	105	0
Volume Right	20	97	0	88	0	20
cSH	59	162	730	1700	915	1700
Volume to Capacity	0.64	0.86	0.04	0.28	0.11	0.27
Queue Length 95th (ft)	66	148	3	0	10	0
Control Delay (s)	139.1	93.5	10.1	0.0	9.4	0.0
Lane LOS	F	F	B		A	
Approach Delay (s)	139.1	93.5	0.6		1.8	
Approach LOS	F	F				

Intersection Summary			
Average Delay	15.8		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	108	8	33	10	4	20	66	539	10	40	411	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.98	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1727			1674			3507			3447	
Flt Permitted		0.76			0.92			0.84			0.87	
Satd. Flow (perm)		1364			1562			2978			3019	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	120	9	37	11	4	22	73	599	11	44	457	57
RTOR Reduction (vph)	0	13	0	0	18	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	153	0	0	19	0	0	683	0	0	550	0
Confl. Peds. (#/hr)			20			1			30			22
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		11.7			11.7			35.6			35.6	
Effective Green, g (s)		11.7			11.7			35.6			35.6	
Actuated g/C Ratio		0.18			0.18			0.56			0.56	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		250			286			1662			1685	
v/s Ratio Prot												
v/s Ratio Perm		c0.11			0.01			c0.23			0.18	
v/c Ratio		0.61			0.07			0.41			0.33	
Uniform Delay, d1		24.0			21.5			8.1			7.6	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.4			0.1			0.8			0.5	
Delay (s)		28.3			21.6			8.8			8.1	
Level of Service		C			C			A			A	
Approach Delay (s)		28.3			21.6			8.8			8.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	11.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1656		
Flt Permitted		0.99		
Satd. Flow (perm)		1656		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	0	22	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	35	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		117		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.30		
Uniform Delay, d1		28.1		
Progression Factor		1.00		
Incremental Delay, d2		1.4		
Delay (s)		29.6		
Level of Service		C		
Approach Delay (s)		29.6		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	323	153	10	20	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.78				0.84
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.95				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1155				1317
Flt Permitted			0.98				0.31	1.00				0.83
Satd. Flow (perm)			1483				570	1155				1098
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	344	163	11	21	364
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	510
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				218	441				419
v/s Ratio Prot								0.45				
v/s Ratio Perm			0.07				0.11					c0.46
v/c Ratio			0.51				0.29	1.17				1.22
Uniform Delay, d1			44.8				23.7	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			9.6				3.4	100.1				117.7
Delay (s)			54.4				27.1	134.1				151.7
Level of Service			D				C	F				F
Approach Delay (s)			54.4					122.3				151.7
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	124.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	107	10	10	119	421	20	50	10	203	261	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3151					3164		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3151					3164		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	114	11	11	127	448	21	53	11	216	278	11	21
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	654	0	0	0	0	535	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					544					547		
v/s Ratio Prot					c0.21					c0.17		
v/s Ratio Perm												
v/c Ratio					1.20					0.98		
Uniform Delay, d1					45.5					45.3		
Progression Factor					1.00					1.00		
Incremental Delay, d2					107.8					33.3		
Delay (s)					153.3					78.5		
Level of Service					F					E		
Approach Delay (s)					153.3					78.5		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	22	80	10	120	70	60	62	40	50	633	130	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		1.00			0.94					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1606			1423					3205		
Flt Permitted		0.89			0.82					0.79		
Satd. Flow (perm)		1443			1183					2540		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	23	83	10	125	73	62	65	42	52	659	135	43
RTOR Reduction (vph)	0	4	0	0	12	0	0	0	0	18	0	0
Lane Group Flow (vph)	0	112	0	0	313	0	0	0	0	870	0	0
Confl. Peds. (#/hr)			24				79				6	
Confl. Bikes (#/hr)			12				49				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					34.6		
Effective Green, g (s)		18.0			18.0					35.6		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		325			266					1130		
v/s Ratio Prot												
v/s Ratio Perm		0.08			c0.26					c0.34		
v/c Ratio		0.34			1.18					0.77		
Uniform Delay, d1		26.0			31.0					18.7		
Progression Factor		1.00			1.00					0.80		
Incremental Delay, d2		0.2			112.1					4.7		
Delay (s)		26.3			143.1					19.7		
Level of Service		C			F					B		
Approach Delay (s)		26.3			143.1					19.7		
Approach LOS		C			F					B		

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	522	12	13	13	130	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	0.99				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3274				1525		
Flt Permitted	0.84				0.97		
Satd. Flow (perm)	2748				1525		
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	544	12	14	14	135	83	10
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	613	0	0	0	242	0	0
Confl. Peds. (#/hr)		1	16				
Confl. Bikes (#/hr)		5	16				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	34.6				14.4		
Effective Green, g (s)	35.6				14.4		
Actuated g/C Ratio	0.45				0.18		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1223				275		
v/s Ratio Prot					c0.16		
v/s Ratio Perm	0.22						
v/c Ratio	0.50				0.88		
Uniform Delay, d1	15.9				32.0		
Progression Factor	1.00				1.00		
Incremental Delay, d2	1.5				25.5		
Delay (s)	17.3				57.5		
Level of Service	B				E		
Approach Delay (s)	17.3				57.5		
Approach LOS	B				E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	80	92	70	761	90	52	204	496
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.98		1.00	0.89	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1716		1770	3247		1770	2903	
Flt Permitted					0.99		0.35	1.00		0.28	1.00	
Satd. Flow (perm)					1716		643	3247		521	2903	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	82	94	71	777	92	53	208	506
RTOR Reduction (vph)	0	0	0	0	41	0	0	11	0	0	202	0
Lane Group Flow (vph)	0	0	0	0	155	0	71	858	0	53	512	0
Confl. Peds. (#/hr)			2			8			8			11
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		386	1948		313	1742	
v/s Ratio Prot								c0.26			0.18	
v/s Ratio Perm					0.09		0.11			0.10		
v/c Ratio					0.30		0.18	0.44		0.17	0.29	
Uniform Delay, d1					21.5		7.2	8.7		7.1	7.8	
Progression Factor					1.00		1.61	1.54		1.80	3.30	
Incremental Delay, d2					1.5		1.0	0.7		0.9	0.3	
Delay (s)					23.0		12.6	14.0		13.7	26.0	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			23.0			13.9			25.1	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	456	110	70	0	0	42	0	423	70	32	192	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1669				1418		3236			3286	
Flt Permitted	0.95	0.98				1.00		1.00			0.85	
Satd. Flow (perm)	1681	1669				1418		3236			2801	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	475	115	73	0	0	44	0	441	73	33	200	0
RTOR Reduction (vph)	0	13	0	0	0	16	0	16	0	0	0	0
Lane Group Flow (vph)	332	318	0	0	0	28	0	498	0	0	233	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			20
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1064				904		849			735	
v/s Ratio Prot								c0.15				
v/s Ratio Perm	c0.20	0.19				0.02					0.08	
v/c Ratio	0.31	0.30				0.03		0.59			0.32	
Uniform Delay, d1	6.5	6.5				5.4		25.7			23.7	
Progression Factor	1.00	1.00				1.00		1.00			0.93	
Incremental Delay, d2	0.8	0.7				0.1		3.0			1.1	
Delay (s)	7.3	7.2				5.4		28.7			23.1	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.3			5.4			28.7			23.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	130	205	60	426	0	0	569	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.92		1.00	1.00			0.98	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2979		1770	1863			1802	
Flt Permitted					0.99		0.29	1.00			1.00	
Satd. Flow (perm)					2979		547	1863			1802	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	86	140	220	65	458	0	0	612	87
RTOR Reduction (vph)	0	0	0	0	100	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	346	0	65	458	0	0	693	0
Confl. Peds. (#/hr)			43			71			283			218
Confl. Bikes (#/hr)									67			58
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					745		356	1211			1171	
v/s Ratio Prot								0.25			c0.38	
v/s Ratio Perm					0.12		0.12					
v/c Ratio					0.46		0.18	0.38			0.59	
Uniform Delay, d1					25.5		5.6	6.5			8.0	
Progression Factor					1.00		2.03	2.06			1.00	
Incremental Delay, d2					2.1		0.8	0.7			2.2	
Delay (s)					27.5		12.1	14.1			10.2	
Level of Service					C		B	B			B	
Approach Delay (s)		0.0			27.5			13.8			10.2	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	390	90	0	0	0	0	375	120	205	444	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.90						0.87		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.97						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1427						1561		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1427						1561		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	126	406	94	0	0	0	0	391	125	214	462	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	126	490	0	0	0	0	0	502	0	214	462	0
Confl. Peds. (#/hr)			309			148			529			196
Confl. Bikes (#/hr)			5			9			39			44
Parking (#/hr)		5										
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)	22.0	22.0						34.0		15.0	52.0	
Effective Green, g (s)	21.0	21.0						33.0		14.0	51.0	
Actuated g/C Ratio	0.26	0.26						0.41		0.18	0.64	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	465	375						644		310	1188	
v/s Ratio Prot		c0.34						c0.32		c0.12	0.25	
v/s Ratio Perm	0.07											
v/c Ratio	0.27	1.31						0.78		0.69	0.39	
Uniform Delay, d1	23.4	29.5						20.3		31.0	7.0	
Progression Factor	1.00	1.00						1.00		0.89	0.47	
Incremental Delay, d2	1.4	155.7						9.0		9.9	0.8	
Delay (s)	24.9	185.2						29.4		37.3	4.0	
Level of Service	C	F						C		D	A	
Approach Delay (s)		152.9			0.0			29.4			14.6	
Approach LOS		F			A			C			B	

Intersection Summary			
HCM Average Control Delay	66.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	21	50	20	20	20	40	52	10	40	385	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.97			0.94					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.97			0.91					0.99	
Flt Protected			0.98			0.99					0.99	
Satd. Flow (prot)			1538			1392					1616	
Flt Permitted			0.88			0.95					0.89	
Satd. Flow (perm)			1382			1333					1445	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	11	23	55	22	22	22	44	57	11	44	423	22
RTOR Reduction (vph)	0	0	15	0	0	39	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	96	0	0	106	0	0	0	0	497	0
Confl. Peds. (#/hr)				55				32				118
Confl. Bikes (#/hr)												14
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			322			311					530	
v/s Ratio Prot												
v/s Ratio Perm			0.07			c0.08					0.34	
v/c Ratio			0.30			0.34					0.94	
Uniform Delay, d1			19.0			19.2					18.3	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.4			3.0					26.5	
Delay (s)			21.3			22.1					44.9	
Level of Service			C			C					D	
Approach Delay (s)			21.3			22.1					44.9	
Approach LOS			C			C					D	

Intersection Summary			
HCM Average Control Delay	40.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	62	385	21	31	22	70	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.99				0.93		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1749				1500		
Flt Permitted		0.87				0.98		
Satd. Flow (perm)		1539				1500		
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	68	423	23	34	24	77	55	44
RTOR Reduction (vph)	0	4	0	0	0	17	0	0
Lane Group Flow (vph)	0	544	0	0	0	183	0	0
Confl. Peds. (#/hr)			67	108				
Confl. Bikes (#/hr)			14	6				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		564				300		
v/s Ratio Prot								
v/s Ratio Perm		c0.35				0.12		
v/c Ratio		0.96				0.61		
Uniform Delay, d1		18.6				21.9		
Progression Factor		1.00				1.00		
Incremental Delay, d2		30.2				9.0		
Delay (s)		48.8				30.8		
Level of Service		D				C		
Approach Delay (s)		48.8				30.8		
Approach LOS		D				C		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	50	0	616	438	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	53	0	648	461	28
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.87	0.98	0.98			
vC, conflicting volume	821	267	511			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	382	207	457			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	93	100			
cM capacity (veh/h)	506	767	1057			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	53	216	432	307	182
Volume Left	0	0	0	0	0
Volume Right	53	0	0	0	28
cSH	767	1057	1700	1700	1700
Volume to Capacity	0.07	0.00	0.25	0.18	0.11
Queue Length 95th (ft)	6	0	0	0	0
Control Delay (s)	10.0	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.0	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	530	146	56	470	130	66	205	76	130	236	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.91			0.95			0.92			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1413			3264			1428			1305	
Flt Permitted		0.88			0.83			0.83			0.64	
Satd. Flow (perm)		1252			2727			1203			840	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	564	155	60	500	138	70	218	81	138	251	149
RTOR Reduction (vph)	0	5	0	0	27	0	0	13	0	0	18	0
Lane Group Flow (vph)	0	788	0	0	671	0	0	356	0	0	521	0
Confl. Peds. (#/hr)			202			95			393			505
Confl. Bikes (#/hr)			3			7			13			20
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		657			1432			316			344	
v/s Ratio Prot											c0.09	
v/s Ratio Perm		c0.63			0.25			0.30			c0.47	
v/c Ratio		1.20			0.47			1.13			1.51	
Uniform Delay, d1		19.0			12.0			29.5			25.0	
Progression Factor		1.00			1.00			0.71			1.00	
Incremental Delay, d2		103.8			1.1			71.7			245.4	
Delay (s)		122.8			13.1			92.6			270.4	
Level of Service		F			B			F			F	
Approach Delay (s)		122.8			13.1			92.6			270.4	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	119.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	720	60	95	530	240	80	244	185	330	304	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.98		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.99			0.96			0.95		1.00	0.97	
Flt Protected		1.00			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3484			3341			3247		1610	3220	
Flt Permitted		0.81			0.68			0.99		0.95	0.99	
Satd. Flow (perm)		2833			2275			3247		1610	3220	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	774	65	102	570	258	86	262	199	355	327	97
RTOR Reduction (vph)	0	7	0	0	44	0	0	89	0	0	21	0
Lane Group Flow (vph)	0	886	0	0	886	0	0	458	0	259	499	0
Confl. Peds. (#/hr)			11			22			22			40
Confl. Bikes (#/hr)			4			8			9			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			15.5		16.0	16.0	
Actuated g/C Ratio		0.49			0.49			0.17		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1401			1125			559		286	572	
v/s Ratio Prot								c0.14		c0.16	0.16	
v/s Ratio Perm		0.31			c0.39							
v/c Ratio		0.63			0.79			0.82		0.91	0.87	
Uniform Delay, d1		16.7			18.8			35.9		36.3	36.0	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.2			5.6			12.6		33.7	16.7	
Delay (s)		18.9			24.4			48.5		69.9	52.8	
Level of Service		B			C			D		E	D	
Approach Delay (s)		18.9			24.4			48.5			58.5	
Approach LOS		B			C			D			E	

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	42	60	450	52	30	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.98			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1623		3252			3281
Flt Permitted	0.98		1.00			0.90
Satd. Flow (perm)	1623		3252			2962
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	65	489	57	33	479
RTOR Reduction (vph)	46	0	11	0	0	0
Lane Group Flow (vph)	66	0	535	0	0	512
Confl. Peds. (#/hr)	18	42		25		
Confl. Bikes (#/hr)		5		8		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	487		1951			1777
v/s Ratio Prot	c0.04		0.16			
v/s Ratio Perm						c0.17
v/c Ratio	0.13		0.27			0.29
Uniform Delay, d1	20.4		7.7			7.7
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.6		0.3			0.4
Delay (s)	21.0		8.0			8.1
Level of Service	C		A			A
Approach Delay (s)	21.0		8.0			8.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	288	130	31	257	96	180	540	41	106	760	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1751		1770	1564		1770	3272		1770	3167	
Flt Permitted	0.28	1.00		0.18	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	516	1751		330	1564		1770	3272		1770	3167	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	303	137	33	271	101	189	568	43	112	800	84
RTOR Reduction (vph)	0	19	0	0	15	0	0	5	0	0	7	0
Lane Group Flow (vph)	74	421	0	33	357	0	189	606	0	112	877	0
Confl. Peds. (#/hr)			26			23			23			42
Confl. Bikes (#/hr)			2			2			5			15
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	26.9	26.9		26.9	26.9		13.2	42.2		10.4	39.4	
Effective Green, g (s)	26.4	26.4		26.4	26.4		14.2	44.2		11.4	41.4	
Actuated g/C Ratio	0.28	0.28		0.28	0.28		0.15	0.47		0.12	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	143	487		92	435		265	1522		212	1380	
v/s Ratio Prot		c0.24			0.23		c0.11	c0.19		0.06	c0.28	
v/s Ratio Perm	0.14			0.10								
v/c Ratio	0.52	0.86		0.36	0.82		0.71	0.40		0.53	0.64	
Uniform Delay, d1	28.9	32.6		27.5	32.1		38.5	16.7		39.3	20.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	14.3		0.9	11.2		7.4	0.8		1.1	2.2	
Delay (s)	30.2	46.9		28.4	43.3		45.8	17.5		40.4	23.2	
Level of Service	C	D		C	D		D	B		D	C	
Approach Delay (s)		44.5			42.1			24.2			25.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	120	216	20	120	20	145	346	30	10	334	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.98			0.99			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.98			0.99			0.97	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1402			1784			1546			1341	
Flt Permitted		0.94			0.93			0.49			0.98	
Satd. Flow (perm)		1326			1667			774			1320	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	129	232	22	129	22	156	372	32	11	359	86
RTOR Reduction (vph)	0	57	0	0	6	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	358	0	0	167	0	0	557	0	0	445	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		497			625			561			371	
v/s Ratio Prot								c0.20				
v/s Ratio Perm		c0.27			0.10			0.32			c0.34	
v/c Ratio		0.72			0.27			0.99			1.20	
Uniform Delay, d1		21.4			17.4			18.9			28.8	
Progression Factor		1.00			1.40			1.00			0.96	
Incremental Delay, d2		8.7			1.0			36.4			92.6	
Delay (s)		30.1			25.3			55.2			120.1	
Level of Service		C			C			E			F	
Approach Delay (s)		30.1			25.3			55.2			120.1	
Approach LOS		C			C			E			F	

Intersection Summary			
HCM Average Control Delay	63.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	90	60	40	392	399	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	96	64	43	417	424	96
Pedestrians	18			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked						
vC, conflicting volume	784	281	538			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	784	281	538			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	69	91	96			
cM capacity (veh/h)	312	703	1011			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	160	182	278	283	237
Volume Left	96	43	0	0	0
Volume Right	64	0	0	0	96
cSH	401	1011	1700	1700	1700
Volume to Capacity	0.40	0.04	0.16	0.17	0.14
Queue Length 95th (ft)	47	3	0	0	0
Control Delay (s)	19.8	2.3	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	19.8	0.9		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	30	43	8	110	20	406	108	124	423	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	33	47	9	120	22	441	117	135	460	22
Pedestrians		274			127			2			166	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		23			11			0			14	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked												
vC, conflicting volume	1789	1743	747	1440	1696	793	756			686		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1789	1743	747	1440	1696	793	756			686		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	25	77	90	4	83	60	97			83		
cM capacity (veh/h)	14	48	318	49	52	299	660			812		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	175	22	559	135	482
Volume Left	11	47	22	0	135	0
Volume Right	33	120	0	117	0	22
cSH	50	114	660	1700	812	1700
Volume to Capacity	1.08	1.53	0.03	0.33	0.17	0.28
Queue Length 95th (ft)	119	318	3	0	15	0
Control Delay (s)	281.8	345.4	10.6	0.0	10.3	0.0
Lane LOS	F	F	B		B	
Approach Delay (s)	281.8	345.4	0.4		2.3	
Approach LOS	F	F				

Intersection Summary			
Average Delay	54.3		
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	93	6	55	10	5	20	72	307	10	20	390	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.92			1.00			0.98	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1698			1677			3489			3461	
Flt Permitted		0.79			0.92			0.81			0.93	
Satd. Flow (perm)		1387			1573			2852			3232	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	100	6	59	11	5	22	77	330	11	22	419	54
RTOR Reduction (vph)	0	25	0	0	18	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	140	0	0	20	0	0	418	0	0	487	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		10.7			10.7			36.0			36.0	
Effective Green, g (s)		10.7			10.7			36.0			36.0	
Actuated g/C Ratio		0.18			0.18			0.60			0.60	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		247			281			1711			1939	
v/s Ratio Prot												
v/s Ratio Perm		c0.10			0.01			0.15			c0.15	
v/c Ratio		0.56			0.07			0.24			0.25	
Uniform Delay, d1		22.5			20.5			5.6			5.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.9			0.1			0.3			0.3	
Delay (s)		25.5			20.6			6.0			6.0	
Level of Service		C			C			A			A	
Approach Delay (s)		25.5			20.6			6.0			6.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.3	
Effective Green, g (s)		1.3	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		37	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.62	
Uniform Delay, d1		29.1	
Progression Factor		1.00	
Incremental Delay, d2		28.2	
Delay (s)		57.3	
Level of Service		E	
Approach Delay (s)		57.3	
Approach LOS		E	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	317	107	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.84				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1262				
Flt Permitted			0.98				0.28	1.00				
Satd. Flow (perm)			1482				522	1262				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	360	122	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	493	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				199	482				
v/s Ratio Prot								0.39				
v/s Ratio Perm			0.07				0.13					
v/c Ratio			0.54				0.34	1.02				
Uniform Delay, d1			45.0				24.2	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			10.6				4.6	46.9				
Delay (s)			55.6				28.8	80.9				
Level of Service			E				C	F				
Approach Delay (s)			55.6					74.6				
Approach LOS			E					E				

Intersection Summary			
HCM Average Control Delay	133.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	326	130	10	10	171	244	10	40	10	188	274	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1261					3133					3168	
Flt Permitted	0.76					0.98					0.98	
Satd. Flow (perm)	960					3133					3168	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	370	148	11	11	194	277	11	45	11	214	311	23
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	4	0
Lane Group Flow (vph)	563	0	0	0	0	532	0	0	0	0	589	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	367					541					547	
v/s Ratio Prot						c0.17					c0.19	
v/s Ratio Perm	c0.59											
v/c Ratio	1.53					0.98					1.08	
Uniform Delay, d1	34.0					45.3					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	253.7					34.9					60.7	
Delay (s)	287.7					80.2					106.2	
Level of Service	F					F					F	
Approach Delay (s)	287.7					80.2					106.2	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	30
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	34
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	13	30	10	120	50	50	62	20	60	486	90	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.96					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.97			0.95					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1573			1452					3210		
Flt Permitted		0.91			0.85					0.80		
Satd. Flow (perm)		1452			1264					2586		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	32	11	128	53	53	66	21	64	517	96	34
RTOR Reduction (vph)	0	9	0	0	12	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	48	0	0	288	0	0	0	0	684	0	0
Confl. Peds. (#/hr)			19				49				8	
Confl. Bikes (#/hr)			7				25				6	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		18.0			18.0					39.6		
Effective Green, g (s)		18.0			18.0					40.6		
Actuated g/C Ratio		0.22			0.22					0.51		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		327			284					1312		
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.23					c0.26		
v/c Ratio		0.15			1.01					0.52		
Uniform Delay, d1		24.9			31.0					13.2		
Progression Factor		1.00			1.00					0.57		
Incremental Delay, d2		0.1			56.7					1.4		
Delay (s)		24.9			87.7					9.0		
Level of Service		C			F					A		
Approach Delay (s)		24.9			87.7					9.0		
Approach LOS		C			F					A		

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	526	13	13	14	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	0.99				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3275				1517	
Flt Permitted	0.89				0.97	
Satd. Flow (perm)	2930				1517	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	560	14	14	15	53	53
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	622	0	0	0	121	0
Confl. Peds. (#/hr)		4	10			
Confl. Bikes (#/hr)		11	18			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	39.6				9.4	
Effective Green, g (s)	40.6				9.4	
Actuated g/C Ratio	0.51				0.12	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1487				178	
v/s Ratio Prot					c0.08	
v/s Ratio Perm	0.21					
v/c Ratio	0.42				0.68	
Uniform Delay, d1	12.3				33.9	
Progression Factor	1.00				1.00	
Incremental Delay, d2	0.9				7.9	
Delay (s)	13.2				41.7	
Level of Service	B				D	
Approach Delay (s)	13.2				41.7	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	70	52	50	634	50	32	176	488
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.89	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1746		1770	3266		1770	2890	
Flt Permitted					1.00		0.34	1.00		0.33	1.00	
Satd. Flow (perm)					1746		637	3266		618	2890	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	76	57	54	689	54	35	191	530
RTOR Reduction (vph)	0	0	0	0	29	0	0	7	0	0	212	0
Lane Group Flow (vph)	0	0	0	0	115	0	54	736	0	35	509	0
Confl. Peds. (#/hr)			3			4			11			8
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					524		382	1960		371	1734	
v/s Ratio Prot								c0.23			0.18	
v/s Ratio Perm					0.07		0.08			0.06		
v/c Ratio					0.22		0.14	0.38		0.09	0.29	
Uniform Delay, d1					21.0		7.0	8.3		6.8	7.8	
Progression Factor					1.00		0.82	0.81		1.59	2.32	
Incremental Delay, d2					1.0		0.7	0.5		0.4	0.4	
Delay (s)					21.9		6.5	7.3		11.2	18.4	
Level of Service					C		A	A		B	B	
Approach Delay (s)		0.0			21.9			7.2			18.1	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	528	80	80	0	0	32	0	174	30	42	144	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1657				1418		3222			3272	
Flt Permitted	0.95	0.97				1.00		1.00			0.85	
Satd. Flow (perm)	1681	1657				1418		3222			2804	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	587	89	89	0	0	36	0	193	33	47	160	0
RTOR Reduction (vph)	0	14	0	0	0	13	0	17	0	0	0	0
Lane Group Flow (vph)	387	364	0	0	0	23	0	209	0	0	207	0
Confl. Peds. (#/hr)			7						19			5
Confl. Bikes (#/hr)									9			10
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1056				904		846			736	
v/s Ratio Prot								0.06				
v/s Ratio Perm	c0.23	0.22				0.02					c0.07	
v/c Ratio	0.36	0.34				0.03		0.25			0.28	
Uniform Delay, d1	6.8	6.7				5.3		23.3			23.5	
Progression Factor	1.00	1.00				1.00		1.00			0.88	
Incremental Delay, d2	0.9	0.9				0.1		0.7			0.9	
Delay (s)	7.8	7.6				5.4		24.0			21.7	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.7			5.4			24.0			21.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	80	110	167	50	390	0	0	515	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.97		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3149		1770	1863			1819	
Flt Permitted					0.99		0.32	1.00			1.00	
Satd. Flow (perm)					3149		588	1863			1819	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	86	118	180	54	419	0	0	554	55
RTOR Reduction (vph)	0	0	0	0	126	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	258	0	54	419	0	0	603	0
Confl. Peds. (#/hr)			23			27			174			188
Confl. Bikes (#/hr)			2			2			34			36
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					945		333	1056			1031	
v/s Ratio Prot								0.22			c0.33	
v/s Ratio Perm					0.08		0.09					
v/c Ratio					0.27		0.16	0.40			0.58	
Uniform Delay, d1					16.0		6.2	7.3			8.4	
Progression Factor					1.00		2.00	1.89			1.00	
Incremental Delay, d2					0.7		0.9	0.9			2.4	
Delay (s)					16.7		13.3	14.7			10.9	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			16.7			14.5			10.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	120	80	0	0	0	0	369	70	167	428	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.81						0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.94						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1240						1723		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1240						1723		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	132	88	0	0	0	0	405	77	184	470	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	78	180	0	0	0	0	0	471	0	184	470	0
Confl. Peds. (#/hr)			247			63			289			232
Confl. Bikes (#/hr)			3			5			14			25
Parking (#/hr)		5										
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)	16.0	16.0						27.0		8.0	38.0	
Effective Green, g (s)	15.0	15.0						26.0		7.0	37.0	
Actuated g/C Ratio	0.25	0.25						0.43		0.12	0.62	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	443	310						747		207	1149	
v/s Ratio Prot		c0.15						c0.27		c0.10	0.25	
v/s Ratio Perm	0.04											
v/c Ratio	0.18	0.58						0.63		0.89	0.41	
Uniform Delay, d1	17.7	19.7						13.3		26.1	5.9	
Progression Factor	1.00	1.00						0.85		1.42	0.36	
Incremental Delay, d2	0.9	7.7						3.7		34.8	0.9	
Delay (s)	18.5	27.5						14.9		71.9	3.0	
Level of Service	B	C						B		E	A	
Approach Delay (s)		25.1			0.0			14.9			22.4	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	21	10	10	10	10	20	33	10	20	306	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.97			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1531			1454					1629	
Flt Permitted			0.83			0.97					0.94	
Satd. Flow (perm)			1308			1416					1536	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	23	11	11	11	11	22	35	11	22	329	11
RTOR Reduction (vph)	0	0	8	0	0	27	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	48	0	0	52	0	0	0	0	371	0
Confl. Peds. (#/hr)				30				1				84
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			305			330					640	
v/s Ratio Prot												
v/s Ratio Perm			0.04			c0.04					0.24	
v/c Ratio			0.16			0.16					0.58	
Uniform Delay, d1			18.3			18.3					13.5	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			1.1			1.0					3.8	
Delay (s)			19.4			19.3					17.3	
Level of Service			B			B					B	
Approach Delay (s)			19.4			19.3					17.3	
Approach LOS			B			B					B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	43	356	21	42	12	30	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.91		
Flt Protected		1.00				0.98		
Satd. Flow (prot)		1748				1477		
Flt Permitted		0.94				0.98		
Satd. Flow (perm)		1653				1477		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	46	383	23	45	13	32	32	54
RTOR Reduction (vph)	0	6	0	0	0	43	0	0
Lane Group Flow (vph)	0	491	0	0	0	89	0	0
Confl. Peds. (#/hr)			60	82				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		689				222		
v/s Ratio Prot								
v/s Ratio Perm		c0.30				0.06		
v/c Ratio		0.71				0.40		
Uniform Delay, d1		14.5				23.1		
Progression Factor		0.63				1.00		
Incremental Delay, d2		5.7				5.3		
Delay (s)		14.8				28.3		
Level of Service		B				C		
Approach Delay (s)		14.8				28.3		
Approach LOS		B				C		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	78	0	387	439	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	84	0	416	472	33
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.99	0.99	0.99			
vC, conflicting volume	703	259	511			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	683	236	490			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	100			
cM capacity (veh/h)	378	756	1055			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	84	139	277	315	191
Volume Left	0	0	0	0	0
Volume Right	84	0	0	0	33
cSH	756	1055	1700	1700	1700
Volume to Capacity	0.11	0.00	0.16	0.19	0.11
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.4	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	24.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	650	85	25	550	140	84	272	64	130	312	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.98			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1545			3269			1482			1421	
Flt Permitted		0.97			0.91			0.79			0.73	
Satd. Flow (perm)		1504			2996			1182			1055	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	684	89	26	579	147	88	286	67	137	328	74
RTOR Reduction (vph)	0	5	0	0	22	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	789	0	0	730	0	0	435	0	0	533	0
Confl. Peds. (#/hr)			105			83			277			231
Confl. Bikes (#/hr)			1			8			33			61
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			41.0			41.0	
Effective Green, g (s)		46.0			46.0			41.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.43			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		728			1451			510			455	
v/s Ratio Prot												
v/s Ratio Perm		c0.52			0.24			0.37			c0.51	
v/c Ratio		1.08			0.50			0.85			1.17	
Uniform Delay, d1		24.5			16.7			24.3			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		58.5			0.1			12.6			98.1	
Delay (s)		83.0			16.8			36.9			125.1	
Level of Service		F			B			D			F	
Approach Delay (s)		83.0			16.8			36.9			125.1	
Approach LOS		F			B			D			F	

Intersection Summary			
HCM Average Control Delay	64.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	320	202	10	170	30	152	304	30	50	366	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.97		1.00	0.96		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1441			1768		1770	1519		1770	1330	
Flt Permitted		0.94			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1367			1716		1770	1519		1770	1330	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	337	213	11	179	32	160	320	32	53	385	95
RTOR Reduction (vph)	0	0	0	0	8	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	613	0	0	214	0	160	348	0	53	469	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		31.0			31.0		10.0	30.0		5.0	24.5	
Effective Green, g (s)		32.0			32.0		9.5	31.0		6.0	25.5	
Actuated g/C Ratio		0.40			0.40		0.12	0.39		0.08	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		547			686		210	589		133	424	
v/s Ratio Prot							c0.09	0.23		0.03	c0.35	
v/s Ratio Perm		c0.45			0.12							
v/c Ratio		1.12			0.31		0.76	0.59		0.40	1.11	
Uniform Delay, d1		24.0			16.5		34.2	19.5		35.3	27.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		76.1			1.2		22.6	4.3		8.7	75.8	
Delay (s)		100.1			17.6		56.8	23.8		44.0	103.0	
Level of Service		F			B		E	C		D	F	
Approach Delay (s)		100.1			17.6			34.1			97.1	
Approach LOS		F			B			C			F	

Intersection Summary			
HCM Average Control Delay	71.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	270	100	70	610	400	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	1.00			1.00	0.97	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.97	
Flt Protected	0.96			0.99	1.00	
Satd. Flow (prot)	1724			3521	3327	
Flt Permitted	0.96			0.85	1.00	
Satd. Flow (perm)	1724			2999	3327	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	290	108	75	656	430	129
RTOR Reduction (vph)	21	0	0	0	27	0
Lane Group Flow (vph)	377	0	0	731	532	0
Confl. Peds. (#/hr)		1				41
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	18.5			36.3	36.3	
Effective Green, g (s)	18.5			36.3	36.3	
Actuated g/C Ratio	0.29			0.58	0.58	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	508			1733	1923	
v/s Ratio Prot	c0.22				0.16	
v/s Ratio Perm				c0.24		
v/c Ratio	0.74			0.42	0.28	
Uniform Delay, d1	20.0			7.4	6.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	5.8			0.8	0.4	
Delay (s)	25.8			8.1	7.0	
Level of Service	C			A	A	
Approach Delay (s)	25.8			8.1	7.0	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	62.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	323	153	10	20	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.78				0.84
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.95				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1158				1319
Flt Permitted			0.98				0.34	1.00				0.94
Satd. Flow (perm)			1483				637	1158				1243
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	344	163	11	21	364
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	510
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				46.0	46.0				46.0
Effective Green, g (s)			6.0				47.0	47.0				47.0
Actuated g/C Ratio			0.05				0.43	0.43				0.43
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				272	495				531
v/s Ratio Prot								c0.45				
v/s Ratio Perm			0.07				0.10					0.41
v/c Ratio			1.20				0.24	1.05				0.96
Uniform Delay, d1			52.0				20.1	31.5				30.6
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			162.6				2.0	53.1				30.4
Delay (s)			214.6				22.1	84.6				61.0
Level of Service			F				C	F				E
Approach Delay (s)			214.6					77.8				61.0
Approach LOS			F					E				E

Intersection Summary			
HCM Average Control Delay	85.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	107	10	10	119	421	20	50	10	203	261	10	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3151					3164		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3151					3164		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	114	11	11	127	448	21	53	11	216	278	11	21
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	654	0	0	0	0	535	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					21.0					20.0		
Effective Green, g (s)					21.0					20.0		
Actuated g/C Ratio					0.19					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					602					575		
v/s Ratio Prot					c0.21					c0.17		
v/s Ratio Perm												
v/c Ratio					1.09					0.93		
Uniform Delay, d1					44.5					44.3		
Progression Factor					1.00					1.00		
Incremental Delay, d2					62.5					23.7		
Delay (s)					107.0					68.0		
Level of Service					F					E		
Approach Delay (s)					107.0					68.0		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	530	146	56	470	130	66	205	76	130	236	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.95			0.95			0.92			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1468			3263			1429			1305	
Flt Permitted		0.88			0.83			0.81			0.76	
Satd. Flow (perm)		1301			2714			1173			999	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	74	564	155	60	500	138	70	218	81	138	251	149
RTOR Reduction (vph)	0	6	0	0	27	0	0	11	0	0	17	0
Lane Group Flow (vph)	0	787	0	0	671	0	0	358	0	0	521	0
Confl. Peds. (#/hr)			202			95			393			505
Confl. Bikes (#/hr)			3			7			13			20
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		41.0			41.0			31.0			31.0	
Effective Green, g (s)		41.0			41.0			31.0			31.0	
Actuated g/C Ratio		0.51			0.51			0.39			0.39	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		667			1391			455			387	
v/s Ratio Prot												
v/s Ratio Perm		c0.60			0.25			0.31			c0.52	
v/c Ratio		1.18			0.48			0.79			1.35	
Uniform Delay, d1		19.5			12.6			21.6			24.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		95.7			0.1			8.1			172.0	
Delay (s)		115.2			12.7			29.7			196.5	
Level of Service		F			B			C			F	
Approach Delay (s)		115.2			12.7			29.7			196.5	
Approach LOS		F			B			C			F	

Intersection Summary			
HCM Average Control Delay	90.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	122.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	120	216	20	120	20	145	346	30	10	334	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.98		1.00	0.98		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1401			1784		1770	1552		1770	1335	
Flt Permitted		0.94			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1325			1679		1770	1552		1770	1335	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	129	232	22	129	22	156	372	32	11	359	86
RTOR Reduction (vph)	0	57	0	0	7	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	358	0	0	167	0	156	400	0	11	434	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		27.0			27.0		10.5	34.0		5.0	28.0	
Effective Green, g (s)		28.0			28.0		10.0	35.0		6.0	29.0	
Actuated g/C Ratio		0.35			0.35		0.12	0.44		0.08	0.36	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		464			588		221	679		133	484	
v/s Ratio Prot							c0.09	0.26		0.01	c0.33	
v/s Ratio Perm		c0.27			0.10							
v/c Ratio		0.77			0.28		0.71	0.59		0.08	0.90	
Uniform Delay, d1		23.1			18.8		33.6	17.1		34.4	24.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		11.7			1.2		17.3	3.7		1.2	22.0	
Delay (s)		34.9			20.0		50.9	20.8		35.7	46.1	
Level of Service		C			B		D	C		D	D	
Approach Delay (s)		34.9			20.0			29.2			45.8	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	60	40	392	399	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.95			1.00	0.97	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1700			3523	3403	
Flt Permitted	0.97			0.89	1.00	
Satd. Flow (perm)	1700			3136	3403	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	96	64	43	417	424	96
RTOR Reduction (vph)	42	0	0	0	14	0
Lane Group Flow (vph)	118	0	0	460	506	0
Confl. Peds. (#/hr)		3				18
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	9.1			40.8	40.8	
Effective Green, g (s)	9.1			40.8	40.8	
Actuated g/C Ratio	0.16			0.70	0.70	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	267			2210	2398	
v/s Ratio Prot	c0.07				c0.15	
v/s Ratio Perm				0.15		
v/c Ratio	0.44			0.21	0.21	
Uniform Delay, d1	22.1			3.0	3.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.2			0.2	0.2	
Delay (s)	23.3			3.2	3.2	
Level of Service	C			A	A	
Approach Delay (s)	23.3			3.2	3.2	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	6.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	317	107	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.84				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1262				
Flt Permitted			0.98				0.32	1.00				
Satd. Flow (perm)			1482				601	1262				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	360	122	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	493	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				47.0	47.0				
Effective Green, g (s)			6.0				48.0	48.0				
Actuated g/C Ratio			0.05				0.44	0.44				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				262	551				
v/s Ratio Prot								0.39				
v/s Ratio Perm			0.07				0.11					
v/c Ratio			1.26				0.26	0.89				
Uniform Delay, d1			52.0				19.7	28.7				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			184.8				2.4	19.6				
Delay (s)			236.8				22.1	48.3				
Level of Service			F				C	D				
Approach Delay (s)			236.8					45.1				
Approach LOS			F					D				

Intersection Summary			
HCM Average Control Delay	89.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	326	130	10	10	171	244	10	40	10	188	274	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.81					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1261					3133					3168	
Flt Permitted	0.88					0.98					0.98	
Satd. Flow (perm)	1108					3133					3168	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	370	148	11	11	194	277	11	45	11	214	311	23
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	4	0
Lane Group Flow (vph)	563	0	0	0	0	531	0	0	0	0	589	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	47.0					20.0					20.0	
Effective Green, g (s)	48.0					20.0					20.0	
Actuated g/C Ratio	0.44					0.18					0.18	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	483					570					576	
v/s Ratio Prot						c0.17					c0.19	
v/s Ratio Perm	c0.51											
v/c Ratio	1.17					0.93					1.02	
Uniform Delay, d1	31.0					44.3					45.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	95.1					24.2					43.3	
Delay (s)	126.1					68.6					88.3	
Level of Service	F					E					F	
Approach Delay (s)	126.1					68.6					88.3	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	30
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	34
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	352	170	14	201	93	121	241	37	121	295	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.94			0.96			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.96			0.99			0.98	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1473			1673			1497			1336	
Flt Permitted		0.93			0.97			0.63			0.79	
Satd. Flow (perm)		1380			1628			955			1068	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	371	179	15	212	98	127	254	39	127	311	95
RTOR Reduction (vph)	0	0	0	0	19	0	0	5	0	0	10	0
Lane Group Flow (vph)	0	613	0	0	306	0	0	415	0	0	523	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		518			611			610			300	
v/s Ratio Prot								c0.14				
v/s Ratio Perm		c0.44			0.19			0.22			c0.49	
v/c Ratio		1.18			0.50			0.68			1.74	
Uniform Delay, d1		25.0			19.2			14.0			28.8	
Progression Factor		1.00			1.24			1.00			1.00	
Incremental Delay, d2		100.9			2.9			6.0			347.9	
Delay (s)		125.9			26.8			20.1			376.7	
Level of Service		F			C			C			F	
Approach Delay (s)		125.9			26.8			20.1			376.7	
Approach LOS		F			C			C			F	

Intersection Summary			
HCM Average Control Delay	156.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	270	210	168	610	400	120
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	290	226	181	656	430	129
Pedestrians	41			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.91					
vC, conflicting volume	1225	322	600			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1043	322	600			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	65	81			
cM capacity (veh/h)	159	651	940			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	516	399	437	287	272
Volume Left	290	181	0	0	0
Volume Right	226	0	0	0	129
cSH	238	940	1700	1700	1700
Volume to Capacity	2.17	0.19	0.26	0.17	0.16
Queue Length 95th (ft)	992	18	0	0	0
Control Delay (s)	574.1	5.6	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	574.1	2.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	156.2		
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	20	32	376	428	24
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	17	20	33	384	437	24
Pedestrians	213					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	18					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked	0.90	0.90	0.90			
vC, conflicting volume	1111	662	674			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1067	566	580			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	95	96			
cM capacity (veh/h)	173	386	734			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	38	416	461
Volume Left	17	33	0
Volume Right	20	0	24
cSH	247	734	1700
Volume to Capacity	0.15	0.04	0.27
Queue Length 95th (ft)	13	3	0
Control Delay (s)	22.2	1.3	0.0
Lane LOS	C	A	
Approach Delay (s)	22.2	1.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	10	4	20	152	538	10	40	446	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.97	
Flt Protected		0.96			0.99			0.99			1.00	
Satd. Flow (prot)		1735			1675			3490			3369	
Flt Permitted		0.75			0.92			0.66			0.87	
Satd. Flow (perm)		1349			1556			2313			2949	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	9	56	11	4	22	169	598	11	44	496	140
RTOR Reduction (vph)	0	10	0	0	17	0	0	0	0	0	24	0
Lane Group Flow (vph)	0	285	0	0	20	0	0	778	0	0	657	0
Confl. Peds. (#/hr)			20			1			30			22
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm					
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2					
Actuated Green, G (s)		16.1			16.1			32.6			32.6	
Effective Green, g (s)		16.1			16.1			32.6			32.6	
Actuated g/C Ratio		0.25			0.25			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		333			384			1157			1475	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.34			0.22	
v/c Ratio		0.86			0.05			0.67			2.98dl	
Uniform Delay, d1		23.4			18.7			12.3			10.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		19.0			0.1			3.1			1.0	
Delay (s)		42.4			18.8			15.4			11.5	
Level of Service		D			B			B			B	
Approach Delay (s)		42.4			18.8			15.4			11.5	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	65.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1656		
Flt Permitted		0.99		
Satd. Flow (perm)		1656		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	0	22	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	35	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		114		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.30		
Uniform Delay, d1		28.9		
Progression Factor		1.00		
Incremental Delay, d2		1.5		
Delay (s)		30.4		
Level of Service		C		
Approach Delay (s)		30.4		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	262	214	10	20	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.69				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.93				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1011				1331
Flt Permitted			0.98				0.33	1.00				0.83
Satd. Flow (perm)			1483				616	1011				1108
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	279	228	11	21	341
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	472
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				235	386				423
v/s Ratio Prot								c0.51				
v/s Ratio Perm			0.07				0.10					0.43
v/c Ratio			0.51				0.27	1.34				1.12
Uniform Delay, d1			44.8				23.5	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			9.6				2.8	170.4				79.1
Delay (s)			54.4				26.3	204.4				113.1
Level of Service			D				C	F				F
Approach Delay (s)			54.4					184.8				113.1
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	135.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	93	10	10	95	445	20	50	10	224	275	10	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3157					3163		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3157					3163		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	99	11	11	101	473	21	53	11	238	293	11	23
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	653	0	0	0	0	574	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					545					546		
v/s Ratio Prot					c0.21					c0.18		
v/s Ratio Perm												
v/c Ratio					1.20					1.05		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					106.1					52.4		
Delay (s)					151.6					97.9		
Level of Service					F					F		
Approach Delay (s)					151.6					97.9		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	72	0	704	457	61
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	76	0	741	481	64
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.87	0.97	0.97			
vC, conflicting volume	906	295	567			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	413	198	481			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	484	767	1022			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	76	247	494	321	225
Volume Left	0	0	0	0	0
Volume Right	76	0	0	0	64
cSH	767	1022	1700	1700	1700
Volume to Capacity	0.10	0.00	0.29	0.19	0.13
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	161	175	25	154	95	111	271	40	92	252	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.94			0.95			0.98			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.95			0.99			0.97	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1447			1675			1525			1328	
Flt Permitted		0.93			0.95			0.69			0.81	
Satd. Flow (perm)		1352			1593			1060			1081	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	173	188	27	166	102	119	291	43	99	271	86
RTOR Reduction (vph)	0	38	0	0	24	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	378	0	0	271	0	0	448	0	0	445	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		507			597			650			304	
v/s Ratio Prot								c0.14				
v/s Ratio Perm		c0.28			0.17			0.22			c0.41	
v/c Ratio		0.74			0.45			0.69			1.46	
Uniform Delay, d1		21.7			18.8			14.1			28.8	
Progression Factor		1.00			1.25			1.00			0.95	
Incremental Delay, d2		9.6			2.5			5.9			210.7	
Delay (s)		31.2			26.0			20.1			238.0	
Level of Service		C			C			C			F	
Approach Delay (s)		31.2			26.0			20.1			238.0	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM Average Control Delay	85.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	90	193	154	392	399	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	96	205	164	417	424	96
Pedestrians	18			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked						
vC, conflicting volume	1027	281	538			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1027	281	538			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	50	71	84			
cM capacity (veh/h)	190	703	1011			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	301	303	278	283	237
Volume Left	96	164	0	0	0
Volume Right	205	0	0	0	96
cSH	379	1011	1700	1700	1700
Volume to Capacity	0.80	0.16	0.16	0.17	0.14
Queue Length 95th (ft)	171	14	0	0	0
Control Delay (s)	42.8	5.8	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	42.8	3.0		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	10.4		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	30	23	407	424	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	33	25	442	461	27
Pedestrians	274			2		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	23			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked						
vC, conflicting volume	1241	750	762			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1241	750	762			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	85	90	96			
cM capacity (veh/h)	143	317	656			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	467	488
Volume Left	22	25	0
Volume Right	33	0	27
cSH	213	656	1700
Volume to Capacity	0.25	0.04	0.29
Queue Length 95th (ft)	24	3	0
Control Delay (s)	27.5	1.1	0.0
Lane LOS	D	A	
Approach Delay (s)	27.5	1.1	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	10	5	20	180	306	10	20	431	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			1.00			0.96	
Flt Protected		0.97			0.99			0.98			1.00	
Satd. Flow (prot)		1722			1679			3462			3378	
Flt Permitted		0.76			0.90			0.61			0.93	
Satd. Flow (perm)		1362			1532			2140			3152	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	224	6	83	11	5	22	194	329	11	22	463	153
RTOR Reduction (vph)	0	15	0	0	15	0	0	0	0	0	30	0
Lane Group Flow (vph)	0	298	0	0	23	0	0	534	0	0	608	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		17.3			17.3			27.4			27.4	
Effective Green, g (s)		17.3			17.3			27.4			27.4	
Actuated g/C Ratio		0.30			0.30			0.47			0.47	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		406			457			1011			1489	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.01			c0.25			0.19	
v/c Ratio		0.73			0.05			0.53			0.41	
Uniform Delay, d1		18.3			14.5			10.8			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		6.7			0.0			2.0			0.8	
Delay (s)		25.0			14.5			12.7			10.8	
Level of Service		C			B			B			B	
Approach Delay (s)		25.0			14.5			12.7			10.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.3	
Effective Green, g (s)		1.3	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		38	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.61	
Uniform Delay, d1		28.1	
Progression Factor		1.00	
Incremental Delay, d2		24.3	
Delay (s)		52.4	
Level of Service		D	
Approach Delay (s)		52.4	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	245	179	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.74				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1086				
Flt Permitted			0.98				0.31	1.00				
Satd. Flow (perm)			1482				576	1086				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	278	203	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	492	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				220	415				
v/s Ratio Prot								0.45				
v/s Ratio Perm			0.07				0.12					
v/c Ratio			0.54				0.31	1.19				
Uniform Delay, d1			45.0				23.8	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			10.6				3.6	105.4				
Delay (s)			55.6				27.4	139.4				
Level of Service			E				C	F				
Approach Delay (s)			55.6					125.8				
Approach LOS			E					F				

Intersection Summary			
HCM Average Control Delay	138.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	113	10	10	136	279	10	40	10	213	291	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1276					3144					3167	
Flt Permitted	0.76					0.98					0.98	
Satd. Flow (perm)	970					3144					3167	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	342	128	11	11	155	317	11	45	11	242	331	23
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	4	0
Lane Group Flow (vph)	515	0	0	0	0	533	0	0	0	0	641	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	370					543					547	
v/s Ratio Prot						c0.17					c0.20	
v/s Ratio Perm	c0.53											
v/c Ratio	1.39					0.98					1.17	
Uniform Delay, d1	34.0					45.3					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	192.2					34.4					95.4	
Delay (s)	226.2					79.8					140.9	
Level of Service	F					E					F	
Approach Delay (s)	226.2					79.8					140.9	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	33
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	38
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	103	0	498	463	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	111	0	535	498	77
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.96	0.96	0.96			
vC, conflicting volume	810	294	581			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	730	194	493			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	343	782	1024			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	111	178	357	332	243
Volume Left	0	0	0	0	0
Volume Right	111	0	0	0	77
cSH	782	1024	1700	1700	1700
Volume to Capacity	0.14	0.00	0.21	0.20	0.14
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.4	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	352	170	14	201	93	121	241	37	121	295	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.94		1.00	0.94		1.00	0.88	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.96		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1473			1673		1770	1480		1770	1295	
Flt Permitted		0.94			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1386			1622		1770	1480		1770	1295	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	371	179	15	212	98	127	254	39	127	311	95
RTOR Reduction (vph)	0	0	0	0	20	0	0	7	0	0	14	0
Lane Group Flow (vph)	0	613	0	0	305	0	127	286	0	127	393	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		33.0			33.0		7.5	24.0		9.0	25.0	
Effective Green, g (s)		34.0			34.0		7.0	25.0		10.0	26.0	
Actuated g/C Ratio		0.42			0.42		0.09	0.31		0.12	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		589			689		155	463		221	421	
v/s Ratio Prot							c0.07	0.19		0.07	c0.30	
v/s Ratio Perm		c0.44			0.19							
v/c Ratio		1.04			0.44		0.82	0.62		0.57	0.93	
Uniform Delay, d1		23.0			16.3		35.9	23.4		33.0	26.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		48.1			2.1		36.4	6.1		10.4	29.8	
Delay (s)		71.1			18.4		72.3	29.5		43.4	55.9	
Level of Service		E			B		E	C		D	E	
Approach Delay (s)		71.1			18.4			42.4			52.9	
Approach LOS		E			B			D			D	

Intersection Summary			
HCM Average Control Delay	50.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	270	210	168	610	400	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.97	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.97	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1694			3501	3317	
Flt Permitted	0.97			0.70	1.00	
Satd. Flow (perm)	1694			2463	3317	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	290	226	181	656	430	129
RTOR Reduction (vph)	40	0	0	0	31	0
Lane Group Flow (vph)	476	0	0	837	528	0
Confl. Peds. (#/hr)		1				41
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	24.1			39.3	39.3	
Effective Green, g (s)	24.1			39.3	39.3	
Actuated g/C Ratio	0.34			0.55	0.55	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	572			1356	1826	
v/s Ratio Prot	c0.28				0.16	
v/s Ratio Perm				c0.34		
v/c Ratio	0.83			0.62	0.29	
Uniform Delay, d1	21.8			10.9	8.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	10.1			2.1	0.4	
Delay (s)	31.8			13.0	9.0	
Level of Service	C			B	A	
Approach Delay (s)	31.8			13.0	9.0	
Approach LOS	C			B	A	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	262	214	10	20	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.70				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.93				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1016				1333
Flt Permitted			0.98				0.37	1.00				0.96
Satd. Flow (perm)			1483				692	1016				1279
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	279	228	11	21	341
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	472
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				47.0	47.0				47.0
Effective Green, g (s)			6.0				48.0	48.0				48.0
Actuated g/C Ratio			0.05				0.44	0.44				0.44
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				302	443				558
v/s Ratio Prot								c0.51				
v/s Ratio Perm			0.07				0.09					0.37
v/c Ratio			1.20				0.21	1.17				0.85
Uniform Delay, d1			52.0				19.3	31.0				27.7
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			162.6				1.6	98.0				14.6
Delay (s)			214.6				20.8	129.0				42.3
Level of Service			F				C	F				D
Approach Delay (s)			214.6					117.1				42.3
Approach LOS			F					F				D

Intersection Summary			
HCM Average Control Delay	100.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	93	10	10	95	445	20	50	10	224	275	10	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3157					3163		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3157					3163		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	99	11	11	101	473	21	53	11	238	293	11	23
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	653	0	0	0	0	574	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					20.0		
Effective Green, g (s)					20.0					20.0		
Actuated g/C Ratio					0.18					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					574					575		
v/s Ratio Prot					c0.21					c0.18		
v/s Ratio Perm												
v/c Ratio					1.14					1.00		
Uniform Delay, d1					45.0					45.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					81.8					36.9		
Delay (s)					126.8					81.9		
Level of Service					F					F		
Approach Delay (s)					126.8					81.9		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	161	175	25	154	95	111	271	40	92	252	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.94			0.95		1.00	0.97		1.00	0.87	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.95		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1447			1675		1770	1521		1770	1288	
Flt Permitted		0.93			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1351			1587		1770	1521		1770	1288	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	173	188	27	166	102	119	291	43	99	271	86
RTOR Reduction (vph)	0	37	0	0	24	0	0	7	0	0	14	0
Lane Group Flow (vph)	0	378	0	0	271	0	119	328	0	99	343	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		30.0			30.0		10.5	27.0		9.0	25.0	
Effective Green, g (s)		31.0			31.0		10.0	28.0		10.0	26.0	
Actuated g/C Ratio		0.39			0.39		0.12	0.35		0.12	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		524			615		221	532		221	419	
v/s Ratio Prot							c0.07	0.22		0.06	c0.27	
v/s Ratio Perm		c0.28			0.17							
v/c Ratio		0.72			0.44		0.54	0.62		0.45	0.82	
Uniform Delay, d1		20.8			18.1		32.8	21.5		32.4	24.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		8.3			2.3		9.1	5.3		6.4	16.1	
Delay (s)		29.1			20.4		41.9	26.8		38.9	41.0	
Level of Service		C			C		D	C		D	D	
Approach Delay (s)		29.1			20.4			30.8			40.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	193	154	392	399	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.91			1.00	0.97	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1647			3490	3401	
Flt Permitted	0.98			0.71	1.00	
Satd. Flow (perm)	1647			2501	3401	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	96	205	164	417	424	96
RTOR Reduction (vph)	123	0	0	0	16	0
Lane Group Flow (vph)	178	0	0	581	504	0
Confl. Peds. (#/hr)		3				18
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	11.5			43.2	43.2	
Effective Green, g (s)	11.5			43.2	43.2	
Actuated g/C Ratio	0.18			0.69	0.69	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	302			1723	2343	
v/s Ratio Prot	c0.11				0.15	
v/s Ratio Perm				c0.23		
v/c Ratio	0.59			0.34	0.22	
Uniform Delay, d1	23.4			4.0	3.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.9			0.5	0.2	
Delay (s)	26.4			4.5	3.8	
Level of Service	C			A	A	
Approach Delay (s)	26.4			4.5	3.8	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	8.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	62.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	245	179	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.74				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1086				
Flt Permitted			0.98				0.34	1.00				
Satd. Flow (perm)			1482				629	1086				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	278	203	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	492	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.0	45.0				
Effective Green, g (s)			6.0				46.0	46.0				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				263	454				
v/s Ratio Prot								0.45				
v/s Ratio Perm			0.07				0.11					
v/c Ratio			1.26				0.26	1.08				
Uniform Delay, d1			52.0				20.9	32.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			184.8				2.4	66.7				
Delay (s)			236.8				23.2	98.7				
Level of Service			F				C	F				
Approach Delay (s)			236.8					89.5				
Approach LOS			F					F				

Intersection Summary			
HCM Average Control Delay	96.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	113	10	10	136	279	10	40	10	213	291	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1277					3144					3167	
Flt Permitted	0.84					0.98					0.98	
Satd. Flow (perm)	1073					3144					3167	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	342	128	11	11	155	317	11	45	11	242	331	23
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	4	0
Lane Group Flow (vph)	515	0	0	0	0	532	0	0	0	0	641	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.0					20.0					22.0	
Effective Green, g (s)	46.0					20.0					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	449					572					633	
v/s Ratio Prot						c0.17					c0.20	
v/s Ratio Perm	c0.48											
v/c Ratio	1.15					0.93					1.01	
Uniform Delay, d1	32.0					44.3					44.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	89.3					23.9					39.0	
Delay (s)	121.3					68.3					83.0	
Level of Service	F					E					F	
Approach Delay (s)	121.3					68.3					83.0	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	33
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	38
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	320	202	14	201	93	121	241	30	50	366	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.94			0.97			0.91	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.96			0.99			0.98	
Flt Protected		0.99			1.00			0.98			1.00	
Satd. Flow (prot)		1440			1673			1510			1345	
Flt Permitted		0.93			0.97			0.52			0.92	
Satd. Flow (perm)		1350			1628			795			1243	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	337	213	15	212	98	127	254	32	53	385	95
RTOR Reduction (vph)	0	0	0	0	19	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	613	0	0	306	0	0	409	0	0	523	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		506			611			560			350	
v/s Ratio Prot								c0.15				
v/s Ratio Perm		c0.45			0.19			0.24			c0.42	
v/c Ratio		1.21			0.50			0.73			1.49	
Uniform Delay, d1		25.0			19.2			14.6			28.8	
Progression Factor		1.00			1.24			1.00			1.00	
Incremental Delay, d2		112.4			2.9			8.2			236.9	
Delay (s)		137.4			26.8			22.8			265.7	
Level of Service		F			C			C			F	
Approach Delay (s)		137.4			26.8			22.8			265.7	
Approach LOS		F			C			C			F	

Intersection Summary			
HCM Average Control Delay	129.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.7%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	270	100	168	610	400	120
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	290	108	181	656	430	129
Pedestrians	41			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	3			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.91					
vC, conflicting volume	1225	322	600			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1046	322	600			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	83	81			
cM capacity (veh/h)	159	651	940			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	398	399	437	287	272
Volume Left	290	181	0	0	0
Volume Right	108	0	0	0	129
cSH	199	940	1700	1700	1700
Volume to Capacity	1.99	0.19	0.26	0.17	0.16
Queue Length 95th (ft)	745	18	0	0	0
Control Delay (s)	504.4	5.6	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	504.4	2.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	113.1		
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	7	20	0	0	0	32	376	85	103	428	24
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	7	20	0	0	0	33	384	87	105	437	24
Pedestrians		213			102						212	
Lane Width (ft)		12.0			0.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		18			0						18	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	1533	1510	662	1265	1479	741	674			572		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1539	1512	518	1225	1475	741	533			572		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	76	90	95	100	100	100	96			89		
cM capacity (veh/h)	42	72	391	90	76	343	727			1000		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	33	470	105	461
Volume Left	10	33	0	105	0
Volume Right	20	0	87	0	24
cSH	96	727	1700	1000	1700
Volume to Capacity	0.39	0.04	0.28	0.11	0.27
Queue Length 95th (ft)	40	4	0	9	0
Control Delay (s)	65.2	10.2	0.0	9.0	0.0
Lane LOS	F	B		A	
Approach Delay (s)	65.2	0.7		1.7	
Approach LOS	F				

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	10	4	20	67	538	10	40	411	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.98	
Flt Protected		0.96			0.99			0.99			1.00	
Satd. Flow (prot)		1735			1675			3507			3446	
Flt Permitted		0.75			0.92			0.84			0.87	
Satd. Flow (perm)		1349			1556			2964			3011	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	230	9	56	11	4	22	74	598	11	44	457	57
RTOR Reduction (vph)	0	10	0	0	17	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	285	0	0	20	0	0	683	0	0	549	0
Confl. Peds. (#/hr)			20			1			30			22
Confl. Bikes (#/hr)									6			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.6			32.6	
Effective Green, g (s)		16.1			16.1			32.6			32.6	
Actuated g/C Ratio		0.25			0.25			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		333			384			1482			1506	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.23			0.18	
v/c Ratio		0.86			0.05			0.46			0.36	
Uniform Delay, d1		23.4			18.7			10.6			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		19.0			0.1			1.0			0.7	
Delay (s)		42.4			18.8			11.6			10.7	
Level of Service		D			B			B			B	
Approach Delay (s)		42.4			18.8			11.6			10.7	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	65.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1656		
Flt Permitted		0.99		
Satd. Flow (perm)		1656		
Peak-hour factor, PHF	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	0	22	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	35	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		114		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.30		
Uniform Delay, d1		28.9		
Progression Factor		1.00		
Incremental Delay, d2		1.5		
Delay (s)		30.4		
Level of Service		C		
Approach Delay (s)		30.4		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	323	153	10	20	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.78				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.95				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1155				1331
Flt Permitted			0.98				0.33	1.00				0.83
Satd. Flow (perm)			1483				616	1155				1108
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	344	163	11	21	341
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	472
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				235	441				423
v/s Ratio Prot								c0.45				
v/s Ratio Perm			0.07				0.10					0.43
v/c Ratio			0.51				0.27	1.17				1.12
Uniform Delay, d1			44.8				23.5	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			9.6				2.8	100.1				79.1
Delay (s)			54.4				26.3	134.1				113.1
Level of Service			D				C	F				F
Approach Delay (s)			54.4					122.3				113.1
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	120.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	93	10	10	119	421	20	50	10	224	275	10	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3151					3163		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3151					3163		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	99	11	11	127	448	21	53	11	238	293	11	23
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	654	0	0	0	0	574	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					544					546		
v/s Ratio Prot					c0.21					c0.18		
v/s Ratio Perm												
v/c Ratio					1.20					1.05		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					107.8					52.4		
Delay (s)					153.3					97.9		
Level of Service					F					F		
Approach Delay (s)					153.3					97.9		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	70	0	616	455	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	74	0	648	479	28
Pedestrians	22					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.88	0.96	0.96			
vC, conflicting volume	839	276	529			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	345	171	434			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	91	100			
cM capacity (veh/h)	538	797	1060			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	74	216	432	319	188
Volume Left	0	0	0	0	0
Volume Right	74	0	0	0	28
cSH	797	1060	1700	1700	1700
Volume to Capacity	0.09	0.00	0.25	0.19	0.11
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	10.0	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	10.0	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	120	216	25	154	95	111	271	30	10	334	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.92			0.95			0.98			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.92			0.95			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1402			1675			1538			1341	
Flt Permitted		0.93			0.95			0.57			0.99	
Satd. Flow (perm)		1310			1593			892			1324	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	129	232	27	166	102	119	291	32	11	359	86
RTOR Reduction (vph)	0	57	0	0	24	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	358	0	0	271	0	0	439	0	0	445	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		491			597			598			372	
v/s Ratio Prot								c0.15				
v/s Ratio Perm		c0.27			0.17			0.24			c0.34	
v/c Ratio		0.73			0.45			0.73			1.20	
Uniform Delay, d1		21.5			18.8			14.7			28.8	
Progression Factor		1.00			1.25			1.00			0.96	
Incremental Delay, d2		9.2			2.5			7.8			91.1	
Delay (s)		30.7			26.0			22.5			118.7	
Level of Service		C			C			C			F	
Approach Delay (s)		30.7			26.0			22.5			118.7	
Approach LOS		C			C			C			F	

Intersection Summary			
HCM Average Control Delay	52.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	90	60	154	392	399	90
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	96	64	164	417	424	96
Pedestrians	18			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	1			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.99					
vC, conflicting volume	1027	281	538			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1009	281	538			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	51	91	84			
cM capacity (veh/h)	193	703	1011			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	160	303	278	283	237
Volume Left	96	164	0	0	0
Volume Right	64	0	0	0	96
cSH	272	1011	1700	1700	1700
Volume to Capacity	0.59	0.16	0.16	0.17	0.14
Queue Length 95th (ft)	85	14	0	0	0
Control Delay (s)	35.3	5.8	0.0	0.0	0.0
Lane LOS	E	A			
Approach Delay (s)	35.3	3.0		0.0	
Approach LOS	E				

Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	30	0	0	0	23	407	107	123	424	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	33	0	0	0	25	442	116	134	461	27
Pedestrians		274			127			2			166	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		23			0			0			14	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	1674	1752	750	1446	1707	794	762			686		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1680	1760	725	1444	1714	794	737			686		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	69	79	90	100	100	100	96			85		
cM capacity (veh/h)	35	52	317	58	55	335	648			908		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	25	559	134	488
Volume Left	11	25	0	134	0
Volume Right	33	0	116	0	27
cSH	87	648	1700	908	1700
Volume to Capacity	0.63	0.04	0.33	0.15	0.29
Queue Length 95th (ft)	73	3	0	13	0
Control Delay (s)	99.9	10.8	0.0	9.6	0.0
Lane LOS	F	B		A	
Approach Delay (s)	99.9	0.5		2.1	
Approach LOS	F				

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	10	5	20	73	306	10	20	389	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			1.00			0.98	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1721			1678			3488			3459	
Flt Permitted		0.76			0.91			0.80			0.93	
Satd. Flow (perm)		1361			1556			2831			3228	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	224	6	83	11	5	22	78	329	11	22	418	55
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	298	0	0	22	0	0	418	0	0	485	0
Confl. Peds. (#/hr)			14						14			6
Confl. Bikes (#/hr)			1			3			9			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.2			32.2	
Effective Green, g (s)		16.1			16.1			32.2			32.2	
Actuated g/C Ratio		0.26			0.26			0.52			0.52	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		355			406			1477			1685	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.01			0.15			c0.15	
v/c Ratio		0.84			0.05			0.28			0.29	
Uniform Delay, d1		21.6			17.1			8.3			8.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		16.2			0.1			0.5			0.4	
Delay (s)		37.8			17.1			8.8			8.7	
Level of Service		D			B			A			A	
Approach Delay (s)		37.8			17.1			8.8			8.7	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.93	0.93	0.93
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.4	
Effective Green, g (s)		1.4	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		39	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.59	
Uniform Delay, d1		29.9	
Progression Factor		1.00	
Incremental Delay, d2		20.8	
Delay (s)		50.6	
Level of Service		D	
Approach Delay (s)		50.6	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	317	107	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.84				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1262				
Flt Permitted			0.98				0.31	1.00				
Satd. Flow (perm)			1482				576	1262				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	360	122	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	493	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				220	482				
v/s Ratio Prot								0.39				
v/s Ratio Perm			0.07				0.12					
v/c Ratio			0.54				0.31	1.02				
Uniform Delay, d1			45.0				23.8	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			10.6				3.6	46.9				
Delay (s)			55.6				27.4	80.9				
Level of Service			E				C	F				
Approach Delay (s)			55.6					74.4				
Approach LOS			E					E				

Intersection Summary			
HCM Average Control Delay	126.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	113	10	10	171	244	10	40	10	213	291	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1276					3133					3167	
Flt Permitted	0.76					0.98					0.98	
Satd. Flow (perm)	968					3133					3167	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	342	128	11	11	194	277	11	45	11	242	331	23
RTOR Reduction (vph)	0	0	0	0	0	6	0	0	0	0	4	0
Lane Group Flow (vph)	515	0	0	0	0	532	0	0	0	0	641	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	370					541					547	
v/s Ratio Prot						c0.17					c0.20	
v/s Ratio Perm	c0.53											
v/c Ratio	1.39					0.98					1.17	
Uniform Delay, d1	34.0					45.3					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	192.2					34.9					95.4	
Delay (s)	226.2					80.2					140.9	
Level of Service	F					F					F	
Approach Delay (s)	226.2					80.2					140.9	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	33
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	38
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	102	0	387	460	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	110	0	416	495	33
Pedestrians	6					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.97	0.97	0.97			
vC, conflicting volume	725	270	534			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	658	190	461			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	86	100			
cM capacity (veh/h)	384	793	1059			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	110	139	277	330	198
Volume Left	0	0	0	0	0
Volume Right	110	0	0	0	33
cSH	793	1059	1700	1700	1700
Volume to Capacity	0.14	0.00	0.16	0.19	0.12
Queue Length 95th (ft)	12	0	0	0	0
Control Delay (s)	10.3	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.3	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	320	202	14	201	93	121	241	30	50	366	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.5	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.94		1.00	0.95		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.96		1.00	0.98		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1441			1673		1770	1500		1770	1330	
Flt Permitted		0.94			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1356			1622		1770	1500		1770	1330	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	337	213	15	212	98	127	254	32	53	385	95
RTOR Reduction (vph)	0	0	0	0	19	0	0	6	0	0	11	0
Lane Group Flow (vph)	0	613	0	0	306	0	127	280	0	53	469	0
Confl. Peds. (#/hr)			100			84			180			218
Confl. Bikes (#/hr)			4			1			23			40
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		32.0			32.0		9.0	29.0		5.0	25.0	
Effective Green, g (s)		33.0			33.0		8.5	30.0		6.0	26.0	
Actuated g/C Ratio		0.41			0.41		0.11	0.38		0.08	0.32	
Clearance Time (s)		5.0			5.0		4.0	5.0		4.0	5.0	
Lane Grp Cap (vph)		559			669		188	563		133	432	
v/s Ratio Prot							c0.07	c0.19		0.03	c0.35	
v/s Ratio Perm		c0.45			0.19							
v/c Ratio		1.10			0.46		0.68	0.50		0.40	1.09	
Uniform Delay, d1		23.5			17.0		34.4	19.2		35.3	27.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		67.1			2.2		17.8	3.1		8.7	68.5	
Delay (s)		90.6			19.3		52.2	22.3		44.0	95.5	
Level of Service		F			B		D	C		D	F	
Approach Delay (s)		90.6			19.3			31.5			90.4	
Approach LOS		F			B			C			F	

Intersection Summary			
HCM Average Control Delay	65.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	270	100	168	610	400	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	1.00			1.00	0.98	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.96			1.00	0.97	
Flt Protected	0.96			0.99	1.00	
Satd. Flow (prot)	1725			3501	3340	
Flt Permitted	0.96			0.72	1.00	
Satd. Flow (perm)	1725			2544	3340	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	290	108	181	656	430	129
RTOR Reduction (vph)	17	0	0	0	38	0
Lane Group Flow (vph)	381	0	0	837	521	0
Confl. Peds. (#/hr)		1				41
Confl. Bikes (#/hr)		3				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	17.3			25.1	25.1	
Effective Green, g (s)	17.3			25.1	25.1	
Actuated g/C Ratio	0.34			0.50	0.50	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	592			1267	1663	
v/s Ratio Prot	c0.22				0.16	
v/s Ratio Perm				c0.33		
v/c Ratio	0.64			0.66	0.31	
Uniform Delay, d1	14.0			9.5	7.5	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	2.4			1.3	0.1	
Delay (s)	16.4			10.8	7.6	
Level of Service	B			B	A	
Approach Delay (s)	16.4			10.8	7.6	
Approach LOS	B			B	A	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	50.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	40	20	323	153	10	20	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.78				0.85
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.92				1.00	0.95				0.97
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1158				1333
Flt Permitted			0.98				0.37	1.00				0.94
Satd. Flow (perm)			1483				681	1158				1254
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	21	11	43	11	43	21	344	163	11	21	341
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	97	0	0	0	64	518	0	0	0	472
Confl. Peds. (#/hr)									176	176		
Confl. Bikes (#/hr)									66	66		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				46.0	46.0				46.0
Effective Green, g (s)			6.0				47.0	47.0				47.0
Actuated g/C Ratio			0.05				0.43	0.43				0.43
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				291	495				536
v/s Ratio Prot								c0.45				
v/s Ratio Perm			0.07				0.09					0.38
v/c Ratio			1.20				0.22	1.05				0.88
Uniform Delay, d1			52.0				19.9	31.5				28.9
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			162.6				1.7	53.1				18.4
Delay (s)			214.6				21.6	84.6				47.4
Level of Service			F				C	F				D
Approach Delay (s)			214.6					77.7				47.4
Approach LOS			F					E				D

Intersection Summary			
HCM Average Control Delay	89.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	93	10	10	119	421	20	50	10	224	275	10	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.98					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3151					3163		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3151					3163		
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	99	11	11	127	448	21	53	11	238	293	11	23
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	654	0	0	0	0	574	0	0
Confl. Peds. (#/hr)	184	185					44					57
Confl. Bikes (#/hr)	52	61					7					8
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					21.0		
Effective Green, g (s)					20.0					21.0		
Actuated g/C Ratio					0.18					0.19		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					573					604		
v/s Ratio Prot					c0.21					c0.18		
v/s Ratio Perm												
v/c Ratio					1.14					0.95		
Uniform Delay, d1					45.0					44.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					83.2					26.1		
Delay (s)					128.2					70.1		
Level of Service					F					E		
Approach Delay (s)					128.2					70.1		
Approach LOS					F					E		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	120	216	25	154	95	111	271	30	10	334	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.92			0.95		1.00	0.98		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.95		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1402			1675		1770	1540		1770	1334	
Flt Permitted		0.93			0.95		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1310			1593		1770	1540		1770	1334	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	129	232	27	166	102	119	291	32	11	359	86
RTOR Reduction (vph)	0	57	0	0	24	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	358	0	0	271	0	119	318	0	11	434	0
Confl. Peds. (#/hr)			55			58			100			229
Confl. Bikes (#/hr)			3			7			11			13
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		29.0			29.0		10.5	31.0		6.0	26.0	
Effective Green, g (s)		30.0			30.0		10.0	32.0		7.0	27.0	
Actuated g/C Ratio		0.38			0.38		0.12	0.40		0.09	0.34	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		491			597		221	616		155	450	
v/s Ratio Prot							c0.07	c0.21		0.01	c0.33	
v/s Ratio Perm		c0.27			0.17							
v/c Ratio		0.73			0.45		0.54	0.52		0.07	0.97	
Uniform Delay, d1		21.5			18.8		32.8	18.2		33.5	26.0	
Progression Factor		1.00			1.00		1.00	1.00		0.88	1.02	
Incremental Delay, d2		9.2			2.5		9.1	3.1		0.1	6.9	
Delay (s)		30.7			21.3		41.9	21.2		29.4	33.4	
Level of Service		C			C		D	C		C	C	
Approach Delay (s)		30.7			21.3			26.8			33.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	60	154	392	399	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.95			1.00	0.97	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1701			3490	3412	
Flt Permitted	0.97			0.73	1.00	
Satd. Flow (perm)	1701			2585	3412	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	96	64	164	417	424	96
RTOR Reduction (vph)	36	0	0	0	24	0
Lane Group Flow (vph)	124	0	0	581	496	0
Confl. Peds. (#/hr)		3				18
Confl. Bikes (#/hr)		1				7
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	6.7			20.5	20.5	
Effective Green, g (s)	6.7			20.5	20.5	
Actuated g/C Ratio	0.19			0.58	0.58	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	324			1505	1987	
v/s Ratio Prot	c0.07				0.15	
v/s Ratio Perm				c0.22		
v/c Ratio	0.38			0.39	0.25	
Uniform Delay, d1	12.4			4.0	3.6	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.8			0.2	0.1	
Delay (s)	13.2			4.1	3.7	
Level of Service	B			A	A	
Approach Delay (s)	13.2			4.1	3.7	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	35.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	40	20	317	107	10	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.84				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.92				1.00	0.96				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1482				1770	1262				
Flt Permitted			0.98				0.34	1.00				
Satd. Flow (perm)			1482				635	1262				
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	11	23	11	34	23	45	23	360	122	11	23	11
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	102	0	0	0	68	493	0	0	0	0
Confl. Peds. (#/hr)									152	148		
Confl. Bikes (#/hr)									14	10		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.5	45.5				
Effective Green, g (s)			6.0				46.5	46.5				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				268	533				
v/s Ratio Prot								0.39				
v/s Ratio Perm			0.07				0.11					
v/c Ratio			1.26				0.25	0.92				
Uniform Delay, d1			52.0				20.5	30.1				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			184.8				2.3	24.2				
Delay (s)			236.8				22.8	54.3				
Level of Service			F				C	D				
Approach Delay (s)			236.8					50.5				
Approach LOS			F					D				

Intersection Summary			
HCM Average Control Delay	86.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	113	10	10	171	244	10	40	10	213	291	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.82					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.98					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1277					3133					3167	
Flt Permitted	0.85					0.98					0.98	
Satd. Flow (perm)	1083					3133					3167	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	342	128	11	11	194	277	11	45	11	242	331	23
RTOR Reduction (vph)	0	0	0	0	0	7	0	0	0	0	4	0
Lane Group Flow (vph)	515	0	0	0	0	531	0	0	0	0	641	0
Confl. Peds. (#/hr)		226	235					46				
Confl. Bikes (#/hr)		18	16					4				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.5					19.5					22.0	
Effective Green, g (s)	46.5					19.5					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	458					555					633	
v/s Ratio Prot						c0.17					c0.20	
v/s Ratio Perm	c0.48											
v/c Ratio	1.12					0.96					1.01	
Uniform Delay, d1	31.8					44.8					44.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	80.7					29.0					39.0	
Delay (s)	112.4					73.9					83.0	
Level of Service	F					E					F	
Approach Delay (s)	112.4					73.9					83.0	
Approach LOS	F					E					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	33
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.88
Adj. Flow (vph)	38
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	20
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Appendix I
LOS Analysis Worksheets – 2035 Conditions

FEHR PEERS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	710	90	20	650	140	110	330	70	150	350	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.96			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.99			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1520			3285			1488			1408	
Flt Permitted		0.97			0.93			0.78			0.61	
Satd. Flow (perm)		1481			3048			1171			874	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	710	90	20	650	140	110	330	70	150	350	90
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	7	0
Lane Group Flow (vph)	0	815	0	0	791	0	0	504	0	0	583	0
Confl. Peds. (#/hr)			117			93			309			258
Confl. Bikes (#/hr)			1			9			37			68
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		717			1476			357			422	
v/s Ratio Prot											c0.12	
v/s Ratio Perm		c0.55			0.26			0.43			c0.48	
v/c Ratio		1.14			0.54			1.41			1.38	
Uniform Delay, d1		24.5			17.1			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		78.2			1.4			200.9			186.1	
Delay (s)		102.7			18.5			233.9			213.1	
Level of Service		F			B			F			F	
Approach Delay (s)		102.7			18.5			233.9			213.1	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	126.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.5%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	650	120	220	560	240	180	600	370	280	290	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.96			0.95		1.00	0.98	
Flt Protected		0.99			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3433			3358			3309		1610	3222	
Flt Permitted		0.64			0.57			0.99		0.95	0.99	
Satd. Flow (perm)		2204			1944			3309		1610	3222	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	650	120	220	560	240	180	600	370	280	290	50
RTOR Reduction (vph)	0	13	0	0	29	0	0	57	0	0	10	0
Lane Group Flow (vph)	0	857	0	0	991	0	0	1093	0	204	406	0
Confl. Peds. (#/hr)			15			12			6			56
Confl. Bikes (#/hr)			5			2			6			7
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.52			0.52			0.16		0.17	0.17	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1157			1021			546		274	548	
v/s Ratio Prot								c0.33		c0.13	0.13	
v/s Ratio Perm		0.39			c0.51							
v/c Ratio		0.74			0.97			2.00		0.74	0.74	
Uniform Delay, d1		18.5			23.0			41.8		39.4	39.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		4.3			21.9			457.5		16.7	8.7	
Delay (s)		22.8			44.9			499.2		56.2	48.1	
Level of Service		C			D			F		E	D	
Approach Delay (s)		22.8			44.9			499.2			50.8	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM Average Control Delay	183.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	117.9%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	80	1160	120	50	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1640		3246			3280
Flt Permitted	0.98		1.00			0.77
Satd. Flow (perm)	1640		3246			2521
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	83	1208	125	52	688
RTOR Reduction (vph)	42	0	10	0	0	0
Lane Group Flow (vph)	114	0	1323	0	0	740
Confl. Peds. (#/hr)	41	37		46		
Confl. Bikes (#/hr)		8		28		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	492		1948			1513
v/s Ratio Prot	c0.07		c0.41			
v/s Ratio Perm						0.29
v/c Ratio	0.23		0.68			0.49
Uniform Delay, d1	21.1		10.8			9.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.1		1.9			1.1
Delay (s)	22.2		12.7			10.2
Level of Service	C		B			B
Approach Delay (s)	22.2		12.7			10.2
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	530	140	40	430	190	220	840	80	250	950	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1783		1770	1526		1770	3225		1770	3144	
Flt Permitted	0.12	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	229	1783		229	1526		1770	3225		1770	3144	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	104	552	146	42	448	198	229	875	83	260	990	94
RTOR Reduction (vph)	0	10	0	0	16	0	0	7	0	0	7	0
Lane Group Flow (vph)	104	688	0	42	630	0	229	951	0	260	1077	0
Confl. Peds. (#/hr)			31			56			55			71
Confl. Bikes (#/hr)			12			28			48			56
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	33.0	33.0		33.0	33.0		14.4	31.5		15.0	32.1	
Effective Green, g (s)	32.5	32.5		32.5	32.5		15.4	33.5		16.0	34.1	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.35		0.17	0.36	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	78	610		78	522		287	1137		298	1129	
v/s Ratio Prot		0.39			0.41		0.13	0.29		c0.15	c0.34	
v/s Ratio Perm	c0.45			0.18								
v/c Ratio	1.33	1.13		0.54	1.21		0.80	0.84		0.87	0.95	
Uniform Delay, d1	31.2	31.2		25.2	31.2		38.3	28.2		38.5	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	214.5	77.1		3.5	109.8		13.4	7.4		22.7	17.8	
Delay (s)	245.8	108.3		28.7	141.0		51.7	35.6		61.2	47.5	
Level of Service	F	F		C	F		D	D		E	D	
Approach Delay (s)		126.1			134.2			38.7			50.1	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM Average Control Delay	76.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	530	190	10	340	60	170	340	40	80	350	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.94			0.97			0.97			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1495			1764			1509			1310	
Flt Permitted		0.89			0.98			0.49			0.84	
Satd. Flow (perm)		1331			1731			753			1114	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	530	190	10	340	60	170	340	40	80	350	110
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	800	0	0	403	0	0	547	0	0	529	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		499			649			547			313	
v/s Ratio Prot								c0.20				
v/s Ratio Perm		c0.60			0.23			0.33			c0.47	
v/c Ratio		1.60			0.62			1.00			1.69	
Uniform Delay, d1		25.0			20.4			19.0			28.8	
Progression Factor		1.00			1.30			1.00			1.00	
Incremental Delay, d2		280.7			4.3			38.3			323.3	
Delay (s)		305.7			30.8			57.3			352.1	
Level of Service		F			C			E			F	
Approach Delay (s)		305.7			30.8			57.3			352.1	
Approach LOS		F			C			E			F	

Intersection Summary			
HCM Average Control Delay	208.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	133.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	400	220	190	920	520	210
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	220	190	920	520	210
Pedestrians	46			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	4			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked	0.87					
vC, conflicting volume	1511	412	776			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1288	412	776			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	61	76			
cM capacity (veh/h)	99	566	804			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	620	497	613	347	383
Volume Left	400	190	0	0	0
Volume Right	220	0	0	0	210
cSH	141	804	1700	1700	1700
Volume to Capacity	4.41	0.24	0.36	0.20	0.23
Queue Length 95th (ft)	Err	23	0	0	0
Control Delay (s)	Err	6.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	Err	2.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	2521.3		
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	3	20	3	2	24	30	520	11	53	470	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	3	20	3	2	24	31	531	11	54	480	10
Pedestrians		238			114						237	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		20			10						20	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.77	0.77	0.77	0.77	0.77		0.77					
vC, conflicting volume	1691	1548	723	1326	1547	887	728			656		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1746	1562	497	1276	1561	887	503			656		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	52	95	94	95	96	90	95			94		
cM capacity (veh/h)	21	56	356	66	56	249	659			843		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	34	30	572	544
Volume Left	10	3	31	54
Volume Right	20	24	11	10
cSH	57	164	659	843
Volume to Capacity	0.59	0.18	0.05	0.06
Queue Length 95th (ft)	59	16	4	5
Control Delay (s)	133.8	31.8	1.3	1.7
Lane LOS	F	D	A	A
Approach Delay (s)	133.8	31.8	1.3	1.7
Approach LOS	F	D		

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	7	17	20	2	50	6	1000	10	40	660	42
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	71	7	18	21	2	53	6	1053	11	42	695	44
Pedestrians		24			33			22			1	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		2			3			2			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked	0.85	0.85		0.85	0.85	0.85				0.85		
vC, conflicting volume	1419	1934	415	1579	1951	566	763			1096		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1149	1752	415	1336	1772	150	763			771		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	34	89	97	71	97	93	99			94		
cM capacity (veh/h)	106	64	564	74	62	721	829			697		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	96	76	533	537	389	392
Volume Left	71	21	6	0	42	0
Volume Right	18	53	0	11	0	44
cSH	118	193	829	1700	697	1700
Volume to Capacity	0.81	0.39	0.01	0.32	0.06	0.23
Queue Length 95th (ft)	119	43	1	0	5	0
Control Delay (s)	106.7	35.2	0.2	0.0	1.8	0.0
Lane LOS	F	E	A		A	
Approach Delay (s)	106.7	35.2	0.1		0.9	
Approach LOS	F	E				

Intersection Summary			
Average Delay	6.8		
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	400	260	10	30	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.72				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.94				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1062				1261
Flt Permitted			0.98				0.32	1.00				0.46
Satd. Flow (perm)			1483				590	1062				582
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	400	260	10	30	330
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	670	0	0	0	500
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				225	405				222
v/s Ratio Prot								0.63				
v/s Ratio Perm			0.06				0.17					c0.86
v/c Ratio			0.48				0.44	1.65				2.25
Uniform Delay, d1			44.6				25.3	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			8.4				6.2	305.3				577.7
Delay (s)			53.0				31.6	339.3				611.7
Level of Service			D				C	F				F
Approach Delay (s)			53.0					299.3				611.7
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	333.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.5%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	130	10	10	130	710	20	50	10	240	420	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3197					3175		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3197					3175		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	130	10	10	130	710	20	50	10	240	420	10	30
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	916	0	0	0	0	708	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					552					548		
v/s Ratio Prot					c0.29					c0.22		
v/s Ratio Perm												
v/c Ratio					1.66					1.29		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					304.6					144.2		
Delay (s)					350.1					189.7		
Level of Service					F					F		
Approach Delay (s)					350.1					189.7		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	20	80	10	170	70	60	160	40	50	810	130	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.92					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.94					0.98		
Flt Protected		0.99			0.98					1.00		
Satd. Flow (prot)		1605			1374					3223		
Flt Permitted		0.87			0.83					0.75		
Satd. Flow (perm)		1402			1160					2415		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	80	10	170	70	60	160	40	50	810	130	70
RTOR Reduction (vph)	0	5	0	0	24	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	105	0	0	436	0	0	0	0	1016	0	0
Confl. Peds. (#/hr)			26				89				7	
Confl. Bikes (#/hr)			14				55				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					34.9		
Effective Green, g (s)		18.0			18.0					35.9		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		315			261					1084		
v/s Ratio Prot												
v/s Ratio Perm		0.08			c0.38					c0.42		
v/c Ratio		0.33			1.67					0.94		
Uniform Delay, d1		26.0			31.0					21.0		
Progression Factor		1.00			1.00					0.76		
Incremental Delay, d2		0.2			318.0					14.3		
Delay (s)		26.2			349.0					30.3		
Level of Service		C			F					C		
Approach Delay (s)		26.2			349.0					30.3		
Approach LOS		C			F					C		

Intersection Summary			
HCM Average Control Delay	86.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	113.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	700	10	10	10	130	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	1.00				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3283				1524		
Flt Permitted	0.70				0.97		
Satd. Flow (perm)	2305				1524		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	700	10	10	10	130	80	10
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	790	0	0	0	230	0	0
Confl. Peds. (#/hr)		1	18				
Confl. Bikes (#/hr)		6	18				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	34.9				14.1		
Effective Green, g (s)	35.9				14.1		
Actuated g/C Ratio	0.45				0.18		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1034				269		
v/s Ratio Prot					c0.15		
v/s Ratio Perm	0.34						
v/c Ratio	0.76				0.86		
Uniform Delay, d1	18.5				32.0		
Progression Factor	1.00				1.00		
Incremental Delay, d2	5.4				21.6		
Delay (s)	23.9				53.6		
Level of Service	C				D		
Approach Delay (s)	23.9				53.6		
Approach LOS	C				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	80	90	80	940	90	50	360	570
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.99		1.00	0.91	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1717		1770	3258		1770	2955	
Flt Permitted					0.99		0.25	1.00		0.21	1.00	
Satd. Flow (perm)					1717		465	3258		400	2955	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	82	92	82	959	92	51	367	582
RTOR Reduction (vph)	0	0	0	0	41	0	0	9	0	0	233	0
Lane Group Flow (vph)	0	0	0	0	153	0	82	1042	0	51	716	0
Confl. Peds. (#/hr)			2			9			9			13
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		279	1955		240	1773	
v/s Ratio Prot								c0.32			0.24	
v/s Ratio Perm					0.09		0.18			0.13		
v/c Ratio					0.30		0.29	0.53		0.21	0.40	
Uniform Delay, d1					21.5		7.8	9.4		7.3	8.4	
Progression Factor					1.00		1.93	1.88		1.82	2.96	
Incremental Delay, d2					1.5		2.2	0.9		0.9	0.3	
Delay (s)					23.0		17.1	18.5		14.3	25.3	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			23.0			18.4			24.8	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	450	110	70	0	0	40	0	620	70	110	270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1669				1418		3260			3262	
Flt Permitted	0.95	0.98				1.00		1.00			0.56	
Satd. Flow (perm)	1681	1669				1418		3260			1839	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	469	115	73	0	0	42	0	646	73	115	281	0
RTOR Reduction (vph)	0	13	0	0	0	14	0	11	0	0	0	0
Lane Group Flow (vph)	328	316	0	0	0	28	0	708	0	0	396	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			22
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1064				904		856			483	
v/s Ratio Prot								c0.22				
v/s Ratio Perm	c0.20	0.19				0.02					0.22	
v/c Ratio	0.31	0.30				0.03		0.83			1.42dl	
Uniform Delay, d1	6.5	6.5				5.4		27.8			27.7	
Progression Factor	1.00	1.00				1.00		1.00			0.85	
Incremental Delay, d2	0.7	0.7				0.1		9.0			13.2	
Delay (s)	7.3	7.2				5.4		36.8			36.9	
Level of Service	A	A				A		D			D	
Approach Delay (s)		7.2			5.4			36.8			36.9	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.1%	ICU Level of Service	H
Analysis Period (min)	15		

Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	90	210	340	70	520	0	0	570	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.90		1.00	1.00			0.98	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.92		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2920		1770	1863			1786	
Flt Permitted					0.99		0.28	1.00			1.00	
Satd. Flow (perm)					2920		523	1863			1786	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	97	226	366	75	559	0	0	613	108
RTOR Reduction (vph)	0	0	0	0	70	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	619	0	75	559	0	0	713	0
Confl. Peds. (#/hr)			48			79			316			244
Confl. Bikes (#/hr)									75			64
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					730		340	1211			1161	
v/s Ratio Prot								0.30			c0.40	
v/s Ratio Perm					0.21		0.14					
v/c Ratio					0.85		0.22	0.46			0.61	
Uniform Delay, d1					28.6		5.7	7.0			8.2	
Progression Factor					1.00		2.14	2.20			1.00	
Incremental Delay, d2					11.8		0.9	0.8			2.4	
Delay (s)					40.3		13.2	16.2			10.6	
Level of Service					D		B	B			B	
Approach Delay (s)		0.0			40.3			15.8			10.6	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	390	90	0	0	0	0	470	130	200	460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.90						0.88		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.97						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1423						1587		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1423						1587		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	125	406	94	0	0	0	0	490	135	208	479	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	125	490	0	0	0	0	0	613	0	208	479	0
Confl. Peds. (#/hr)			345			166			591			219
Confl. Bikes (#/hr)			6			10			44			49
Parking (#/hr)		5										
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)	22.0	22.0						34.0		15.0	52.0	
Effective Green, g (s)	21.0	21.0						33.0		14.0	51.0	
Actuated g/C Ratio	0.26	0.26						0.41		0.18	0.64	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	465	374						655		310	1188	
v/s Ratio Prot		c0.34						c0.39		c0.12	0.26	
v/s Ratio Perm	0.07											
v/c Ratio	0.27	1.31						0.94		0.67	0.40	
Uniform Delay, d1	23.4	29.5						22.5		30.8	7.1	
Progression Factor	1.00	1.00						1.00		0.89	0.53	
Incremental Delay, d2	1.4	157.2						22.4		8.5	0.8	
Delay (s)	24.8	186.7						44.9		36.0	4.5	
Level of Service	C	F						D		D	A	
Approach Delay (s)		154.3			0.0			44.9			14.0	
Approach LOS		F			A			D			B	

Intersection Summary			
HCM Average Control Delay	69.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations			✣			✣					✣	
Volume (vph)	10	30	50	20	20	20	40	60	10	40	500	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.97			0.93					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.98			0.99					1.00	
Satd. Flow (prot)			1538			1378					1622	
Flt Permitted			0.87			0.95					0.91	
Satd. Flow (perm)			1368			1322					1480	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	32	53	21	21	21	42	63	11	42	526	21
RTOR Reduction (vph)	0	0	13	0	0	45	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	104	0	0	102	0	0	0	0	598	0
Confl. Peds. (#/hr)				61				36				132
Confl. Bikes (#/hr)												16
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			319			308					543	
v/s Ratio Prot												
v/s Ratio Perm			0.08			c0.08					c0.40	
v/c Ratio			0.33			0.33					1.10	
Uniform Delay, d1			19.1			19.1					19.0	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.7			2.9					69.4	
Delay (s)			21.8			22.0					88.4	
Level of Service			C			C					F	
Approach Delay (s)			21.8			22.0					88.4	
Approach LOS			C			C					F	

Intersection Summary			
HCM Average Control Delay	67.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	70	390	30	40	30	70	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.96				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.94		
Flt Protected		0.99				0.97		
Satd. Flow (prot)		1721				1504		
Flt Permitted		0.82				0.97		
Satd. Flow (perm)		1412				1504		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	411	32	42	32	74	53	42
RTOR Reduction (vph)	0	5	0	0	0	16	0	0
Lane Group Flow (vph)	0	554	0	0	0	185	0	0
Confl. Peds. (#/hr)			75	121				
Confl. Bikes (#/hr)			16	7				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		518				301		
v/s Ratio Prot								
v/s Ratio Perm		0.39				0.12		
v/c Ratio		1.07				0.61		
Uniform Delay, d1		19.0				21.9		
Progression Factor		1.00				1.00		
Incremental Delay, d2		59.4				9.1		
Delay (s)		78.4				31.0		
Level of Service		E				C		
Approach Delay (s)		78.4				31.0		
Approach LOS		E				C		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	6	25	530	43	5	490
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	6	25	530	43	5	490
Pedestrians	114					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	10					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			219			433
pX, platoon unblocked	0.75	0.68			0.68	
vC, conflicting volume	1166	666			687	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	613	273			305	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	95			99	
cM capacity (veh/h)	309	471			773	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	31	573	495
Volume Left	6	0	5
Volume Right	25	43	0
cSH	428	1700	773
Volume to Capacity	0.07	0.34	0.01
Queue Length 95th (ft)	6	0	0
Control Delay (s)	14.1	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	14.1	0.0	0.2
Approach LOS	B		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		
Description: South Driveway/College Avenue			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	34	22	1000	680	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	17	34	22	1000	680	17
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295		
pX, platoon unblocked	0.84					
vC, conflicting volume	1256	372	721			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	924	372	721			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	94	97			
cM capacity (veh/h)	215	612	859			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	51	355	667	453	244
Volume Left	17	22	0	0	0
Volume Right	34	0	0	0	17
cSH	379	859	1700	1700	1700
Volume to Capacity	0.13	0.03	0.39	0.27	0.14
Queue Length 95th (ft)	12	2	0	0	0
Control Delay (s)	16.0	0.9	0.0	0.0	0.0
Lane LOS	C	A			
Approach Delay (s)	16.0	0.3		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	590	160	50	560	130	90	240	80	140	260	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.90			0.96			0.93			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1400			3280			1441			1293	
Flt Permitted		0.87			0.86			0.78			0.64	
Satd. Flow (perm)		1222			2831			1140			833	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	590	160	50	560	130	90	240	80	140	260	160
RTOR Reduction (vph)	0	3	0	0	23	0	0	11	0	0	18	0
Lane Group Flow (vph)	0	827	0	0	717	0	0	399	0	0	542	0
Confl. Peds. (#/hr)			225			106			439			564
Confl. Bikes (#/hr)			3			8			15			22
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		642			1486			299			341	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.68			0.25			0.35			c0.50	
v/c Ratio		1.29			0.48			1.33			1.59	
Uniform Delay, d1		19.0			12.1			29.5			25.0	
Progression Factor		1.00			1.00			0.78			1.00	
Incremental Delay, d2		141.0			1.1			158.8			278.6	
Delay (s)		160.0			13.2			181.8			303.6	
Level of Service		F			B			F			F	
Approach Delay (s)		160.0			13.2			181.8			303.6	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	152.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	128.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	720	130	160	530	240	160	280	280	330	360	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.97		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.96			0.94		1.00	0.97	
Flt Protected		1.00			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3440			3341			3213		1610	3233	
Flt Permitted		0.80			0.57			0.99		0.95	0.99	
Satd. Flow (perm)		2771			1910			3213		1610	3233	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	758	137	168	558	253	168	295	295	347	379	95
RTOR Reduction (vph)	0	15	0	0	38	0	0	99	0	0	18	0
Lane Group Flow (vph)	0	933	0	0	941	0	0	659	0	271	532	0
Confl. Peds. (#/hr)			13			24			24			45
Confl. Bikes (#/hr)			5			9			10			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			15.5		16.0	16.0	
Actuated g/C Ratio		0.49			0.49			0.17		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1370			944			553		286	575	
v/s Ratio Prot								c0.21		c0.17	0.16	
v/s Ratio Perm		0.34			c0.49							
v/c Ratio		0.68			1.00			1.19		0.95	0.93	
Uniform Delay, d1		17.3			22.7			37.2		36.6	36.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.8			28.4			103.5		41.3	23.0	
Delay (s)		20.1			51.1			140.8		77.9	59.4	
Level of Service		C			D			F		E	E	
Approach Delay (s)		20.1			51.1			140.8			65.5	
Approach LOS		C			D			F			E	

Intersection Summary			
HCM Average Control Delay	65.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	105.9%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	60	650	50	30	620
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.96		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1613		3275			3284
Flt Permitted	0.98		1.00			0.90
Satd. Flow (perm)	1613		3275			2952
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	65	707	54	33	674
RTOR Reduction (vph)	46	0	7	0	0	0
Lane Group Flow (vph)	63	0	754	0	0	707
Confl. Peds. (#/hr)	20	47		28		
Confl. Bikes (#/hr)		6		9		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	484		1965			1771
v/s Ratio Prot	c0.04		0.23			
v/s Ratio Perm						c0.24
v/c Ratio	0.13		0.38			0.40
Uniform Delay, d1	20.4		8.3			8.4
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.6		0.6			0.7
Delay (s)	20.9		8.9			9.1
Level of Service	C		A			A
Approach Delay (s)	20.9		8.9			9.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	330	130	40	330	150	180	580	40	120	760	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1759		1770	1550		1770	3276		1770	3162	
Flt Permitted	0.17	1.00		0.20	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	326	1759		373	1550		1770	3276		1770	3162	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	347	137	42	347	158	189	611	42	126	800	84
RTOR Reduction (vph)	0	15	0	0	17	0	0	5	0	0	8	0
Lane Group Flow (vph)	105	469	0	42	488	0	189	648	0	126	876	0
Confl. Peds. (#/hr)			29			25			25			47
Confl. Bikes (#/hr)			2			2			6			17
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	31.8	31.8		31.8	31.8		13.2	36.7		11.0	34.5	
Effective Green, g (s)	31.3	31.3		31.3	31.3		14.2	38.7		12.0	36.5	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.15	0.41		0.13	0.38	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	107	580		123	511		265	1335		224	1215	
v/s Ratio Prot		0.27			0.31		c0.11	0.20		0.07	c0.28	
v/s Ratio Perm	c0.32			0.11								
v/c Ratio	0.98	0.81		0.34	0.95		0.71	0.49		0.56	0.72	
Uniform Delay, d1	31.6	29.1		24.1	31.1		38.5	20.8		39.0	24.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	80.5	7.7		0.6	28.2		7.4	1.3		1.9	3.7	
Delay (s)	112.1	36.8		24.7	59.3		45.8	22.1		41.0	28.6	
Level of Service	F	D		C	E		D	C		D	C	
Approach Delay (s)		50.2			56.7			27.4			30.2	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	38.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	200	30	230	40	160	350	40	20	340	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.98			0.98			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.98			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1450			1780			1533			1325	
Flt Permitted		0.93			0.94			0.50			0.96	
Satd. Flow (perm)		1352			1675			774			1280	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	200	30	230	40	160	350	40	20	340	90
RTOR Reduction (vph)	0	33	0	0	7	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	437	0	0	293	0	0	547	0	0	439	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		507			628			558			360	
v/s Ratio Prot								c0.20				
v/s Ratio Perm		c0.32			0.17			0.32			c0.34	
v/c Ratio		0.86			0.47			0.98			1.22	
Uniform Delay, d1		23.1			18.9			18.6			28.8	
Progression Factor		1.00			1.37			1.00			0.95	
Incremental Delay, d2		17.3			2.5			33.4			100.6	
Delay (s)		40.4			28.5			52.0			127.9	
Level of Service		D			C			D			F	
Approach Delay (s)		40.4			28.5			52.0			127.9	
Approach LOS		D			C			D			F	

Intersection Summary			
HCM Average Control Delay	64.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.2%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	120	140	120	540	510	150
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	128	149	128	574	543	160
Pedestrians	20			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				954	1223	
pX, platoon unblocked						
vC, conflicting volume	1185	374	722			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1185	374	722			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	16	76	85			
cM capacity (veh/h)	152	611	861			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	277	319	383	362	340
Volume Left	128	128	0	0	0
Volume Right	149	0	0	0	160
cSH	256	861	1700	1700	1700
Volume to Capacity	1.08	0.15	0.23	0.21	0.20
Queue Length 95th (ft)	289	13	0	0	0
Control Delay (s)	122.4	5.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	122.4	2.3		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	21.1		
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	4	30	2	3	29	20	530	19	57	480	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	4	33	2	3	32	22	576	21	62	522	22
Pedestrians		306			141			2			185	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		26			12			0			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.78	0.78	0.78	0.78	0.78		0.78					
vC, conflicting volume	1811	1744	841	1464	1744	912	849			738		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1899	1813	653	1454	1814	912	665			738		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	23	88	88	95	91	87	96			92		
cM capacity (veh/h)	14	35	271	40	35	248	536			766		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	48	37	618	605
Volume Left	11	2	22	62
Volume Right	33	32	21	22
cSH	47	135	536	766
Volume to Capacity	1.01	0.27	0.04	0.08
Queue Length 95th (ft)	107	26	3	7
Control Delay (s)	269.7	41.5	1.1	2.1
Lane LOS	F	E	A	A
Approach Delay (s)	269.7	41.5	1.1	2.1
Approach LOS	F	E		

Intersection Summary			
Average Delay	12.5		
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	4	33	20	2	30	9	590	10	20	600	36
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	49	4	35	21	2	32	9	621	11	21	632	38
Pedestrians		7			16			16				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			1				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								657				
pX, platoon unblocked	0.99	0.99		0.99	0.99	0.99				0.99		
vC, conflicting volume	1062	1366	358	1072	1380	332	676			648		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1049	1356	358	1060	1369	315	676			633		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	70	97	94	86	98	95	99			98		
cM capacity (veh/h)	162	140	627	153	137	668	906			928		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	88	55	320	321	337	354
Volume Left	49	21	9	0	21	0
Volume Right	35	32	0	11	0	38
cSH	226	273	906	1700	928	1700
Volume to Capacity	0.39	0.20	0.01	0.19	0.02	0.21
Queue Length 95th (ft)	44	18	1	0	2	0
Control Delay (s)	30.7	21.4	0.4	0.0	0.8	0.0
Lane LOS	D	C	A		A	
Approach Delay (s)	30.7	21.4	0.2		0.4	
Approach LOS	D	C				

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	370	190	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.78				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.95				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1163				
Flt Permitted			0.98				0.32	1.00				
Satd. Flow (perm)			1483				588	1163				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	370	190	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	570	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				225	444				
v/s Ratio Prot								0.49				
v/s Ratio Perm			0.06				0.15					
v/c Ratio			0.48				0.40	1.28				
Uniform Delay, d1			44.6				24.8	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			8.4				5.2	144.0				
Delay (s)			53.0				30.0	178.0				
Level of Service			D				C	F				
Approach Delay (s)			53.0					157.8				
Approach LOS			D					F				

Intersection Summary			
HCM Average Control Delay	203.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	310	150	10	10	170	370	10	40	10	210	400	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.78					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.99					0.98	
Satd. Flow (prot)	1206					3162					3181	
Flt Permitted	0.58					0.99					0.98	
Satd. Flow (perm)	705					3162					3181	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	310	150	10	10	170	370	10	40	10	210	400	20
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	0	0	4	0
Lane Group Flow (vph)	510	0	0	0	0	595	0	0	0	0	676	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	269					546					549	
v/s Ratio Prot						c0.19					c0.21	
v/s Ratio Perm	c0.72											
v/c Ratio	1.90					1.09					1.23	
Uniform Delay, d1	34.0					45.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	416.9					65.2					119.2	
Delay (s)	450.9					110.7					164.7	
Level of Service	F					F					F	
Approach Delay (s)	450.9					110.7					164.7	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	40
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	40
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	10	30	10	180	50	50	130	20	60	540	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.95					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.97			0.94					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1572			1429					3217		
Flt Permitted		0.91			0.85					0.77		
Satd. Flow (perm)		1437			1236					2477		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	32	11	189	53	53	137	21	63	568	95	53
RTOR Reduction (vph)	0	9	0	0	21	0	0	0	0	13	0	0
Lane Group Flow (vph)	0	45	0	0	411	0	0	0	0	734	0	0
Confl. Peds. (#/hr)			21				55				9	
Confl. Bikes (#/hr)			8				28				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		18.0			18.0					39.7		
Effective Green, g (s)		18.0			18.0					40.7		
Actuated g/C Ratio		0.22			0.22					0.51		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		323			278					1260		
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.33					c0.30		
v/c Ratio		0.14			1.48					0.58		
Uniform Delay, d1		24.8			31.0					13.7		
Progression Factor		1.00			1.00					0.60		
Incremental Delay, d2		0.1			233.8					1.9		
Delay (s)		24.9			264.8					10.1		
Level of Service		C			F					B		
Approach Delay (s)		24.9			264.8					10.1		
Approach LOS		C			F					B		

Intersection Summary			
HCM Average Control Delay	65.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	670	10	10	10	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	1.00				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3285				1515	
Flt Permitted	0.86				0.97	
Satd. Flow (perm)	2822				1515	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	11	11	11	53	53
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	780	0	0	0	117	0
Confl. Peds. (#/hr)		5	12			
Confl. Bikes (#/hr)		13	20			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	39.7				9.3	
Effective Green, g (s)	40.7				9.3	
Actuated g/C Ratio	0.51				0.12	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1436				176	
v/s Ratio Prot					c0.08	
v/s Ratio Perm	0.28					
v/c Ratio	0.54				0.66	
Uniform Delay, d1	13.3				33.9	
Progression Factor	1.00				1.00	
Incremental Delay, d2	1.5				7.1	
Delay (s)	14.8				41.0	
Level of Service	B				D	
Approach Delay (s)	14.8				41.0	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	70	50	60	680	50	30	310	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.90	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1748		1770	3268		1770	2941	
Flt Permitted					1.00		0.25	1.00		0.31	1.00	
Satd. Flow (perm)					1748		467	3268		578	2941	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	76	54	65	739	54	33	337	609
RTOR Reduction (vph)	0	0	0	0	28	0	0	7	0	0	244	0
Lane Group Flow (vph)	0	0	0	0	113	0	65	786	0	33	702	0
Confl. Peds. (#/hr)			3			5			13			9
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					524		280	1961		347	1765	
v/s Ratio Prot								c0.24			0.24	
v/s Ratio Perm					0.06		0.14			0.06		
v/c Ratio					0.22		0.23	0.40		0.10	0.40	
Uniform Delay, d1					21.0		7.4	8.4		6.8	8.4	
Progression Factor					1.00		0.80	0.81		1.68	2.19	
Incremental Delay, d2					0.9		1.9	0.6		0.4	0.5	
Delay (s)					21.9		7.8	7.4		11.8	18.9	
Level of Service					C		A	A		B	B	
Approach Delay (s)		0.0			21.9			7.5			18.6	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	530	80	80	0	0	50	0	210	30	120	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.98	
Satd. Flow (prot)	1681	1657				1418		3235			3248	
Flt Permitted	0.95	0.97				1.00		1.00			0.73	
Satd. Flow (perm)	1681	1657				1418		3235			2404	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	589	89	89	0	0	56	0	233	33	133	222	0
RTOR Reduction (vph)	0	14	0	0	0	20	0	14	0	0	0	0
Lane Group Flow (vph)	389	364	0	0	0	36	0	252	0	0	355	0
Confl. Peds. (#/hr)			8						21			6
Confl. Bikes (#/hr)									10			12
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1056				904		849			631	
v/s Ratio Prot								0.08				
v/s Ratio Perm	c0.23	0.22				0.03					c0.15	
v/c Ratio	0.36	0.34				0.04		0.30			0.56	
Uniform Delay, d1	6.8	6.7				5.4		23.6			25.5	
Progression Factor	1.00	1.00				1.00		1.00			0.87	
Incremental Delay, d2	1.0	0.9				0.1		0.9			3.3	
Delay (s)	7.8	7.6				5.5		24.5			25.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.7			5.5			24.5			25.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	100	170	260	60	460	0	0	520	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.96		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3130		1770	1863			1810	
Flt Permitted					0.99		0.30	1.00			1.00	
Satd. Flow (perm)					3130		568	1863			1810	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	108	183	280	65	495	0	0	559	65
RTOR Reduction (vph)	0	0	0	0	95	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	476	0	65	495	0	0	617	0
Confl. Peds. (#/hr)			25			30			194			210
Confl. Bikes (#/hr)			2			2			38			40
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					939		322	1056			1026	
v/s Ratio Prot								0.27			c0.34	
v/s Ratio Perm					0.15		0.11					
v/c Ratio					0.51		0.20	0.47			0.60	
Uniform Delay, d1					17.3		6.4	7.7			8.5	
Progression Factor					1.00		2.06	1.99			1.00	
Incremental Delay, d2					2.0		1.0	1.1			2.6	
Delay (s)					19.3		14.2	16.3			11.2	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			19.3			16.1			11.2	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	120	80	0	0	0	0	450	70	160	460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.79						0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.94						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1216						1735		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1216						1735		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	77	132	88	0	0	0	0	495	77	176	505	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	77	180	0	0	0	0	0	563	0	176	505	0
Confl. Peds. (#/hr)			276			70			323			259
Confl. Bikes (#/hr)			3			6			16			28
Parking (#/hr)		5										
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)	16.0	16.0						27.0		8.0	38.0	
Effective Green, g (s)	15.0	15.0						26.0		7.0	37.0	
Actuated g/C Ratio	0.25	0.25						0.43		0.12	0.62	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	443	304						752		207	1149	
v/s Ratio Prot		c0.15						c0.32		c0.10	0.27	
v/s Ratio Perm	0.04											
v/c Ratio	0.17	0.59						0.75		0.85	0.44	
Uniform Delay, d1	17.6	19.8						14.3		26.0	6.0	
Progression Factor	1.00	1.00						0.81		1.38	0.43	
Incremental Delay, d2	0.9	8.3						5.7		28.4	1.0	
Delay (s)	18.5	28.1						17.3		64.2	3.6	
Level of Service	B	C						B		E	A	
Approach Delay (s)		25.6			0.0			17.3			19.2	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	30	10	10	10	10	20	40	10	20	380	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1535			1449					1632	
Flt Permitted			0.80			0.97					0.95	
Satd. Flow (perm)			1271			1413					1555	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	32	11	11	11	11	22	43	11	22	409	11
RTOR Reduction (vph)	0	0	8	0	0	33	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	57	0	0	54	0	0	0	0	451	0
Confl. Peds. (#/hr)				33				1				94
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			297			330					648	
v/s Ratio Prot												
v/s Ratio Perm			c0.04			0.04					0.29	
v/c Ratio			0.19			0.16					0.70	
Uniform Delay, d1			18.5			18.3					14.4	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			1.4			1.1					6.1	
Delay (s)			19.9			19.4					20.5	
Level of Service			B			B					C	
Approach Delay (s)			19.9			19.4					20.5	
Approach LOS			B			B					C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	50	380	30	50	20	30	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.92		
Flt Protected		1.00				0.98		
Satd. Flow (prot)		1730				1483		
Flt Permitted		0.93				0.98		
Satd. Flow (perm)		1623				1483		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	54	409	32	54	22	32	32	54
RTOR Reduction (vph)	0	6	0	0	0	37	0	0
Lane Group Flow (vph)	0	543	0	0	0	103	0	0
Confl. Peds. (#/hr)			67	92				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		676				222		
v/s Ratio Prot								
v/s Ratio Perm		c0.33				0.07		
v/c Ratio		0.80				0.46		
Uniform Delay, d1		15.3				23.3		
Progression Factor		0.61				1.00		
Incremental Delay, d2		8.8				6.8		
Delay (s)		18.2				30.1		
Level of Service		B				C		
Approach Delay (s)		18.2				30.1		
Approach LOS		B				C		

Intersection Summary

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	4	20	550	47	6	510
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	4	20	550	47	6	510
Pedestrians	141					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	12					
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			219			433
pX, platoon unblocked						
vC, conflicting volume	1236	714			738	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1236	714			738	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	95			99	
cM capacity (veh/h)	170	380			766	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	24	597	516
Volume Left	4	0	6
Volume Right	20	47	0
cSH	315	1700	766
Volume to Capacity	0.08	0.35	0.01
Queue Length 95th (ft)	6	0	1
Control Delay (s)	17.4	0.0	0.2
Lane LOS	C		A
Approach Delay (s)	17.4	0.0	0.2
Approach LOS	C		

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		
Description: South Driveway/College Avenue			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	55	16	590	630	17
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	17	55	16	590	630	17
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295		
pX, platoon unblocked	0.89					
vC, conflicting volume	972	330	654			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	734	330	654			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	92	98			
cM capacity (veh/h)	311	661	923			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	72	213	393	420	227
Volume Left	17	16	0	0	0
Volume Right	55	0	0	0	17
cSH	522	923	1700	1700	1700
Volume to Capacity	0.14	0.02	0.23	0.25	0.13
Queue Length 95th (ft)	12	1	0	0	0
Control Delay (s)	13.0	0.8	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.0	0.3		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	710	95	25	650	140	114	342	74	150	362	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.96			0.95			0.95			0.95	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.97			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1517			3286			1487			1411	
Flt Permitted		0.97			0.92			0.77			0.61	
Satd. Flow (perm)		1477			3022			1159			870	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	710	95	25	650	140	114	342	74	150	362	90
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	7	0
Lane Group Flow (vph)	0	820	0	0	796	0	0	524	0	0	595	0
Confl. Peds. (#/hr)			117			93			309			258
Confl. Bikes (#/hr)			1			9			37			68
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		46.0			46.0			29.0			41.0	
Effective Green, g (s)		46.0			46.0			29.0			41.0	
Actuated g/C Ratio		0.48			0.48			0.31			0.43	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		715			1463			354			421	
v/s Ratio Prot											c0.12	
v/s Ratio Perm		c0.56			0.26			0.45			c0.49	
v/c Ratio		1.15			0.54			1.48			1.41	
Uniform Delay, d1		24.5			17.2			33.0			27.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		81.9			1.5			230.5			199.8	
Delay (s)		106.4			18.6			263.5			226.8	
Level of Service		F			B			F			F	
Approach Delay (s)		106.4			18.6			263.5			226.8	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	136.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	650	120	224	560	240	180	603	374	280	293	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.99		1.00	0.98	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.96			0.95		1.00	0.98	
Flt Protected		0.99			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3433			3358			3309		1610	3223	
Flt Permitted		0.64			0.57			0.99		0.95	0.99	
Satd. Flow (perm)		2200			1940			3309		1610	3223	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	650	120	224	560	240	180	603	374	280	293	50
RTOR Reduction (vph)	0	13	0	0	29	0	0	58	0	0	10	0
Lane Group Flow (vph)	0	857	0	0	995	0	0	1099	0	204	409	0
Confl. Peds. (#/hr)			15			12			6			56
Confl. Bikes (#/hr)			5			2			6			7
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		50.5			50.5			17.0		17.5	17.5	
Effective Green, g (s)		52.5			52.5			16.5		17.0	17.0	
Actuated g/C Ratio		0.52			0.52			0.16		0.17	0.17	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1155			1019			546		274	548	
v/s Ratio Prot								c0.33		0.13	c0.13	
v/s Ratio Perm		0.39			c0.51							
v/c Ratio		0.74			0.98			2.01		0.74	0.75	
Uniform Delay, d1		18.5			23.1			41.8		39.4	39.5	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		4.3			23.1			462.5		16.7	9.0	
Delay (s)		22.8			46.2			504.3		56.2	48.4	
Level of Service		C			D			F		E	D	
Approach Delay (s)		22.8			46.2			504.3			50.9	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM Average Control Delay	185.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	118.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	72	80	1168	122	50	668
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.97		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.93		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1641		3245			3280
Flt Permitted	0.98		1.00			0.76
Satd. Flow (perm)	1641		3245			2515
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	75	83	1217	127	52	696
RTOR Reduction (vph)	41	0	10	0	0	0
Lane Group Flow (vph)	117	0	1334	0	0	748
Confl. Peds. (#/hr)	41	37		46		
Confl. Bikes (#/hr)		8		28		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	492		1947			1509
v/s Ratio Prot	c0.07		c0.41			
v/s Ratio Perm						0.30
v/c Ratio	0.24		0.69			0.50
Uniform Delay, d1	21.1		10.9			9.1
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	1.1		2.0			1.2
Delay (s)	22.2		12.9			10.3
Level of Service	C		B			B
Approach Delay (s)	22.2		12.9			10.3
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↑↱		↰	↑↱	
Volume (vph)	100	536	140	41	436	194	220	840	81	255	950	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1783		1770	1526		1770	3224		1770	3144	
Flt Permitted	0.12	1.00		0.12	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	229	1783		229	1526		1770	3224		1770	3144	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	104	558	146	43	454	202	229	875	84	266	990	94
RTOR Reduction (vph)	0	10	0	0	17	0	0	8	0	0	7	0
Lane Group Flow (vph)	104	694	0	43	639	0	229	951	0	266	1077	0
Confl. Peds. (#/hr)			31			56			55			71
Confl. Bikes (#/hr)			12			28			48			56
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	33.0	33.0		33.0	33.0		14.4	31.4		15.1	32.1	
Effective Green, g (s)	32.5	32.5		32.5	32.5		15.4	33.4		16.1	34.1	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.16	0.35		0.17	0.36	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	78	610		78	522		287	1133		300	1129	
v/s Ratio Prot		0.39			0.42		0.13	0.30		c0.15	c0.34	
v/s Ratio Perm	c0.45			0.19								
v/c Ratio	1.33	1.14		0.55	1.22		0.80	0.84		0.89	0.95	
Uniform Delay, d1	31.2	31.2		25.3	31.2		38.3	28.3		38.6	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	214.5	80.8		4.7	117.0		13.4	7.5		24.8	17.8	
Delay (s)	245.8	112.0		30.0	148.3		51.7	35.9		63.3	47.5	
Level of Service	F	F		C	F		D	D		E	D	
Approach Delay (s)		129.2			141.0			38.9			50.6	
Approach LOS		F			F			D			D	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	530	202	10	340	60	182	364	40	80	376	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.97			0.97			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.98			0.99			0.97	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1488			1764			1513			1320	
Flt Permitted		0.89			0.98			0.46			0.84	
Satd. Flow (perm)		1327			1729			702			1120	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	530	202	10	340	60	182	364	40	80	376	110
RTOR Reduction (vph)	0	0	0	0	8	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	812	0	0	403	0	0	583	0	0	555	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		498			648			531			315	
v/s Ratio Prot								c0.22				
v/s Ratio Perm		c0.61			0.23			0.36			c0.50	
v/c Ratio		1.63			0.62			1.10			1.76	
Uniform Delay, d1		25.0			20.4			19.0			28.8	
Progression Factor		1.00			1.30			1.00			1.00	
Incremental Delay, d2		292.8			4.4			68.3			355.9	
Delay (s)		317.8			30.8			87.3			384.7	
Level of Service		F			C			F			F	
Approach Delay (s)		317.8			30.8			87.3			384.7	
Approach LOS		F			C			F			F	

Intersection Summary			
HCM Average Control Delay	227.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.7%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	400	220	190	930	530	210
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	220	190	930	530	210
Pedestrians	46			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	4			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.81					
vC, conflicting volume	1526	417	786			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1190	417	786			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	61	76			
cM capacity (veh/h)	108	562	797			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	620	500	620	353	387
Volume Left	400	190	0	0	0
Volume Right	220	0	0	0	210
cSH	151	797	1700	1700	1700
Volume to Capacity	4.11	0.24	0.36	0.21	0.23
Queue Length 95th (ft)	Err	23	0	0	0
Control Delay (s)	Err	6.1	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	Err	2.7		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	2501.0		
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	7	20	35	6	95	30	485	86	103	458	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	7	20	36	6	97	31	495	88	105	467	10
Pedestrians		238			114						237	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		20			10						20	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.81	0.81	0.81	0.81	0.81	0.72	0.81			0.72		
vC, conflicting volume	1814	1679	710	1416	1640	890	716			697		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1370	1203	529	881	1156	654	536			386		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	60	92	94	70	94	60	95			86		
cM capacity (veh/h)	26	90	358	120	96	244	673			765		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	139	31	583	105	478
Volume Left	10	36	31	0	105	0
Volume Right	20	97	0	88	0	10
cSH	71	183	673	1700	765	1700
Volume to Capacity	0.54	0.76	0.05	0.34	0.14	0.28
Queue Length 95th (ft)	56	124	4	0	12	0
Control Delay (s)	103.8	68.4	10.6	0.0	10.5	0.0
Lane LOS	F	F	B		B	
Approach Delay (s)	103.8	68.4	0.5		1.9	
Approach LOS	F	F				

Intersection Summary			
Average Delay	10.8		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	108	8	33	10	4	20	66	969	10	40	661	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.99	
Flt Protected		0.96			0.98			1.00			1.00	
Satd. Flow (prot)		1725			1677			3520			3476	
Flt Permitted		0.76			0.92			0.85			0.86	
Satd. Flow (perm)		1363			1558			3019			2991	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	114	8	35	11	4	21	69	1020	11	42	696	54
RTOR Reduction (vph)	0	13	0	0	17	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	144	0	0	19	0	0	1100	0	0	787	0
Confl. Peds. (#/hr)			22			1			33			24
Confl. Bikes (#/hr)									7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		11.4			11.4			35.8			35.8	
Effective Green, g (s)		11.4			11.4			35.8			35.8	
Actuated g/C Ratio		0.18			0.18			0.56			0.56	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		244			279			1697			1681	
v/s Ratio Prot												
v/s Ratio Perm		c0.11			0.01			c0.36			0.26	
v/c Ratio		0.59			0.07			0.65			0.47	
Uniform Delay, d1		24.0			21.7			9.6			8.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		3.6			0.1			1.9			0.9	
Delay (s)		27.6			21.8			11.5			9.2	
Level of Service		C			C			B			A	
Approach Delay (s)		27.6			21.8			11.5			9.2	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	12.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	63.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1657		
Flt Permitted		0.99		
Satd. Flow (perm)		1657		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	0	21	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	34	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		117		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.29		
Uniform Delay, d1		28.1		
Progression Factor		1.00		
Incremental Delay, d2		1.4		
Delay (s)		29.4		
Level of Service		C		
Approach Delay (s)		29.4		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	413	273	10	30	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.72				0.80
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.94				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1058				1257
Flt Permitted			0.98				0.30	1.00				0.40
Satd. Flow (perm)			1483				567	1058				510
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	413	273	10	30	342
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	519
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				216	404				195
v/s Ratio Prot								0.66				
v/s Ratio Perm			0.06				0.18					c1.02
v/c Ratio			0.48				0.46	1.72				2.66
Uniform Delay, d1			44.6				25.5	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			8.4				7.0	335.5				762.2
Delay (s)			53.0				32.5	369.5				796.2
Level of Service			D				C	F				F
Approach Delay (s)			53.0					327.2				796.2
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	381.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	137	10	10	139	721	20	50	10	253	431	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3198					3176		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3198					3176		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	137	10	10	139	721	20	50	10	253	431	10	30
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	937	0	0	0	0	732	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					552					549		
v/s Ratio Prot					c0.29					c0.23		
v/s Ratio Perm												
v/c Ratio					1.70					1.33		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					321.4					161.8		
Delay (s)					366.9					207.3		
Level of Service					F					F		
Approach Delay (s)					366.9					207.3		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	22	80	10	170	70	60	162	40	50	823	130	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.92					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.94					0.98		
Flt Protected		0.99			0.98					1.00		
Satd. Flow (prot)		1604			1373					3224		
Flt Permitted		0.85			0.83					0.74		
Satd. Flow (perm)		1379			1157					2395		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	80	10	170	70	60	162	40	50	823	130	71
RTOR Reduction (vph)	0	5	0	0	24	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	107	0	0	438	0	0	0	0	1029	0	0
Confl. Peds. (#/hr)			26				89				7	
Confl. Bikes (#/hr)			14				55				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		18.0			18.0					34.8		
Effective Green, g (s)		18.0			18.0					35.8		
Actuated g/C Ratio		0.22			0.22					0.45		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		310			260					1072		
v/s Ratio Prot												
v/s Ratio Perm		0.08			c0.38					c0.43		
v/c Ratio		0.35			1.68					0.96		
Uniform Delay, d1		26.1			31.0					21.4		
Progression Factor		1.00			1.00					0.76		
Incremental Delay, d2		0.2			324.2					17.6		
Delay (s)		26.3			355.2					33.9		
Level of Service		C			F					C		
Approach Delay (s)		26.3			355.2					33.9		
Approach LOS		C			F					C		

Intersection Summary			
HCM Average Control Delay	88.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	712	12	13	13	130	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	1.00				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3279				1525		
Flt Permitted	0.69				0.97		
Satd. Flow (perm)	2279				1525		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	712	12	13	13	130	80	10
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	808	0	0	0	233	0	0
Confl. Peds. (#/hr)		1	18				
Confl. Bikes (#/hr)		6	18				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	34.8				14.2		
Effective Green, g (s)	35.8				14.2		
Actuated g/C Ratio	0.45				0.18		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	1020				271		
v/s Ratio Prot					c0.15		
v/s Ratio Perm	0.35						
v/c Ratio	0.79				0.86		
Uniform Delay, d1	18.9				31.9		
Progression Factor	1.00				1.00		
Incremental Delay, d2	6.3				22.0		
Delay (s)	25.2				54.0		
Level of Service	C				D		
Approach Delay (s)	25.2				54.0		
Approach LOS	C				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	80	92	80	951	90	52	364	576
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.94		1.00	0.99		1.00	0.91	
Flt Protected					0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1715		1770	3258		1770	2955	
Flt Permitted					0.99		0.25	1.00		0.21	1.00	
Satd. Flow (perm)					1715		458	3258		393	2955	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	20	82	94	82	970	92	53	371	588
RTOR Reduction (vph)	0	0	0	0	41	0	0	9	0	0	235	0
Lane Group Flow (vph)	0	0	0	0	155	0	82	1053	0	53	724	0
Confl. Peds. (#/hr)			2			9			9			13
Confl. Bikes (#/hr)			2			2						1
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					515		275	1955		236	1773	
v/s Ratio Prot								c0.32			0.24	
v/s Ratio Perm					0.09		0.18			0.13		
v/c Ratio					0.30		0.30	0.54		0.22	0.41	
Uniform Delay, d1					21.5		7.8	9.5		7.4	8.5	
Progression Factor					1.00		1.92	1.87		1.82	3.02	
Incremental Delay, d2					1.5		2.2	0.9		0.9	0.3	
Delay (s)					23.0		17.2	18.6		14.4	25.9	
Level of Service					C		B	B		B	C	
Approach Delay (s)		0.0			23.0			18.5			25.3	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.0%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	456	110	70	0	0	42	0	623	70	112	272	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			0.99	
Satd. Flow (prot)	1681	1669				1418		3261			3261	
Flt Permitted	0.95	0.98				1.00		1.00			0.56	
Satd. Flow (perm)	1681	1669				1418		3261			1841	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	475	115	73	0	0	44	0	649	73	117	283	0
RTOR Reduction (vph)	0	13	0	0	0	13	0	11	0	0	0	0
Lane Group Flow (vph)	332	318	0	0	0	31	0	711	0	0	400	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			22
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1064				904		856			483	
v/s Ratio Prot								c0.22				
v/s Ratio Perm	c0.20	0.19				0.02					0.22	
v/c Ratio	0.31	0.30				0.03		0.83			1.44dl	
Uniform Delay, d1	6.5	6.5				5.4		27.8			27.8	
Progression Factor	1.00	1.00				1.00		1.00			0.84	
Incremental Delay, d2	0.8	0.7				0.1		9.2			13.8	
Delay (s)	7.3	7.2				5.4		37.0			37.2	
Level of Service	A	A				A		D			D	
Approach Delay (s)		7.3			5.4			37.0			37.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		

Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	90	210	345	70	536	0	0	589	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.90		1.00	1.00			0.98	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.92		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					2917		1770	1863			1788	
Flt Permitted					0.99		0.27	1.00			1.00	
Satd. Flow (perm)					2917		500	1863			1788	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	97	226	371	75	576	0	0	633	109
RTOR Reduction (vph)	0	0	0	0	68	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	627	0	75	576	0	0	734	0
Confl. Peds. (#/hr)			48			79			316			244
Confl. Bikes (#/hr)									75			64
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					19.0		51.0	51.0			51.0	
Effective Green, g (s)					20.0		52.0	52.0			52.0	
Actuated g/C Ratio					0.25		0.65	0.65			0.65	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					729		325	1211			1162	
v/s Ratio Prot								0.31			c0.41	
v/s Ratio Perm					0.21		0.15					
v/c Ratio					0.86		0.23	0.48			0.63	
Uniform Delay, d1					28.7		5.8	7.1			8.3	
Progression Factor					1.00		2.17	2.21			1.00	
Incremental Delay, d2					12.6		1.0	0.8			2.6	
Delay (s)					41.2		13.5	16.5			10.9	
Level of Service					D		B	B			B	
Approach Delay (s)		0.0			41.2			16.1			10.9	
Approach LOS		A			D			B			B	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	390	90	0	0	0	0	485	130	205	474	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.90						0.88		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.97						0.97		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1423						1593		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1423						1593		1770	1863	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	126	406	94	0	0	0	0	505	135	214	494	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	126	490	0	0	0	0	0	628	0	214	494	0
Confl. Peds. (#/hr)			345			166			591			219
Confl. Bikes (#/hr)			6			10			44			49
Parking (#/hr)		5										
Turn Type	Perm									custom		
Protected Phases		4						1		3	2	
Permitted Phases	4									3		
Actuated Green, G (s)	22.0	22.0						34.0		15.0	52.0	
Effective Green, g (s)	21.0	21.0						33.0		14.0	51.0	
Actuated g/C Ratio	0.26	0.26						0.41		0.18	0.64	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	465	374						657		310	1188	
v/s Ratio Prot		c0.34						c0.39		c0.12	0.27	
v/s Ratio Perm	0.07											
v/c Ratio	0.27	1.31						0.96		0.69	0.42	
Uniform Delay, d1	23.4	29.5						22.8		31.0	7.2	
Progression Factor	1.00	1.00						1.00		0.91	0.51	
Incremental Delay, d2	1.4	157.2						25.9		9.0	0.8	
Delay (s)	24.9	186.7						48.7		37.1	4.4	
Level of Service	C	F						D		D	A	
Approach Delay (s)		154.1			0.0			48.7			14.3	
Approach LOS		F			A			D			B	

Intersection Summary			
HCM Average Control Delay	69.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	31	50	20	20	20	40	62	10	40	505	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.97			0.93					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.98			0.99					1.00	
Satd. Flow (prot)			1538			1377					1622	
Flt Permitted			0.87			0.95					0.91	
Satd. Flow (perm)			1370			1321					1478	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	33	53	21	21	21	42	65	11	42	532	21
RTOR Reduction (vph)	0	0	13	0	0	47	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	105	0	0	102	0	0	0	0	604	0
Confl. Peds. (#/hr)				61				36				132
Confl. Bikes (#/hr)												16
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					22.0	
Effective Green, g (s)			14.0			14.0					22.0	
Actuated g/C Ratio			0.23			0.23					0.37	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			320			308					542	
v/s Ratio Prot												
v/s Ratio Perm			0.08			c0.08					c0.41	
v/c Ratio			0.33			0.33					1.11	
Uniform Delay, d1			19.1			19.1					19.0	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.7			2.9					74.1	
Delay (s)			21.8			22.0					93.1	
Level of Service			C			C					F	
Approach Delay (s)			21.8			22.0					93.1	
Approach LOS			C			C					F	

Intersection Summary			
HCM Average Control Delay	72.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	72	395	31	41	32	70	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.96				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.94		
Flt Protected		0.99				0.97		
Satd. Flow (prot)		1720				1504		
Flt Permitted		0.81				0.97		
Satd. Flow (perm)		1399				1504		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	416	33	43	34	74	53	42
RTOR Reduction (vph)	0	5	0	0	0	16	0	0
Lane Group Flow (vph)	0	563	0	0	0	187	0	0
Confl. Peds. (#/hr)			75	121				
Confl. Bikes (#/hr)			16	7				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		22.0				12.0		
Effective Green, g (s)		22.0				12.0		
Actuated g/C Ratio		0.37				0.20		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		513				301		
v/s Ratio Prot								
v/s Ratio Perm		0.40				0.12		
v/c Ratio		1.10				0.62		
Uniform Delay, d1		19.0				21.9		
Progression Factor		1.00				1.00		
Incremental Delay, d2		68.9				9.3		
Delay (s)		87.9				31.2		
Level of Service		F				C		
Approach Delay (s)		87.9				31.2		
Approach LOS		F				C		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	50	0	1046	688	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	50	0	1046	688	27
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.89	0.91	0.91			
vC, conflicting volume	1248	382	739			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	560	120	513			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	94	100			
cM capacity (veh/h)	397	810	934			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	50	349	697	459	256
Volume Left	0	0	0	0	0
Volume Right	50	0	0	0	27
cSH	810	934	1700	1700	1700
Volume to Capacity	0.06	0.00	0.41	0.27	0.15
Queue Length 95th (ft)	5	0	0	0	0
Control Delay (s)	9.7	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.7	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	590	166	56	560	130	96	255	86	140	276	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			0.95			1.00			1.00	
Frpb, ped/bikes		0.90			0.96			0.93			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.97			0.96	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1394			3281			1439			1299	
Flt Permitted		0.87			0.84			0.77			0.63	
Satd. Flow (perm)		1217			2773			1119			828	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	590	166	56	560	130	96	255	86	140	276	160
RTOR Reduction (vph)	0	3	0	0	22	0	0	11	0	0	18	0
Lane Group Flow (vph)	0	833	0	0	724	0	0	426	0	0	559	0
Confl. Peds. (#/hr)			225			106			439			564
Confl. Bikes (#/hr)			3			8			15			22
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		42.0			42.0			21.0			30.0	
Effective Green, g (s)		42.0			42.0			21.0			30.0	
Actuated g/C Ratio		0.52			0.52			0.26			0.38	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		639			1456			294			340	
v/s Ratio Prot											c0.10	
v/s Ratio Perm		c0.68			0.26			0.38			c0.51	
v/c Ratio		1.30			0.50			1.45			1.64	
Uniform Delay, d1		19.0			12.2			29.5			25.0	
Progression Factor		1.00			1.00			0.76			1.00	
Incremental Delay, d2		147.9			1.2			203.7			302.1	
Delay (s)		166.9			13.4			226.3			327.1	
Level of Service		F			B			F			F	
Approach Delay (s)		166.9			13.4			226.3			327.1	
Approach LOS		F			B			F			F	

Intersection Summary			
HCM Average Control Delay	168.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	129.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	720	130	165	530	240	160	284	285	330	364	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95			0.95			0.95		0.91	0.91	
Frpb, ped/bikes		1.00			0.99			0.97		1.00	0.99	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.96			0.94		1.00	0.97	
Flt Protected		1.00			0.99			0.99		0.95	0.99	
Satd. Flow (prot)		3440			3341			3212		1610	3234	
Flt Permitted		0.80			0.56			0.99		0.95	0.99	
Satd. Flow (perm)		2764			1903			3212		1610	3234	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	758	137	174	558	253	168	299	300	347	383	95
RTOR Reduction (vph)	0	15	0	0	38	0	0	99	0	0	18	0
Lane Group Flow (vph)	0	933	0	0	947	0	0	668	0	274	533	0
Confl. Peds. (#/hr)			13			24			24			45
Confl. Bikes (#/hr)			5			9			10			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		42.5			42.5			16.0		16.5	16.5	
Effective Green, g (s)		44.5			44.5			15.5		16.0	16.0	
Actuated g/C Ratio		0.49			0.49			0.17		0.18	0.18	
Clearance Time (s)		6.0			6.0			4.5		4.5	4.5	
Lane Grp Cap (vph)		1367			941			553		286	575	
v/s Ratio Prot								c0.21		c0.17	0.16	
v/s Ratio Perm		0.34			c0.50							
v/c Ratio		0.68			1.01			1.21		0.96	0.93	
Uniform Delay, d1		17.4			22.8			37.2		36.7	36.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		2.8			30.8			110.1		43.5	23.2	
Delay (s)		20.1			53.5			147.3		80.2	59.7	
Level of Service		C			D			F		F	E	
Approach Delay (s)		20.1			53.5			147.3			66.5	
Approach LOS		C			D			F			E	

Intersection Summary			
HCM Average Control Delay	68.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	42	60	660	52	30	631
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.96		0.99			1.00
Flpb, ped/bikes	1.00		1.00			1.00
Frt	0.92		0.99			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1618		3273			3284
Flt Permitted	0.98		1.00			0.90
Satd. Flow (perm)	1618		3273			2952
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	65	717	57	33	686
RTOR Reduction (vph)	46	0	7	0	0	0
Lane Group Flow (vph)	66	0	767	0	0	719
Confl. Peds. (#/hr)	20	47		28		
Confl. Bikes (#/hr)		6		9		
Parking (#/hr)		1	4			8
Turn Type					Perm	
Protected Phases	6		8			8
Permitted Phases					8	
Actuated Green, G (s)	23.0		47.0			47.0
Effective Green, g (s)	24.0		48.0			48.0
Actuated g/C Ratio	0.30		0.60			0.60
Clearance Time (s)	5.0		5.0			5.0
Lane Grp Cap (vph)	485		1964			1771
v/s Ratio Prot	c0.04		0.23			
v/s Ratio Perm						c0.24
v/c Ratio	0.14		0.39			0.41
Uniform Delay, d1	20.4		8.4			8.5
Progression Factor	1.00		1.00			1.00
Incremental Delay, d2	0.6		0.6			0.7
Delay (s)	21.0		8.9			9.2
Level of Service	C		A			A
Approach Delay (s)	21.0		8.9			9.2
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		
Description: The Uplands/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	338	130	41	337	156	180	580	41	126	760	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1761		1770	1549		1770	3275		1770	3162	
Flt Permitted	0.16	1.00		0.20	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	306	1761		364	1549		1770	3275		1770	3162	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	356	137	43	355	164	189	611	43	133	800	84
RTOR Reduction (vph)	0	15	0	0	18	0	0	5	0	0	8	0
Lane Group Flow (vph)	105	478	0	43	501	0	189	649	0	133	876	0
Confl. Peds. (#/hr)			29			25			25			47
Confl. Bikes (#/hr)			2			2			6			17
Parking (#/hr)					3			4			12	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)	32.2	32.2		32.2	32.2		13.2	36.0		11.3	34.1	
Effective Green, g (s)	31.7	31.7		31.7	31.7		14.2	38.0		12.3	36.1	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.15	0.40		0.13	0.38	
Clearance Time (s)	4.5	4.5		4.5	4.5		5.0	6.0		5.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	102	588		121	517		265	1310		229	1202	
v/s Ratio Prot		0.27			0.32		c0.11	0.20		0.08	c0.28	
v/s Ratio Perm	c0.34			0.12								
v/c Ratio	1.03	0.81		0.36	0.97		0.71	0.50		0.58	0.73	
Uniform Delay, d1	31.6	28.9		23.9	31.2		38.5	21.3		38.9	25.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	97.3	8.0		0.7	31.2		7.4	1.3		2.4	3.9	
Delay (s)	128.9	37.0		24.6	62.4		45.8	22.7		41.3	29.2	
Level of Service	F	D		C	E		D	C		D	C	
Approach Delay (s)		53.1			59.5			27.9			30.7	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/Telegraph Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	216	30	230	40	175	382	40	20	374	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.98			0.98			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.98			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1442			1780			1536			1339	
Flt Permitted		0.93			0.93			0.44			0.96	
Satd. Flow (perm)		1347			1671			690			1293	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	216	30	230	40	175	382	40	20	374	90
RTOR Reduction (vph)	0	36	0	0	7	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	450	0	0	293	0	0	594	0	0	474	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		505			627			531			364	
v/s Ratio Prot								c0.22				
v/s Ratio Perm		c0.33			0.18			0.36			c0.37	
v/c Ratio		0.89			0.47			1.12			1.30	
Uniform Delay, d1		23.5			18.9			19.0			28.8	
Progression Factor		1.00			1.37			1.00			0.95	
Incremental Delay, d2		20.5			2.5			75.7			137.8	
Delay (s)		43.9			28.4			94.7			165.2	
Level of Service		D			C			F			F	
Approach Delay (s)		43.9			28.4			94.7			165.2	
Approach LOS		D			C			F			F	

Intersection Summary			
HCM Average Control Delay	89.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	120	140	120	553	524	150
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	128	149	128	588	557	160
Pedestrians	20			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.94					
vC, conflicting volume	1207	382	737			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1085	382	737			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	23	75	85			
cM capacity (veh/h)	165	605	850			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	277	324	392	372	345
Volume Left	128	128	0	0	0
Volume Right	149	0	0	0	160
cSH	272	850	1700	1700	1700
Volume to Capacity	1.02	0.15	0.23	0.22	0.20
Queue Length 95th (ft)	263	13	0	0	0
Control Delay (s)	100.5	5.0	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	100.5	2.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	17.2		
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	30	43	8	110	20	496	108	124	463	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	33	47	9	120	22	539	117	135	503	22
Pedestrians		306			141			2			185	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		26			12			0			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.83	0.83	0.83	0.83	0.83		0.83					
vC, conflicting volume	1981	1931	822	1595	1883	924	831			798		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2081	2020	681	1615	1962	924	692			798		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	56	88	0	68	51	96			81		
cM capacity (veh/h)	5	25	277	23	27	244	557			728		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	175	22	657	135	525
Volume Left	11	47	22	0	135	0
Volume Right	33	120	0	117	0	22
cSH	20	61	557	1700	728	1700
Volume to Capacity	2.75	2.87	0.04	0.39	0.19	0.31
Queue Length 95th (ft)	179	448	3	0	17	0
Control Delay (s)	1199.2	989.5	11.7	0.0	11.1	0.0
Lane LOS	F	F	B		B	
Approach Delay (s)	1199.2	989.5	0.4		2.3	
Approach LOS	F	F				

Intersection Summary			
Average Delay	153.2		
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	93	6	55	10	5	20	72	557	10	20	600	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.92			1.00			0.99	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1696			1680			3508			3485	
Flt Permitted		0.79			0.92			0.82			0.93	
Satd. Flow (perm)		1386			1573			2885			3249	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	6	58	11	5	21	76	586	11	21	632	53
RTOR Reduction (vph)	0	26	0	0	17	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	136	0	0	20	0	0	673	0	0	701	0
Confl. Peds. (#/hr)			16						16			7
Confl. Bikes (#/hr)			1			3			10			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		10.6			10.6			36.1			36.1	
Effective Green, g (s)		10.6			10.6			36.1			36.1	
Actuated g/C Ratio		0.18			0.18			0.60			0.60	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		245			278			1736			1955	
v/s Ratio Prot												
v/s Ratio Perm		c0.10			0.01			c0.23			0.22	
v/c Ratio		0.56			0.07			0.39			0.36	
Uniform Delay, d1		22.6			20.6			6.2			6.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		2.7			0.1			0.7			0.5	
Delay (s)		25.3			20.7			6.9			6.6	
Level of Service		C			C			A			A	
Approach Delay (s)		25.3			20.7			6.9			6.6	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	9.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.3	
Effective Green, g (s)		1.3	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		37	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.62	
Uniform Delay, d1		29.1	
Progression Factor		1.00	
Incremental Delay, d2		28.2	
Delay (s)		57.3	
Level of Service		E	
Approach Delay (s)		57.3	
Approach LOS		E	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	387	207	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.78				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.95				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1154				
Flt Permitted			0.98				0.30	1.00				
Satd. Flow (perm)			1483				558	1154				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	387	207	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				213	441				
v/s Ratio Prot								0.52				
v/s Ratio Perm			0.06				0.16					
v/c Ratio			0.48				0.42	1.37				
Uniform Delay, d1			44.6				25.1	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			8.4				6.0	180.3				
Delay (s)			53.0				31.1	214.3				
Level of Service			D				C	F				
Approach Delay (s)			53.0					190.5				
Approach LOS			D					F				

Intersection Summary			
HCM Average Control Delay	253.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	326	160	10	10	181	384	10	40	10	228	414	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.77					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1202					3166					3182	
Flt Permitted	0.52					0.98					0.98	
Satd. Flow (perm)	629					3166					3182	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	326	160	10	10	181	384	10	40	10	228	414	20
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	0	4	0
Lane Group Flow (vph)	536	0	0	0	0	621	0	0	0	0	708	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	240					547					550	
v/s Ratio Prot						c0.20					c0.22	
v/s Ratio Perm	c0.85											
v/c Ratio	2.23					1.14					1.29	
Uniform Delay, d1	34.0					45.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	568.3					81.4					142.5	
Delay (s)	602.3					126.9					188.0	
Level of Service	F					F					F	
Approach Delay (s)	602.3					126.9					188.0	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	40
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	40
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	13	30	10	180	50	50	132	20	60	556	90	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.95					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.97			0.94					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1572			1428					3219		
Flt Permitted		0.88			0.85					0.76		
Satd. Flow (perm)		1396			1241					2457		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	32	11	189	53	53	139	21	63	585	95	55
RTOR Reduction (vph)	0	9	0	0	21	0	0	0	0	12	0	0
Lane Group Flow (vph)	0	48	0	0	413	0	0	0	0	752	0	0
Confl. Peds. (#/hr)			21				55				9	
Confl. Bikes (#/hr)			8				28				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm					Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4					2			6
Actuated Green, G (s)		18.0			18.0					39.6		
Effective Green, g (s)		18.0			18.0					40.6		
Actuated g/C Ratio		0.22			0.22					0.51		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		314			279					1247		
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.33					c0.31		
v/c Ratio		0.15			1.48					0.60		
Uniform Delay, d1		24.9			31.0					14.0		
Progression Factor		1.00			1.00					0.61		
Incremental Delay, d2		0.1			234.6					2.0		
Delay (s)		25.0			265.6					10.6		
Level of Service		C			F					B		
Approach Delay (s)		25.0			265.6					10.6		
Approach LOS		C			F					B		

Intersection Summary			
HCM Average Control Delay	65.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	686	13	13	14	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	0.99				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3279				1517	
Flt Permitted	0.85				0.97	
Satd. Flow (perm)	2803				1517	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	722	14	14	15	53	53
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	805	0	0	0	121	0
Confl. Peds. (#/hr)		5	12			
Confl. Bikes (#/hr)		13	20			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	39.6				9.4	
Effective Green, g (s)	40.6				9.4	
Actuated g/C Ratio	0.51				0.12	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1423				178	
v/s Ratio Prot					c0.08	
v/s Ratio Perm	0.29					
v/c Ratio	0.57				0.68	
Uniform Delay, d1	13.6				33.9	
Progression Factor	1.00				1.00	
Incremental Delay, d2	1.6				7.9	
Delay (s)	15.2				41.7	
Level of Service	B				D	
Approach Delay (s)	15.2				41.7	
Approach LOS	B				D	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	10	70	52	60	694	50	32	316	568
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor					1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes					0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes					1.00		1.00	1.00		1.00	1.00	
Frt					0.95		1.00	0.99		1.00	0.90	
Flt Protected					1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)					1745		1770	3269		1770	2942	
Flt Permitted					1.00		0.25	1.00		0.30	1.00	
Satd. Flow (perm)					1745		457	3269		566	2942	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	11	76	57	65	754	54	35	343	617
RTOR Reduction (vph)	0	0	0	0	29	0	0	6	0	0	247	0
Lane Group Flow (vph)	0	0	0	0	115	0	65	802	0	35	713	0
Confl. Peds. (#/hr)			3			5			13			9
Confl. Bikes (#/hr)									1			3
Parking (#/hr)								6			5	
Turn Type				Perm			Perm			Perm		
Protected Phases					8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)					25.0		47.0	47.0		47.0	47.0	
Effective Green, g (s)					24.0		48.0	48.0		48.0	48.0	
Actuated g/C Ratio					0.30		0.60	0.60		0.60	0.60	
Clearance Time (s)					3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)					524		274	1961		340	1765	
v/s Ratio Prot								c0.25			0.24	
v/s Ratio Perm					0.07		0.14			0.06		
v/c Ratio					0.22		0.24	0.41		0.10	0.40	
Uniform Delay, d1					21.0		7.5	8.5		6.8	8.4	
Progression Factor					1.00		0.80	0.81		1.71	2.30	
Incremental Delay, d2					1.0		2.0	0.6		0.4	0.5	
Delay (s)					21.9		7.9	7.5		12.1	20.0	
Level of Service					C		A	A		B	B	
Approach Delay (s)		0.0			21.9			7.5			19.7	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/SR 24 WB On-ramps/Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	538	80	80	0	0	52	0	214	30	122	204	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.97				1.00		1.00			0.98	
Satd. Flow (prot)	1681	1658				1418		3237			3248	
Flt Permitted	0.95	0.97				1.00		1.00			0.72	
Satd. Flow (perm)	1681	1658				1418		3237			2394	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	598	89	89	0	0	58	0	238	33	136	227	0
RTOR Reduction (vph)	0	13	0	0	0	21	0	13	0	0	0	0
Lane Group Flow (vph)	389	374	0	0	0	37	0	258	0	0	363	0
Confl. Peds. (#/hr)			8						21			6
Confl. Bikes (#/hr)									10			12
Parking (#/hr)						4		4			6	
Turn Type	Perm					custom				Perm		
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	51.0	51.0				51.0		21.0			21.0	
Actuated g/C Ratio	0.64	0.64				0.64		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1072	1057				904		850			628	
v/s Ratio Prot								0.08				
v/s Ratio Perm	c0.23	0.23				0.03					c0.15	
v/c Ratio	0.36	0.35				0.04		0.30			0.58	
Uniform Delay, d1	6.8	6.8				5.4		23.6			25.6	
Progression Factor	1.00	1.00				1.00		1.00			0.88	
Incremental Delay, d2	1.0	0.9				0.1		0.9			3.5	
Delay (s)	7.8	7.7				5.5		24.6			26.2	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.8			5.5			24.6			26.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Clifton Street/SR 24 Eastbound Off-Ramp/Claremont Avenue			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↰↱		↰	↑			↱	
Volume (vph)	0	0	0	100	170	267	60	480	0	0	545	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	1.00			1.00	
Frpb, ped/bikes					0.96		1.00	1.00			0.99	
Flpb, ped/bikes					1.00		1.00	1.00			1.00	
Frt					0.93		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3126		1770	1863			1812	
Flt Permitted					0.99		0.29	1.00			1.00	
Satd. Flow (perm)					3126		531	1863			1812	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	108	183	287	65	516	0	0	586	66
RTOR Reduction (vph)	0	0	0	0	90	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	0	488	0	65	516	0	0	645	0
Confl. Peds. (#/hr)			25			30			194			210
Confl. Bikes (#/hr)			2			2			38			40
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					17.0		33.0	33.0			33.0	
Effective Green, g (s)					18.0		34.0	34.0			34.0	
Actuated g/C Ratio					0.30		0.57	0.57			0.57	
Clearance Time (s)					5.0		5.0	5.0			5.0	
Lane Grp Cap (vph)					938		301	1056			1027	
v/s Ratio Prot								0.28			c0.36	
v/s Ratio Perm					0.16		0.12					
v/c Ratio					0.52		0.22	0.49			0.63	
Uniform Delay, d1					17.4		6.4	7.8			8.7	
Progression Factor					1.00		2.07	1.99			1.00	
Incremental Delay, d2					2.1		1.2	1.1			2.9	
Delay (s)					19.5		14.4	16.6			11.7	
Level of Service					B		B	B			B	
Approach Delay (s)		0.0			19.5			16.4			11.7	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Miles Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	120	80	0	0	0	0	469	70	167	478	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0						4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00						1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.79						0.95		1.00	1.00	
Flpb, ped/bikes	1.00	1.00						1.00		1.00	1.00	
Frt	1.00	0.94						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1216						1739		1770	1863	
Flt Permitted	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (perm)	1770	1216						1739		1770	1863	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	78	132	88	0	0	0	0	515	77	184	525	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	78	180	0	0	0	0	0	583	0	184	525	0
Confl. Peds. (#/hr)			276			70			323			259
Confl. Bikes (#/hr)			3			6			16			28
Parking (#/hr)		5										
Turn Type	Perm									Prot		
Protected Phases		4						1		3	2	
Permitted Phases	4											
Actuated Green, G (s)	16.0	16.0						27.0		8.0	38.0	
Effective Green, g (s)	15.0	15.0						26.0		7.0	37.0	
Actuated g/C Ratio	0.25	0.25						0.43		0.12	0.62	
Clearance Time (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	443	304						754		207	1149	
v/s Ratio Prot		c0.15						c0.34		c0.10	0.28	
v/s Ratio Perm	0.04											
v/c Ratio	0.18	0.59						0.77		0.89	0.46	
Uniform Delay, d1	17.7	19.8						14.5		26.1	6.1	
Progression Factor	1.00	1.00						0.82		1.38	0.41	
Incremental Delay, d2	0.9	8.3						6.5		33.3	1.0	
Delay (s)	18.5	28.1						18.3		69.2	3.6	
Level of Service	B	C						B		E	A	
Approach Delay (s)		25.6			0.0			18.3			20.6	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Shafter Avenue/Keith Avenue/College Avenue			

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	31	10	10	10	10	20	43	10	20	386	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1535			1447					1632	
Flt Permitted			0.80			0.97					0.95	
Satd. Flow (perm)			1265			1412					1556	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	33	11	11	11	11	22	46	11	22	415	11
RTOR Reduction (vph)	0	0	8	0	0	35	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	58	0	0	55	0	0	0	0	457	0
Confl. Peds. (#/hr)				33				1				94
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			295			329					648	
v/s Ratio Prot												
v/s Ratio Perm			c0.05			0.04					0.29	
v/c Ratio			0.20			0.17					0.71	
Uniform Delay, d1			18.5			18.3					14.5	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			1.5			1.1					6.4	
Delay (s)			19.9			19.4					20.8	
Level of Service			B			B					C	
Approach Delay (s)			19.9			19.4					20.8	
Approach LOS			B			B					C	

Intersection Summary			
HCM Average Control Delay	21.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	53	386	31	52	22	30	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.92		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1729				1484		
Flt Permitted		0.93				0.98		
Satd. Flow (perm)		1615				1484		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	415	33	56	24	32	32	54
RTOR Reduction (vph)	0	6	0	0	0	37	0	0
Lane Group Flow (vph)	0	555	0	0	0	105	0	0
Confl. Peds. (#/hr)			67	92				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		673				223		
v/s Ratio Prot								
v/s Ratio Perm		c0.34				0.07		
v/c Ratio		0.82				0.47		
Uniform Delay, d1		15.5				23.3		
Progression Factor		0.62				1.00		
Incremental Delay, d2		9.9				7.0		
Delay (s)		19.6				30.4		
Level of Service		B				C		
Approach Delay (s)		19.6				30.4		
Approach LOS		B				C		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	78	0	637	639	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	78	0	637	639	31
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.91	0.94	0.94			
vC, conflicting volume	980	342	677			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	506	185	539			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	100			
cM capacity (veh/h)	449	775	962			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	78	212	425	426	244
Volume Left	0	0	0	0	0
Volume Right	78	0	0	0	31
cSH	775	962	1700	1700	1700
Volume to Capacity	0.10	0.00	0.25	0.25	0.14
Queue Length 95th (ft)	8	0	0	0	0
Control Delay (s)	10.2	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.2	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	710	95	25	650	140	114	342	74	150	362	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			0.95			1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.96			0.95		1.00	0.93	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.98			0.97			0.98		1.00	0.97	
Flt Protected		1.00			1.00			0.99		0.95	1.00	
Satd. Flow (prot)		1542			3293			1488		1770	1390	
Flt Permitted		0.97			0.92			0.73		0.31	1.00	
Satd. Flow (perm)		1502			3032			1091		585	1390	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	710	95	25	650	140	114	342	74	150	362	90
RTOR Reduction (vph)	0	5	0	0	19	0	0	7	0	0	10	0
Lane Group Flow (vph)	0	820	0	0	796	0	0	523	0	150	442	0
Confl. Peds. (#/hr)			117			93			309			258
Confl. Bikes (#/hr)			1			9			37			68
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		43.0			43.0			31.0		39.0	39.0	
Effective Green, g (s)		43.0			43.0			31.0		39.0	39.0	
Actuated g/C Ratio		0.48			0.48			0.34		0.43	0.43	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		0.2			0.2			0.2		1.0	0.2	
Lane Grp Cap (vph)		718			1449			376		306	602	
v/s Ratio Prot										0.02	c0.32	
v/s Ratio Perm		c0.55			0.26			c0.48		0.19		
v/c Ratio		1.14			0.55			1.39		0.49	0.73	
Uniform Delay, d1		23.5			16.6			29.5		21.1	21.2	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		79.9			0.2			192.1		0.5	4.0	
Delay (s)		103.4			16.9			221.6		21.5	25.2	
Level of Service		F			B			F		C	C	
Approach Delay (s)		103.4			16.9			221.6			24.3	
Approach LOS		F			B			F			C	

Intersection Summary			
HCM Average Control Delay	83.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	126.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	650	120	224	560	240	180	603	374	280	293	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		0.91	0.91	
Frpb, ped/bikes		1.00		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.95			0.95		1.00	0.98	
Flt Protected		0.99		0.95	1.00			0.99		0.95	0.99	
Satd. Flow (prot)		3431		1770	1765			3316		1610	3209	
Flt Permitted		0.53		0.23	1.00			0.99		0.95	0.99	
Satd. Flow (perm)		1818		431	1765			3316		1610	3209	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	100	650	120	224	560	240	180	603	374	280	293	50
RTOR Reduction (vph)	0	11	0	0	13	0	0	47	0	0	9	0
Lane Group Flow (vph)	0	859	0	224	787	0	0	1110	0	204	410	0
Confl. Peds. (#/hr)			15			12			6			56
Confl. Bikes (#/hr)			5			2			6			7
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		56.5		56.5	56.5			31.5		17.0	17.0	
Effective Green, g (s)		58.5		58.5	58.5			31.0		16.5	16.5	
Actuated g/C Ratio		0.49		0.49	0.49			0.26		0.14	0.14	
Clearance Time (s)		6.0		6.0	6.0			4.5		4.5	4.5	
Vehicle Extension (s)		3.5		3.5	3.5			3.5		3.5	3.5	
Lane Grp Cap (vph)		886		210	860			857		221	441	
v/s Ratio Prot					0.45			c0.33		0.13	c0.13	
v/s Ratio Perm		0.47		c0.52								
v/c Ratio		1.16dl		1.07	0.92			1.29		0.92	0.93	
Uniform Delay, d1		29.9		30.8	28.5			44.5		51.1	51.2	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		22.9		80.9	14.4			141.3		40.2	26.6	
Delay (s)		52.8		111.6	42.8			185.8		91.3	77.8	
Level of Service		D		F	D			F		F	E	
Approach Delay (s)		52.8			57.9			185.8			82.2	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM Average Control Delay	101.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	132.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
dl Defacto Left Lane. Recode with 1 though lane as a left lane.			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	530	202	10	340	60	182	364	40	80	376	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.97		1.00	0.95		1.00	0.88	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	0.99		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1488			1764		1770	1504		1770	1293	
Flt Permitted		0.92			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1372			1729		1770	1504		1770	1293	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	530	202	10	340	60	182	364	40	80	376	110
RTOR Reduction (vph)	0	0	0	0	8	0	0	5	0	0	13	0
Lane Group Flow (vph)	0	812	0	0	402	0	182	399	0	80	473	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		34.0			34.0		10.0	27.0		5.0	21.5	
Effective Green, g (s)		35.0			35.0		9.5	28.0		6.0	22.5	
Actuated g/C Ratio		0.44			0.44		0.12	0.35		0.08	0.28	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		600			756		210	526		133	364	
v/s Ratio Prot							c0.10	0.27		0.05	c0.37	
v/s Ratio Perm		c0.59			0.23							
v/c Ratio		1.35			0.53		0.87	0.76		0.60	1.30	
Uniform Delay, d1		22.5			16.5		34.6	23.0		35.8	28.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		169.8			2.7		35.1	9.8		18.5	153.7	
Delay (s)		192.3			19.2		69.8	32.8		54.4	182.4	
Level of Service		F			B		E	C		D	F	
Approach Delay (s)		192.3			19.2			44.3			164.3	
Approach LOS		F			B			D			F	

Intersection Summary			
HCM Average Control Delay	119.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	121.7%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	400	220	190	930	530	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.95			1.00	0.96	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1709			3509	3241	
Flt Permitted	0.97			0.65	1.00	
Satd. Flow (perm)	1709			2288	3241	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	220	190	930	530	210
RTOR Reduction (vph)	25	0	0	0	53	0
Lane Group Flow (vph)	595	0	0	1120	687	0
Confl. Peds. (#/hr)		1				46
Confl. Bikes (#/hr)		3				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	28.8			43.0	43.0	
Effective Green, g (s)	28.8			43.0	43.0	
Actuated g/C Ratio	0.36			0.54	0.54	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	617			1233	1746	
v/s Ratio Prot	c0.35				0.21	
v/s Ratio Perm				c0.49		
v/c Ratio	0.96			0.91	0.39	
Uniform Delay, d1	25.0			16.6	10.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	27.3			11.3	0.7	
Delay (s)	52.3			28.0	11.4	
Level of Service	D			C	B	
Approach Delay (s)	52.3			28.0	11.4	
Approach LOS	D			C	B	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	7	20	35	6	95	30	485	86	103	458	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		1.00			0.76		1.00	0.97		1.00	0.99	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.91		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1482			1260		1770	1553		1770	1510	
Flt Permitted		0.93			0.90		0.47	1.00		0.40	1.00	
Satd. Flow (perm)		1401			1148		878	1553		751	1510	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	7	20	36	6	97	31	495	88	105	467	10
RTOR Reduction (vph)	0	17	0	0	83	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	20	0	0	56	0	31	577	0	105	476	0
Confl. Peds. (#/hr)						237			114			238
Confl. Bikes (#/hr)						5			48			76
Parking (#/hr)		6						4			16	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.5			6.5		31.5	31.5		31.5	31.5	
Effective Green, g (s)		6.5			6.5		31.5	31.5		31.5	31.5	
Actuated g/C Ratio		0.14			0.14		0.68	0.68		0.68	0.68	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		198			162		601	1063		514	1034	
v/s Ratio Prot								c0.37			0.32	
v/s Ratio Perm		0.01			c0.05		0.04			0.14		
v/c Ratio		0.10			0.34		0.05	0.54		0.20	0.46	
Uniform Delay, d1		17.2			17.8		2.4	3.6		2.7	3.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			1.3		0.2	2.0		0.9	1.5	
Delay (s)		17.4			19.1		2.5	5.6		3.6	4.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		17.4			19.1			5.5			4.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	46.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	413	273	10	30	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.72				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.94				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1061				1259
Flt Permitted			0.98				0.34	1.00				0.57
Satd. Flow (perm)			1483				633	1061				715
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	413	273	10	30	342
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	519
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				46.0	46.0				46.0
Effective Green, g (s)			6.0				47.0	47.0				47.0
Actuated g/C Ratio			0.05				0.43	0.43				0.43
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				270	453				306
v/s Ratio Prot								0.66				
v/s Ratio Perm			0.06				0.16					c0.73
v/c Ratio			1.11				0.37	1.54				1.70
Uniform Delay, d1			52.0				21.4	31.5				31.5
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			133.3				3.9	252.3				327.0
Delay (s)			185.3				25.3	283.8				358.5
Level of Service			F				C	F				F
Approach Delay (s)			185.3					251.3				358.5
Approach LOS			F					F				F

Intersection Summary			
HCM Average Control Delay	262.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.8%	ICU Level of Service	H
Analysis Period (min)	15		

Description: College Avenue/Claremont Avenue/62nd Street

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	137	10	10	139	721	20	50	10	253	431	10	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3198					3177		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3198					3177		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	137	10	10	139	721	20	50	10	253	431	10	30
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	936	0	0	0	0	732	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					21.0					20.0		
Effective Green, g (s)					21.0					20.0		
Actuated g/C Ratio					0.19					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					611					578		
v/s Ratio Prot					c0.29					c0.23		
v/s Ratio Perm												
v/c Ratio					1.53					1.27		
Uniform Delay, d1					44.5					45.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					247.5					132.9		
Delay (s)					292.0					177.9		
Level of Service					F					F		
Approach Delay (s)					292.0					177.9		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	22	80	10	170	70	60	162	40	50	823	130	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.92					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.99			0.94					0.98		
Flt Protected		0.99			0.98					1.00		
Satd. Flow (prot)		1604			1375					3224		
Flt Permitted		0.86			0.83					0.73		
Satd. Flow (perm)		1398			1164					2358		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	80	10	170	70	60	162	40	50	823	130	71
RTOR Reduction (vph)	0	5	0	0	24	0	0	0	0	14	0	0
Lane Group Flow (vph)	0	107	0	0	438	0	0	0	0	1029	0	0
Confl. Peds. (#/hr)			26				89				7	
Confl. Bikes (#/hr)			14				55				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		19.5			19.5					33.3		
Effective Green, g (s)		19.5			19.5					34.3		
Actuated g/C Ratio		0.24			0.24					0.43		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		341			284					1011		
v/s Ratio Prot												
v/s Ratio Perm		0.08			c0.38					c0.44		
v/c Ratio		0.32			1.54					1.02		
Uniform Delay, d1		24.8			30.2					22.9		
Progression Factor		1.00			1.00					0.78		
Incremental Delay, d2		0.2			260.6					30.9		
Delay (s)		25.0			290.8					48.7		
Level of Service		C			F					D		
Approach Delay (s)		25.0			290.8					48.7		
Approach LOS		C			F					D		

Intersection Summary			
HCM Average Control Delay	84.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	115.0%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations							
Volume (vph)	712	12	13	13	130	80	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0		
Lane Util. Factor	0.95				1.00		
Frpb, ped/bikes	1.00				1.00		
Flpb, ped/bikes	1.00				1.00		
Frt	1.00				0.95		
Flt Protected	1.00				0.97		
Satd. Flow (prot)	3279				1525		
Flt Permitted	0.68				0.97		
Satd. Flow (perm)	2234				1525		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	712	12	13	13	130	80	10
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	808	0	0	0	233	0	0
Confl. Peds. (#/hr)		1	18				
Confl. Bikes (#/hr)		6	18				
Parking (#/hr)	5				2		
Turn Type				Split			
Protected Phases	6			3	3		
Permitted Phases							
Actuated Green, G (s)	33.3				14.2		
Effective Green, g (s)	34.3				14.2		
Actuated g/C Ratio	0.43				0.18		
Clearance Time (s)	5.0				4.0		
Vehicle Extension (s)	4.0				2.0		
Lane Grp Cap (vph)	958				271		
v/s Ratio Prot					c0.15		
v/s Ratio Perm	0.36						
v/c Ratio	0.84				0.86		
Uniform Delay, d1	20.4				31.9		
Progression Factor	1.00				1.00		
Incremental Delay, d2	9.0				22.0		
Delay (s)	29.4				54.0		
Level of Service	C				D		
Approach Delay (s)	29.4				54.0		
Approach LOS	C				D		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	31	50	20	20	20	40	62	10	40	505	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.97			0.91					0.99	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.98			0.99					1.00	
Satd. Flow (prot)			1526			1350					1619	
Flt Permitted			0.87			0.96					0.91	
Satd. Flow (perm)			1354			1299					1482	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	33	53	21	21	21	42	65	11	42	532	21
RTOR Reduction (vph)	0	0	10	0	0	35	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	108	0	0	115	0	0	0	0	604	0
Confl. Peds. (#/hr)				61				36				132
Confl. Bikes (#/hr)												16
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			20.0			20.0					33.0	
Effective Green, g (s)			20.0			20.0					33.0	
Actuated g/C Ratio			0.25			0.25					0.41	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			339			325					611	
v/s Ratio Prot												
v/s Ratio Perm			0.08			c0.09					c0.41	
v/c Ratio			0.32			0.35					0.99	
Uniform Delay, d1			24.5			24.7					23.3	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			2.5			3.0					33.8	
Delay (s)			26.9			27.7					57.1	
Level of Service			C			C					E	
Approach Delay (s)			26.9			27.7					57.1	
Approach LOS			C			C					E	

Intersection Summary			
HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	72	395	31	41	32	70	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.95				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.94		
Flt Protected		0.99				0.97		
Satd. Flow (prot)		1700				1504		
Flt Permitted		0.82				0.97		
Satd. Flow (perm)		1397				1504		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	416	33	43	34	74	53	42
RTOR Reduction (vph)	0	4	0	0	0	11	0	0
Lane Group Flow (vph)	0	564	0	0	0	192	0	0
Confl. Peds. (#/hr)			75	121				
Confl. Bikes (#/hr)			16	7				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		33.0				15.0		
Effective Green, g (s)		33.0				15.0		
Actuated g/C Ratio		0.41				0.19		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		576				282		
v/s Ratio Prot								
v/s Ratio Perm		0.40				0.13		
v/c Ratio		0.98				0.68		
Uniform Delay, d1		23.2				30.3		
Progression Factor		0.63				1.32		
Incremental Delay, d2		30.9				12.1		
Delay (s)		45.4				52.1		
Level of Service		D				D		
Approach Delay (s)		45.4				52.1		
Approach LOS		D				D		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	590	166	56	560	130	96	255	86	140	276	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			0.95			1.00		1.00	1.00	
Frpb, ped/bikes		0.94			0.96			0.93		1.00	0.85	
Flpb, ped/bikes		1.00			1.00			1.00		1.00	1.00	
Frt		0.97			0.97			0.97		1.00	0.94	
Flt Protected		1.00			1.00			0.99		0.95	1.00	
Satd. Flow (prot)		1457			3281			1439		1770	1240	
Flt Permitted		0.87			0.84			0.75		0.32	1.00	
Satd. Flow (perm)		1271			2761			1087		588	1240	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	590	166	56	560	130	96	255	86	140	276	160
RTOR Reduction (vph)	0	3	0	0	22	0	0	11	0	0	26	0
Lane Group Flow (vph)	0	833	0	0	724	0	0	426	0	140	410	0
Confl. Peds. (#/hr)			225			106			439			564
Confl. Bikes (#/hr)			3			8			15			22
Parking (#/hr)		8						7			15	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		6			6			8		7	4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		41.0			41.0			23.0		31.0	31.0	
Effective Green, g (s)		41.0			41.0			23.0		31.0	31.0	
Actuated g/C Ratio		0.51			0.51			0.29		0.39	0.39	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		0.2			0.2			0.2		1.0	0.2	
Lane Grp Cap (vph)		651			1415			313		287	481	
v/s Ratio Prot										0.02	c0.33	
v/s Ratio Perm		c0.65			0.26			c0.39		0.16		
v/c Ratio		1.28			0.51			1.36		0.49	0.85	
Uniform Delay, d1		19.5			12.9			28.5		19.5	22.4	
Progression Factor		1.00			1.00			1.00		1.00	1.00	
Incremental Delay, d2		137.1			0.1			182.2		0.5	13.1	
Delay (s)		156.6			13.0			210.7		20.0	35.5	
Level of Service		F			B			F		B	D	
Approach Delay (s)		156.6			13.0			210.7			31.7	
Approach LOS		F			B			F			C	

Intersection Summary			
HCM Average Control Delay	96.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	139.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue - Ashby Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	720	130	165	530	240	160	284	285	330	364	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0			5.0		5.0	5.0	
Lane Util. Factor		0.95		1.00	1.00			0.95		0.91	0.91	
Frpb, ped/bikes		1.00		1.00	0.99			0.98		1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.98		1.00	0.95			0.94		1.00	0.97	
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.99	
Satd. Flow (prot)		3438		1770	1751			3225		1610	3222	
Flt Permitted		0.62		0.20	1.00			0.99		0.95	0.99	
Satd. Flow (perm)		2142		375	1751			3225		1610	3222	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	758	137	174	558	253	168	299	300	347	383	95
RTOR Reduction (vph)	0	12	0	0	14	0	0	86	0	0	14	0
Lane Group Flow (vph)	0	936	0	174	797	0	0	681	0	274	537	0
Confl. Peds. (#/hr)			13			24			24			45
Confl. Bikes (#/hr)			5			9			10			
Turn Type	Perm			Perm			Split			Split		
Protected Phases		2			6		8	8		7	7	
Permitted Phases	2			6								
Actuated Green, G (s)		55.1		55.1	55.1			25.6		21.5	21.5	
Effective Green, g (s)		57.1		57.1	57.1			25.1		21.0	21.0	
Actuated g/C Ratio		0.49		0.49	0.49			0.21		0.18	0.18	
Clearance Time (s)		6.0		6.0	6.0			4.5		4.5	4.5	
Vehicle Extension (s)		3.5		3.5	3.5			3.5		3.5	3.5	
Lane Grp Cap (vph)		1044		183	853			691		288	577	
v/s Ratio Prot					0.46			c0.21		c0.17	0.17	
v/s Ratio Perm		0.44		c0.46								
v/c Ratio		0.90		0.95	0.93			0.99		0.95	0.93	
Uniform Delay, d1		27.4		28.7	28.3			45.9		47.6	47.4	
Progression Factor		1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2		10.3		52.5	17.2			30.5		40.1	22.1	
Delay (s)		37.7		81.2	45.5			76.4		87.7	69.5	
Level of Service		D		F	D			E		F	E	
Approach Delay (s)		37.7			51.8			76.4			75.6	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	58.9	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	117.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	121.9%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Ashby Avenue - Claremont Avenue			
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	216	30	230	40	175	382	40	20	374	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.98		1.00	0.97		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1780		1770	1538		1770	1330	
Flt Permitted		0.93			0.93		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1347			1671		1770	1538		1770	1330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	216	30	230	40	175	382	40	20	374	90
RTOR Reduction (vph)	0	36	0	0	7	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	450	0	0	293	0	175	417	0	20	453	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		29.0			29.0		10.5	32.0		5.0	26.0	
Effective Green, g (s)		30.0			30.0		10.0	33.0		6.0	27.0	
Actuated g/C Ratio		0.38			0.38		0.12	0.41		0.08	0.34	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		505			627		221	634		133	449	
v/s Ratio Prot							c0.10	0.27		0.01	c0.34	
v/s Ratio Perm		c0.33			0.18							
v/c Ratio		0.89			0.47		0.79	0.66		0.15	1.01	
Uniform Delay, d1		23.5			18.9		34.0	19.0		34.6	26.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		20.5			2.5		24.6	5.3		2.4	44.9	
Delay (s)		43.9			21.4		58.5	24.2		37.0	71.4	
Level of Service		D			C		E	C		D	E	
Approach Delay (s)		43.9			21.4			34.3			70.0	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	44.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	140	120	553	524	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.98	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.93			1.00	0.97	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1674			3508	3367	
Flt Permitted	0.98			0.73	1.00	
Satd. Flow (perm)	1674			2577	3367	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	128	149	128	588	557	160
RTOR Reduction (vph)	65	0	0	0	24	0
Lane Group Flow (vph)	212	0	0	716	693	0
Confl. Peds. (#/hr)		3				20
Confl. Bikes (#/hr)		1				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	13.2			44.2	44.2	
Effective Green, g (s)	13.2			44.2	44.2	
Actuated g/C Ratio	0.20			0.68	0.68	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	338			1742	2276	
v/s Ratio Prot	c0.13				0.21	
v/s Ratio Perm				c0.28		
v/c Ratio	0.63			0.41	0.30	
Uniform Delay, d1	23.9			4.8	4.3	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	3.6			0.7	0.3	
Delay (s)	27.5			5.5	4.7	
Level of Service	C			A	A	
Approach Delay (s)	27.5			5.5	4.7	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	30	43	8	110	20	496	108	124	463	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.98			0.78		1.00	0.96		1.00	0.98	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.91		1.00	0.97		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1451			1305		1770	1534		1770	1490	
Flt Permitted		0.94			0.89		0.44	1.00		0.35	1.00	
Satd. Flow (perm)		1375			1178		813	1534		658	1490	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	11	33	47	9	120	22	539	117	135	503	22
RTOR Reduction (vph)	0	28	0	0	102	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	27	0	0	74	0	22	649	0	135	524	0
Confl. Peds. (#/hr)			2			185			141			306
Confl. Bikes (#/hr)						2			15			28
Parking (#/hr)		6						4			16	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		6.7			6.7		29.4	29.4		29.4	29.4	
Effective Green, g (s)		6.7			6.7		29.4	29.4		29.4	29.4	
Actuated g/C Ratio		0.15			0.15		0.67	0.67		0.67	0.67	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		209			179		542	1023		439	993	
v/s Ratio Prot								c0.42			0.35	
v/s Ratio Perm		0.02			c0.06		0.03			0.21		
v/c Ratio		0.13			0.41		0.04	0.63		0.31	0.53	
Uniform Delay, d1		16.2			16.9		2.5	4.2		3.1	3.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			1.6		0.1	3.0		1.8	2.0	
Delay (s)		16.5			18.5		2.7	7.2		4.9	5.8	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		16.5			18.5			7.1			5.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM Average Control Delay	8.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	44.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	387	207	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.78				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.95				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1155				
Flt Permitted			0.98				0.34	1.00				
Satd. Flow (perm)			1483				634	1155				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	387	207	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				47.0	47.0				
Effective Green, g (s)			6.0				48.0	48.0				
Actuated g/C Ratio			0.05				0.44	0.44				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				277	504				
v/s Ratio Prot								0.52				
v/s Ratio Perm			0.06				0.14					
v/c Ratio			1.11				0.32	1.20				
Uniform Delay, d1			52.0				20.4	31.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			133.3				3.1	107.2				
Delay (s)			185.3				23.5	138.2				
Level of Service			F				C	F				
Approach Delay (s)			185.3					123.4				
Approach LOS			F					F				

Intersection Summary			
HCM Average Control Delay	161.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	122.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	326	160	10	10	181	384	10	40	10	228	414	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.77					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1203					3166					3182	
Flt Permitted	0.67					0.98					0.98	
Satd. Flow (perm)	811					3166					3182	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	326	160	10	10	181	384	10	40	10	228	414	20
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	0	0	4	0
Lane Group Flow (vph)	536	0	0	0	0	620	0	0	0	0	708	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	47.0					20.0					20.0	
Effective Green, g (s)	48.0					20.0					20.0	
Actuated g/C Ratio	0.44					0.18					0.18	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	354					576					579	
v/s Ratio Prot						c0.20					c0.22	
v/s Ratio Perm	c0.66											
v/c Ratio	1.51					1.08					1.22	
Uniform Delay, d1	31.0					45.0					45.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	245.5					59.8					115.1	
Delay (s)	276.5					104.8					160.1	
Level of Service	F					F					F	
Approach Delay (s)	276.5					104.8					160.1	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	40
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	40
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	13	30	10	180	50	50	132	20	60	556	90	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0					4.0		
Lane Util. Factor		1.00			1.00					0.95		
Frpb, ped/bikes		0.99			0.95					0.99		
Flpb, ped/bikes		1.00			1.00					1.00		
Frt		0.97			0.94					0.98		
Flt Protected		0.99			0.98					0.99		
Satd. Flow (prot)		1572			1430					3219		
Flt Permitted		0.89			0.84					0.74		
Satd. Flow (perm)		1424			1232					2398		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	32	11	189	53	53	139	21	63	585	95	55
RTOR Reduction (vph)	0	8	0	0	21	0	0	0	0	12	0	0
Lane Group Flow (vph)	0	49	0	0	413	0	0	0	0	752	0	0
Confl. Peds. (#/hr)			21				55				9	
Confl. Bikes (#/hr)			8				28				7	
Parking (#/hr)		3			5					5		
Turn Type	Perm			Perm				Perm	Perm			Perm
Protected Phases		4			4					2		
Permitted Phases	4			4				2	2			6
Actuated Green, G (s)		21.0			21.0					36.5		
Effective Green, g (s)		21.0			21.0					37.5		
Actuated g/C Ratio		0.26			0.26					0.47		
Clearance Time (s)		4.0			4.0					5.0		
Vehicle Extension (s)		2.0			2.0					4.0		
Lane Grp Cap (vph)		374			323					1124		
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.34					c0.31		
v/c Ratio		0.13			1.28					0.67		
Uniform Delay, d1		22.5			29.5					16.4		
Progression Factor		1.00			1.00					0.67		
Incremental Delay, d2		0.1			146.7					3.0		
Delay (s)		22.6			176.2					14.0		
Level of Service		C			F					B		
Approach Delay (s)		22.6			176.2					14.0		
Approach LOS		C			F					B		

Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
Description: Claremont Avenue/Forest Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	SEL2	SEL	SER
Lane Configurations						
Volume (vph)	686	13	13	14	50	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0				4.0	
Lane Util. Factor	0.95				1.00	
Frpb, ped/bikes	1.00				1.00	
Flpb, ped/bikes	1.00				1.00	
Frt	0.99				0.94	
Flt Protected	1.00				0.97	
Satd. Flow (prot)	3279				1517	
Flt Permitted	0.85				0.97	
Satd. Flow (perm)	2800				1517	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	722	14	14	15	53	53
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	805	0	0	0	121	0
Confl. Peds. (#/hr)		5	12			
Confl. Bikes (#/hr)		13	20			
Parking (#/hr)	5				2	
Turn Type				Split		
Protected Phases	6			3	3	
Permitted Phases						
Actuated Green, G (s)	36.5				9.5	
Effective Green, g (s)	37.5				9.5	
Actuated g/C Ratio	0.47				0.12	
Clearance Time (s)	5.0				4.0	
Vehicle Extension (s)	4.0				2.0	
Lane Grp Cap (vph)	1313				180	
v/s Ratio Prot					c0.08	
v/s Ratio Perm	0.29					
v/c Ratio	0.61				0.67	
Uniform Delay, d1	15.8				33.8	
Progression Factor	1.00				1.00	
Incremental Delay, d2	2.1				7.5	
Delay (s)	18.0				41.3	
Level of Service	B				D	
Approach Delay (s)	18.0				41.3	
Approach LOS	B				D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	10	31	10	10	10	10	20	43	10	20	386	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)			4.0			4.0					4.0	
Lane Util. Factor			1.00			1.00					1.00	
Frpb, ped/bikes			0.98			0.98					1.00	
Flpb, ped/bikes			1.00			1.00					1.00	
Frt			0.98			0.90					1.00	
Flt Protected			0.97			0.99					1.00	
Satd. Flow (prot)			1535			1447					1632	
Flt Permitted			0.80			0.97					0.95	
Satd. Flow (perm)			1265			1412					1556	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	11	33	11	11	11	11	22	46	11	22	415	11
RTOR Reduction (vph)	0	0	8	0	0	35	0	0	0	0	2	0
Lane Group Flow (vph)	0	0	58	0	0	55	0	0	0	0	457	0
Confl. Peds. (#/hr)				33				1				94
Confl. Bikes (#/hr)				3								2
Parking (#/hr)			3			3					3	
Turn Type	Perm	Perm			Perm				Perm	Perm		
Protected Phases			1			1					2	
Permitted Phases	1	1			1				2	2		
Actuated Green, G (s)			14.0			14.0					25.0	
Effective Green, g (s)			14.0			14.0					25.0	
Actuated g/C Ratio			0.23			0.23					0.42	
Clearance Time (s)			4.0			4.0					4.0	
Lane Grp Cap (vph)			295			329					648	
v/s Ratio Prot												
v/s Ratio Perm			c0.05			0.04					0.29	
v/c Ratio			0.20			0.17					0.71	
Uniform Delay, d1			18.5			18.3					14.5	
Progression Factor			1.00			1.00					1.00	
Incremental Delay, d2			1.5			1.1					6.4	
Delay (s)			19.9			19.4					20.8	
Level of Service			B			B					C	
Approach Delay (s)			19.9			19.4					20.8	
Approach LOS			B			B					C	

Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
Description: Hudson Street/Manila Avenue/College Avenue			
c Critical Lane Group			

Movement	SBL	SBT	SBR	SBR2	SEL2	SEL	SER	SER2
Lane Configurations								
Volume (vph)	53	386	31	52	22	30	30	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	16	12	12	12	12	12	12
Total Lost time (s)		4.0				4.0		
Lane Util. Factor		1.00				1.00		
Frpb, ped/bikes		0.97				1.00		
Flpb, ped/bikes		1.00				1.00		
Frt		0.98				0.92		
Flt Protected		0.99				0.98		
Satd. Flow (prot)		1729				1484		
Flt Permitted		0.93				0.98		
Satd. Flow (perm)		1615				1484		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	57	415	33	56	24	32	32	54
RTOR Reduction (vph)	0	6	0	0	0	37	0	0
Lane Group Flow (vph)	0	555	0	0	0	105	0	0
Confl. Peds. (#/hr)			67	92				
Confl. Bikes (#/hr)			2	2				
Parking (#/hr)		6				3		
Turn Type	Perm				Perm			
Protected Phases		2				4		
Permitted Phases	2				4			
Actuated Green, G (s)		25.0				9.0		
Effective Green, g (s)		25.0				9.0		
Actuated g/C Ratio		0.42				0.15		
Clearance Time (s)		4.0				4.0		
Lane Grp Cap (vph)		673				223		
v/s Ratio Prot								
v/s Ratio Perm		c0.34				0.07		
v/c Ratio		0.82				0.47		
Uniform Delay, d1		15.5				23.3		
Progression Factor		0.63				1.00		
Incremental Delay, d2		10.1				7.0		
Delay (s)		19.9				30.4		
Level of Service		B				C		
Approach Delay (s)		19.9				30.4		
Approach LOS		B				C		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Volume (vph)	80	562	170	14	371	123	151	301	47	151	305	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.94			0.95			0.96			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.99			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		1513			1701			1489			1312	
Flt Permitted		0.84			0.97			0.61			0.74	
Satd. Flow (perm)		1282			1653			930			987	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	562	170	14	371	123	151	301	47	151	305	110
RTOR Reduction (vph)	0	0	0	0	14	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	812	0	0	494	0	0	494	0	0	555	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		481			620			600			278	
v/s Ratio Prot								c0.16				
v/s Ratio Perm		c0.63			0.30			0.27			c0.56	
v/c Ratio		1.69			0.80			0.82			2.00	
Uniform Delay, d1		25.0			22.3			15.9			28.8	
Progression Factor		1.00			1.24			1.00			1.00	
Incremental Delay, d2		318.6			10.1			12.2			461.3	
Delay (s)		343.6			37.7			28.1			490.1	
Level of Service		F			D			C			F	
Approach Delay (s)		343.6			37.7			28.1			490.1	
Approach LOS		F			D			C			F	

Intersection Summary			
HCM Average Control Delay	247.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	125.9%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	400	330	288	930	530	210
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	330	288	930	530	210
Pedestrians	46			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	4			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.77					
vC, conflicting volume	1722	417	786			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1339	417	786			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	41	64			
cM capacity (veh/h)	68	562	797			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	730	598	620	353	387
Volume Left	400	288	0	0	0
Volume Right	330	0	0	0	210
cSH	113	797	1700	1700	1700
Volume to Capacity	6.46	0.36	0.36	0.21	0.23
Queue Length 95th (ft)	Err	41	0	0	0
Control Delay (s)	Err	8.6	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	Err	4.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	2717.4		
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	17	20	32	486	458	14
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	17	20	33	496	467	14
Pedestrians	238					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	20					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked	0.82	0.82	0.82			
vC, conflicting volume	1274	712	720			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1225	543	551			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	86	94	95			
cM capacity (veh/h)	124	356	672			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	38	529	482
Volume Left	17	33	0
Volume Right	20	0	14
cSH	191	672	1700
Volume to Capacity	0.20	0.05	0.28
Queue Length 95th (ft)	18	4	0
Control Delay (s)	28.4	1.3	0.0
Lane LOS	D	A	
Approach Delay (s)	28.4	1.3	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	10	4	20	152	968	10	40	696	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.98	
Flt Protected		0.96			0.98			0.99			1.00	
Satd. Flow (prot)		1734			1677			3508			3415	
Flt Permitted		0.75			0.91			0.64			0.84	
Satd. Flow (perm)		1349			1554			2248			2874	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	218	8	53	11	4	21	160	1019	11	42	733	133
RTOR Reduction (vph)	0	10	0	0	16	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	269	0	0	20	0	0	1190	0	0	894	0
Confl. Peds. (#/hr)			22			1			33			24
Confl. Bikes (#/hr)									7			1
Turn Type	Perm			Perm			Perm					
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2					
Actuated Green, G (s)		16.1			16.1			32.9			32.9	
Effective Green, g (s)		16.1			16.1			32.9			32.9	
Actuated g/C Ratio		0.25			0.25			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		332			382			1129			1444	
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.01			c0.53			0.31	
v/c Ratio		0.81			0.05			1.05			4.75dl	
Uniform Delay, d1		23.3			18.9			16.3			11.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.9			0.1			42.2			2.0	
Delay (s)		37.2			18.9			58.5			13.8	
Level of Service		D			B			E			B	
Approach Delay (s)		37.2			18.9			58.5			13.8	
Approach LOS		D			B			E			B	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1657		
Flt Permitted		0.99		
Satd. Flow (perm)		1657		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	0	21	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	34	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		114		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.30		
Uniform Delay, d1		29.0		
Progression Factor		1.00		
Incremental Delay, d2		1.5		
Delay (s)		30.4		
Level of Service		C		
Approach Delay (s)		30.4		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	352	334	10	30	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.66				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.93				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	955				1268
Flt Permitted			0.98				0.33	1.00				0.40
Satd. Flow (perm)			1483				610	955				514
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	352	334	10	30	321
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	484
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				233	365				196
v/s Ratio Prot								0.73				
v/s Ratio Perm			0.06				0.16					c0.94
v/c Ratio			0.48				0.43	1.91				2.47
Uniform Delay, d1			44.6				25.1	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			8.4				5.7	418.2				676.3
Delay (s)			53.0				30.8	452.2				710.3
Level of Service			D				C	F				F
Approach Delay (s)			53.0					399.3				710.3
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	387.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	123	10	10	115	745	20	50	10	274	445	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3202					3175		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3202					3175		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	10	10	115	745	20	50	10	274	445	10	32
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	937	0	0	0	0	769	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					553					548		
v/s Ratio Prot					c0.29					c0.24		
v/s Ratio Perm												
v/c Ratio					1.69					1.40		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					320.0					191.9		
Delay (s)					365.5					237.4		
Level of Service					F					F		
Approach Delay (s)					365.5					237.4		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	72	0	1134	707	61
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	72	0	1134	707	61
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.90	0.87	0.87			
vC, conflicting volume	1328	408	792			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	518	32	471			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	432	886	930			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	72	378	756	471	297
Volume Left	0	0	0	0	0
Volume Right	72	0	0	0	61
cSH	886	930	1700	1700	1700
Volume to Capacity	0.08	0.00	0.44	0.28	0.17
Queue Length 95th (ft)	7	0	0	0	0
Control Delay (s)	9.4	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.4	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	251	175	35	264	115	141	307	50	102	292	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.94			0.95			0.97			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.95			0.96			0.99			0.97	
Flt Protected		0.99			1.00			0.99			0.99	
Satd. Flow (prot)		1480			1703			1516			1328	
Flt Permitted		0.89			0.94			0.62			0.80	
Satd. Flow (perm)		1331			1603			960			1068	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	251	175	35	264	115	141	307	50	102	292	90
RTOR Reduction (vph)	0	26	0	0	18	0	0	5	0	0	10	0
Lane Group Flow (vph)	0	460	0	0	397	0	0	493	0	0	474	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		499			601			615			300	
v/s Ratio Prot								c0.16				
v/s Ratio Perm		c0.35			0.25			0.26			c0.44	
v/c Ratio		0.92			0.66			0.80			1.58	
Uniform Delay, d1		23.9			20.8			15.6			28.8	
Progression Factor		1.00			1.27			1.00			0.95	
Incremental Delay, d2		25.0			5.6			10.6			262.4	
Delay (s)		48.9			31.9			26.1			289.7	
Level of Service		D			C			C			F	
Approach Delay (s)		48.9			31.9			26.1			289.7	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM Average Control Delay	101.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	120	273	234	553	524	150
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	128	290	249	588	557	160
Pedestrians	20			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.91					
vC, conflicting volume	1449	382	737			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1302	382	737			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	52	71			
cM capacity (veh/h)	97	605	850			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	418	445	392	372	345
Volume Left	128	249	0	0	0
Volume Right	290	0	0	0	160
cSH	232	850	1700	1700	1700
Volume to Capacity	1.80	0.29	0.23	0.22	0.20
Queue Length 95th (ft)	717	31	0	0	0
Control Delay (s)	412.3	7.7	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	412.3	4.1		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	89.1		
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	30	23	497	464	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	33	25	540	504	27
Pedestrians	306			2		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	26			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				330	322	
pX, platoon unblocked	0.84	0.84	0.84			
vC, conflicting volume	1414	826	838			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1398	701	715			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	88	96			
cM capacity (veh/h)	93	275	557			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	54	565	532
Volume Left	22	25	0
Volume Right	33	0	27
cSH	154	557	1700
Volume to Capacity	0.35	0.04	0.31
Queue Length 95th (ft)	36	4	0
Control Delay (s)	40.5	1.3	0.0
Lane LOS	E	A	
Approach Delay (s)	40.5	1.3	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	10	5	20	180	556	10	20	641	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			1.00			0.97	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1720			1681			3487			3419	
Flt Permitted		0.76			0.91			0.59			0.93	
Satd. Flow (perm)		1362			1554			2090			3183	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	219	6	81	11	5	21	189	585	11	21	675	149
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	0	0	18	0
Lane Group Flow (vph)	0	291	0	0	21	0	0	785	0	0	827	0
Confl. Peds. (#/hr)			16						16			7
Confl. Bikes (#/hr)			1			3			10			2
Turn Type	Perm			Perm			Perm					
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2					
Actuated Green, G (s)		16.1			16.1			32.3			32.3	
Effective Green, g (s)		16.1			16.1			32.3			32.3	
Actuated g/C Ratio		0.26			0.26			0.52			0.52	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		355			405			1092			1664	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.38			0.26	
v/c Ratio		0.82			0.05			0.72			4.03dr	
Uniform Delay, d1		21.5			17.1			11.3			9.5	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.0			0.1			4.1			1.1	
Delay (s)		35.5			17.2			15.4			10.6	
Level of Service		D			B			B			B	
Approach Delay (s)		35.5			17.2			15.4			10.6	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.4	
Effective Green, g (s)		1.4	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		38	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.61	
Uniform Delay, d1		29.9	
Progression Factor		1.00	
Incremental Delay, d2		24.3	
Delay (s)		54.2	
Level of Service		D	
Approach Delay (s)		54.2	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	315	279	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.71				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1026				
Flt Permitted			0.98				0.33	1.00				
Satd. Flow (perm)			1483				607	1026				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	315	279	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				232	392				
v/s Ratio Prot								0.59				
v/s Ratio Perm			0.06				0.15					
v/c Ratio			0.48				0.39	1.54				
Uniform Delay, d1			44.6				24.7	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			8.4				4.8	255.8				
Delay (s)			53.0				29.5	289.8				
Level of Service			D				C	F				
Approach Delay (s)			53.0					256.1				
Approach LOS			D					F				

Intersection Summary			
HCM Average Control Delay	258.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	143	10	10	146	419	10	40	10	253	431	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.78					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.99					0.98	
Satd. Flow (prot)	1211					3175					3181	
Flt Permitted	0.52					0.99					0.98	
Satd. Flow (perm)	632					3175					3181	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	301	143	10	10	146	419	10	40	10	253	431	20
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	0	4	0
Lane Group Flow (vph)	494	0	0	0	0	621	0	0	0	0	753	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	241					548					549	
v/s Ratio Prot						c0.20					c0.24	
v/s Ratio Perm	c0.78											
v/c Ratio	2.05					1.13					1.37	
Uniform Delay, d1	34.0					45.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	486.6					80.6					178.4	
Delay (s)	520.6					126.1					223.9	
Level of Service	F					F					F	
Approach Delay (s)	520.6					126.1					223.9	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	103	0	748	663	72
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	103	0	748	663	72
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.91	0.91	0.91			
vC, conflicting volume	1080	374	742			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	432	103	508			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	88	100			
cM capacity (veh/h)	500	840	949			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	249	499	442	293
Volume Left	0	0	0	0	0
Volume Right	103	0	0	0	72
cSH	840	949	1700	1700	1700
Volume to Capacity	0.12	0.00	0.29	0.26	0.17
Queue Length 95th (ft)	10	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.9	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	562	170	14	371	123	151	301	47	151	305	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.94			0.95		1.00	0.94		1.00	0.86	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.98		1.00	0.96	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1514			1701		1770	1469		1770	1254	
Flt Permitted		0.90			0.97		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1368			1660		1770	1469		1770	1254	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	562	170	14	371	123	151	301	47	151	305	110
RTOR Reduction (vph)	0	0	0	0	15	0	0	7	0	0	16	0
Lane Group Flow (vph)	0	812	0	0	493	0	151	341	0	151	399	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		36.0			36.0		7.5	23.5		6.5	22.0	
Effective Green, g (s)		37.0			37.0		7.0	24.5		7.5	23.0	
Actuated g/C Ratio		0.46			0.46		0.09	0.31		0.09	0.29	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		633			768		155	450		166	361	
v/s Ratio Prot							c0.09	0.23		0.09	c0.32	
v/s Ratio Perm		c0.59			0.30							
v/c Ratio		1.28			0.64		0.97	0.76		0.91	1.10	
Uniform Delay, d1		21.5			16.4		36.4	25.1		35.9	28.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		139.1			4.1		65.8	11.3		49.3	78.5	
Delay (s)		160.6			20.6		102.2	36.4		85.2	107.0	
Level of Service		F			C		F	D		F	F	
Approach Delay (s)		160.6			20.6			56.3			101.2	
Approach LOS		F			C			E			F	

Intersection Summary			
HCM Average Control Delay	94.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	122.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	400	330	288	930	530	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.96	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1691			3498	3241	
Flt Permitted	0.97			0.61	1.00	
Satd. Flow (perm)	1691			2165	3241	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	330	288	930	530	210
RTOR Reduction (vph)	37	0	0	0	53	0
Lane Group Flow (vph)	693	0	0	1218	687	0
Confl. Peds. (#/hr)		1				46
Confl. Bikes (#/hr)		3				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	29.0			43.0	43.0	
Effective Green, g (s)	29.0			43.0	43.0	
Actuated g/C Ratio	0.36			0.54	0.54	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	613			1164	1742	
v/s Ratio Prot	c0.41				0.21	
v/s Ratio Perm				c0.56		
v/c Ratio	1.13			1.05	0.39	
Uniform Delay, d1	25.5			18.5	10.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	77.9			39.4	0.7	
Delay (s)	103.4			57.9	11.5	
Level of Service	F			E	B	
Approach Delay (s)	103.4			57.9	11.5	
Approach LOS	F			E	B	

Intersection Summary			
HCM Average Control Delay	57.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	352	334	10	30	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.66				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.93				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	960				1270
Flt Permitted			0.98				0.37	1.00				0.59
Satd. Flow (perm)			1483				685	960				755
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	352	334	10	30	321
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	484
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				47.0	47.0				47.0
Effective Green, g (s)			6.0				48.0	48.0				48.0
Actuated g/C Ratio			0.05				0.44	0.44				0.44
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				299	419				329
v/s Ratio Prot								c0.72				
v/s Ratio Perm			0.06				0.15					0.64
v/c Ratio			1.11				0.33	1.66				1.47
Uniform Delay, d1			52.0				20.5	31.0				31.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			133.3				3.0	307.9				227.9
Delay (s)			185.3				23.5	338.9				258.9
Level of Service			F				C	F				F
Approach Delay (s)			185.3					299.3				258.9
Approach LOS			F					F				F

Intersection Summary			
HCM Average Control Delay	274.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	123	10	10	115	745	20	50	10	274	445	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3202					3175		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3202					3175		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	10	10	115	745	20	50	10	274	445	10	32
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	937	0	0	0	0	769	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					20.0		
Effective Green, g (s)					20.0					20.0		
Actuated g/C Ratio					0.18					0.18		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					582					577		
v/s Ratio Prot					c0.29					c0.24		
v/s Ratio Perm												
v/c Ratio					1.61					1.33		
Uniform Delay, d1					45.0					45.0		
Progression Factor					1.00					1.00		
Incremental Delay, d2					282.2					161.0		
Delay (s)					327.2					206.0		
Level of Service					F					F		
Approach Delay (s)					327.2					206.0		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	251	175	35	264	115	141	307	50	102	292	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.94			0.95		1.00	0.96		1.00	0.87	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.96		1.00	0.98		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1480			1703		1770	1508		1770	1289	
Flt Permitted		0.91			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1348			1611		1770	1508		1770	1289	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	251	175	35	264	115	141	307	50	102	292	90
RTOR Reduction (vph)	0	25	0	0	17	0	0	7	0	0	14	0
Lane Group Flow (vph)	0	461	0	0	397	0	141	350	0	102	368	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		31.0			31.0		10.5	28.0		7.0	24.0	
Effective Green, g (s)		32.0			32.0		10.0	29.0		8.0	25.0	
Actuated g/C Ratio		0.40			0.40		0.12	0.36		0.10	0.31	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		539			644		221	547		177	403	
v/s Ratio Prot							c0.08	c0.23		0.06	c0.29	
v/s Ratio Perm		c0.34			0.25							
v/c Ratio		0.85			0.62		0.64	0.64		0.58	0.91	
Uniform Delay, d1		21.9			19.1		33.3	21.2		34.4	26.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		15.8			4.4		13.3	5.6		13.0	27.6	
Delay (s)		37.7			23.5		46.6	26.8		47.3	54.1	
Level of Service		D			C		D	C		D	D	
Approach Delay (s)		37.7			23.5			32.4			52.7	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	37.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	273	234	553	524	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.98	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.91			1.00	0.97	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1645			3487	3364	
Flt Permitted	0.98			0.61	1.00	
Satd. Flow (perm)	1645			2167	3364	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	128	290	249	588	557	160
RTOR Reduction (vph)	116	0	0	0	27	0
Lane Group Flow (vph)	302	0	0	837	690	0
Confl. Peds. (#/hr)		3				20
Confl. Bikes (#/hr)		1				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	17.3			45.4	45.4	
Effective Green, g (s)	17.3			45.4	45.4	
Actuated g/C Ratio	0.24			0.64	0.64	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	403			1392	2160	
v/s Ratio Prot	c0.18				0.21	
v/s Ratio Perm				c0.39		
v/c Ratio	0.75			0.60	0.32	
Uniform Delay, d1	24.7			7.4	5.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	7.4			1.9	0.4	
Delay (s)	32.1			9.3	6.1	
Level of Service	C			A	A	
Approach Delay (s)	32.1			9.3	6.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	13.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	315	279	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.71				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.93				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1027				
Flt Permitted			0.98				0.35	1.00				
Satd. Flow (perm)			1483				658	1027				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	315	279	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.0	45.0				
Effective Green, g (s)			6.0				46.0	46.0				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				275	429				
v/s Ratio Prot								0.59				
v/s Ratio Perm			0.06				0.14					
v/c Ratio			1.11				0.33	1.41				
Uniform Delay, d1			52.0				21.6	32.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			133.3				3.2	197.1				
Delay (s)			185.3				24.7	229.1				
Level of Service			F				C	F				
Approach Delay (s)			185.3					202.6				
Approach LOS			F					F				

Intersection Summary			
HCM Average Control Delay	179.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.3%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	143	10	10	146	419	10	40	10	253	431	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.78					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.99					0.98	
Satd. Flow (prot)	1212					3175					3181	
Flt Permitted	0.62					0.99					0.98	
Satd. Flow (perm)	758					3175					3181	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	301	143	10	10	146	419	10	40	10	253	431	20
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	0	0	4	0
Lane Group Flow (vph)	494	0	0	0	0	620	0	0	0	0	753	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.0					20.0					22.0	
Effective Green, g (s)	46.0					20.0					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	317					577					636	
v/s Ratio Prot						c0.20					c0.24	
v/s Ratio Perm	c0.65											
v/c Ratio	1.56					1.07					1.18	
Uniform Delay, d1	32.0					45.0					44.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	266.2					59.1					98.1	
Delay (s)	298.2					104.1					142.1	
Level of Service	F					F					F	
Approach Delay (s)	298.2					104.1					142.1	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	530	202	14	371	123	151	301	40	80	376	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.95			0.96			0.89	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.97			0.99			0.97	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1488			1701			1501			1320	
Flt Permitted		0.84			0.97			0.50			0.86	
Satd. Flow (perm)		1261			1653			756			1146	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	530	202	14	371	123	151	301	40	80	376	110
RTOR Reduction (vph)	0	0	0	0	14	0	0	4	0	0	11	0
Lane Group Flow (vph)	0	812	0	0	494	0	0	488	0	0	555	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		473			620			546			322	
v/s Ratio Prot								c0.18				
v/s Ratio Perm		c0.64			0.30			0.29			c0.48	
v/c Ratio		1.72			0.80			0.89			1.72	
Uniform Delay, d1		25.0			22.3			17.0			28.8	
Progression Factor		1.00			1.24			1.00			1.00	
Incremental Delay, d2		331.4			10.1			19.7			338.7	
Delay (s)		356.4			37.7			36.7			367.5	
Level of Service		F			D			D			F	
Approach Delay (s)		356.4			37.7			36.7			367.5	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM Average Control Delay	224.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	136.1%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	400	220	288	930	530	210
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	400	220	288	930	530	210
Pedestrians	46			1		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	4			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.79					
vC, conflicting volume	1722	417	786			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1375	417	786			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	61	64			
cM capacity (veh/h)	66	562	797			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	620	598	620	353	387
Volume Left	400	288	0	0	0
Volume Right	220	0	0	0	210
cSH	96	797	1700	1700	1700
Volume to Capacity	6.46	0.36	0.36	0.21	0.23
Queue Length 95th (ft)	Err	41	0	0	0
Control Delay (s)	Err	8.6	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	Err	4.2		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	2406.7		
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	7	20	0	0	0	32	486	85	103	458	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	10	7	20	0	0	0	33	496	87	105	467	14
Pedestrians		238			114						237	
Lane Width (ft)		12.0			0.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		20			0						20	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.82	0.82	0.81	0.82	0.82	0.72	0.81			0.72		
vC, conflicting volume	1721	1685	712	1420	1648	890	720			697		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1255	1211	531	887	1166	659	540			392		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	82	93	94	100	100	100	95			88		
cM capacity (veh/h)	58	100	357	144	106	270	670			846		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	38	33	583	105	482
Volume Left	10	33	0	105	0
Volume Right	20	0	87	0	14
cSH	124	670	1700	846	1700
Volume to Capacity	0.30	0.05	0.34	0.12	0.28
Queue Length 95th (ft)	30	4	0	11	0
Control Delay (s)	46.3	10.6	0.0	9.9	0.0
Lane LOS	E	B		A	
Approach Delay (s)	46.3	0.6		1.8	
Approach LOS	E				

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	207	8	50	10	4	20	67	968	10	40	661	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.92			1.00			0.99	
Flt Protected		0.96			0.98			1.00			1.00	
Satd. Flow (prot)		1734			1677			3519			3476	
Flt Permitted		0.75			0.91			0.85			0.86	
Satd. Flow (perm)		1349			1554			2998			2980	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	218	8	53	11	4	21	71	1019	11	42	696	54
RTOR Reduction (vph)	0	10	0	0	16	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	269	0	0	20	0	0	1101	0	0	787	0
Confl. Peds. (#/hr)			22			1			33			24
Confl. Bikes (#/hr)									7			1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.9			32.9	
Effective Green, g (s)		16.1			16.1			32.9			32.9	
Actuated g/C Ratio		0.25			0.25			0.50			0.50	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		332			382			1506			1497	
v/s Ratio Prot												
v/s Ratio Perm		c0.20			0.01			c0.37			0.26	
v/c Ratio		0.81			0.05			0.73			0.53	
Uniform Delay, d1		23.3			18.9			12.8			11.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		13.9			0.1			3.2			1.3	
Delay (s)		37.2			18.9			16.0			12.3	
Level of Service		D			B			B			B	
Approach Delay (s)		37.2			18.9			16.0			12.3	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	0	20	10
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)		4.0		
Lane Util. Factor		1.00		
Frpb, ped/bikes		1.00		
Flpb, ped/bikes		1.00		
Frt		0.90		
Flt Protected		0.99		
Satd. Flow (prot)		1657		
Flt Permitted		0.99		
Satd. Flow (perm)		1657		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	0	21	11
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	34	0	0
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Turn Type	Split			
Protected Phases	8	8		
Permitted Phases				
Actuated Green, G (s)		4.5		
Effective Green, g (s)		4.5		
Actuated g/C Ratio		0.07		
Clearance Time (s)		4.0		
Vehicle Extension (s)		3.0		
Lane Grp Cap (vph)		114		
v/s Ratio Prot		c0.02		
v/s Ratio Perm				
v/c Ratio		0.30		
Uniform Delay, d1		29.0		
Progression Factor		1.00		
Incremental Delay, d2		1.5		
Delay (s)		30.4		
Level of Service		C		
Approach Delay (s)		30.4		
Approach LOS		C		

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	413	273	10	30	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.72				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.94				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1058				1268
Flt Permitted			0.98				0.33	1.00				0.40
Satd. Flow (perm)			1483				610	1058				514
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	413	273	10	30	321
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	484
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			15.0				41.0	41.0				41.0
Effective Green, g (s)			14.0				42.0	42.0				42.0
Actuated g/C Ratio			0.13				0.38	0.38				0.38
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			189				233	404				196
v/s Ratio Prot								0.66				
v/s Ratio Perm			0.06				0.16					c0.94
v/c Ratio			0.48				0.43	1.72				2.47
Uniform Delay, d1			44.6				25.1	34.0				34.0
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			8.4				5.7	335.5				676.3
Delay (s)			53.0				30.8	369.5				710.3
Level of Service			D				C	F				F
Approach Delay (s)			53.0					327.0				710.3
Approach LOS			D					F				F

Intersection Summary			
HCM Average Control Delay	368.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	123	10	10	139	721	20	50	10	274	445	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3198					3175		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3198					3175		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	10	10	139	721	20	50	10	274	445	10	32
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	937	0	0	0	0	769	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					19.0					19.0		
Effective Green, g (s)					19.0					19.0		
Actuated g/C Ratio					0.17					0.17		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					552					548		
v/s Ratio Prot					c0.29					c0.24		
v/s Ratio Perm												
v/c Ratio					1.70					1.40		
Uniform Delay, d1					45.5					45.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					321.4					191.9		
Delay (s)					366.9					237.4		
Level of Service					F					F		
Approach Delay (s)					366.9					237.4		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	70	0	1046	705	27
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	70	0	1046	705	27
Pedestrians	24					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	2					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.90	0.89	0.89			
vC, conflicting volume	1266	390	756			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	504	63	475			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	100			
cM capacity (veh/h)	436	861	944			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	70	349	697	470	262
Volume Left	0	0	0	0	0
Volume Right	70	0	0	0	27
cSH	861	944	1700	1700	1700
Volume to Capacity	0.08	0.00	0.41	0.28	0.15
Queue Length 95th (ft)	7	0	0	0	0
Control Delay (s)	9.6	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.6	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	216	35	264	115	141	307	40	20	374	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.93			0.95			0.98			0.90	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.94			0.96			0.99			0.97	
Flt Protected		0.99			1.00			0.99			1.00	
Satd. Flow (prot)		1442			1703			1527			1339	
Flt Permitted		0.89			0.94			0.50			0.97	
Satd. Flow (perm)		1297			1603			774			1301	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	216	35	264	115	141	307	40	20	374	90
RTOR Reduction (vph)	0	36	0	0	18	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	450	0	0	397	0	0	484	0	0	474	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		6			6		3	8			4	
Permitted Phases	6			6			8			4		
Actuated Green, G (s)		29.0			29.0			41.0			21.5	
Effective Green, g (s)		30.0			30.0			42.0			22.5	
Actuated g/C Ratio		0.38			0.38			0.52			0.28	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		486			601			557			366	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		c0.35			0.25			0.28			c0.36	
v/c Ratio		0.93			0.66			0.87			1.29	
Uniform Delay, d1		23.9			20.8			16.6			28.8	
Progression Factor		1.00			1.27			1.00			0.95	
Incremental Delay, d2		25.9			5.6			16.7			134.6	
Delay (s)		49.9			31.9			33.3			162.0	
Level of Service		D			C			C			F	
Approach Delay (s)		49.9			31.9			33.3			162.0	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM Average Control Delay	70.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.5%	ICU Level of Service	G
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	120	140	234	553	524	150
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	128	149	249	588	557	160
Pedestrians	20			3		
Lane Width (ft)	12.0			12.0		
Walking Speed (ft/s)	4.0			4.0		
Percent Blockage	2			0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				297	1223	
pX, platoon unblocked	0.91					
vC, conflicting volume	1449	382	737			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1303	382	737			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	75	71			
cM capacity (veh/h)	97	605	850			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	277	445	392	372	345
Volume Left	128	249	0	0	0
Volume Right	149	0	0	0	160
cSH	177	850	1700	1700	1700
Volume to Capacity	1.57	0.29	0.23	0.22	0.20
Queue Length 95th (ft)	455	31	0	0	0
Control Delay (s)	327.9	7.7	0.0	0.0	0.0
Lane LOS	F	A			
Approach Delay (s)	327.9	4.1		0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	51.4		
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	10	30	0	0	0	23	497	107	123	464	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	11	33	0	0	0	25	540	116	134	504	27
Pedestrians		306			141			2			185	
Lane Width (ft)		12.0			0.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		26			0			0			15	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								330			322	
pX, platoon unblocked	0.83	0.83	0.83	0.83	0.83		0.83					
vC, conflicting volume	1867	1939	826	1601	1894	924	838			798		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1944	2032	683	1623	1978	924	697			798		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	38	61	88	100	100	100	95			84		
cM capacity (veh/h)	17	28	276	29	30	276	553			825		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	54	25	657	134	532
Volume Left	11	25	0	134	0
Volume Right	33	0	116	0	27
cSH	48	553	1700	825	1700
Volume to Capacity	1.13	0.05	0.39	0.16	0.31
Queue Length 95th (ft)	123	4	0	14	0
Control Delay (s)	305.8	11.8	0.0	10.2	0.0
Lane LOS	F	B		B	
Approach Delay (s)	305.8	0.4		2.1	
Approach LOS	F				

Intersection Summary			
Average Delay	13.0		
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	208	6	77	10	5	20	73	556	10	20	599	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frpb, ped/bikes		0.99			0.99			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			1.00			0.99	
Flt Protected		0.97			0.99			0.99			1.00	
Satd. Flow (prot)		1720			1681			3507			3484	
Flt Permitted		0.76			0.91			0.81			0.93	
Satd. Flow (perm)		1362			1554			2864			3244	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	219	6	81	11	5	21	77	585	11	21	631	54
RTOR Reduction (vph)	0	15	0	0	16	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	291	0	0	21	0	0	673	0	0	700	0
Confl. Peds. (#/hr)			16						16			7
Confl. Bikes (#/hr)			1			3			10			2
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		16.1			16.1			32.3			32.3	
Effective Green, g (s)		16.1			16.1			32.3			32.3	
Actuated g/C Ratio		0.26			0.26			0.52			0.52	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		355			405			1497			1695	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.01			c0.23			0.22	
v/c Ratio		0.82			0.05			0.45			0.41	
Uniform Delay, d1		21.5			17.1			9.2			9.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		14.0			0.1			1.0			0.7	
Delay (s)		35.5			17.2			10.2			9.7	
Level of Service		D			B			B			A	
Approach Delay (s)		35.5			17.2			10.2			9.7	
Approach LOS		D			B			B			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	61.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL2	NWL	NWR
Lane Configurations			
Volume (vph)	11	0	10
Ideal Flow (vphpl)	1900	1900	1900
Total Lost time (s)		4.0	
Lane Util. Factor		1.00	
Frpb, ped/bikes		1.00	
Flpb, ped/bikes		1.00	
Frt		0.94	
Flt Protected		0.97	
Satd. Flow (prot)		1698	
Flt Permitted		0.97	
Satd. Flow (perm)		1698	
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	12	0	11
RTOR Reduction (vph)	0	0	0
Lane Group Flow (vph)	0	23	0
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Turn Type	Split		
Protected Phases	8	8	
Permitted Phases			
Actuated Green, G (s)		1.4	
Effective Green, g (s)		1.4	
Actuated g/C Ratio		0.02	
Clearance Time (s)		4.0	
Vehicle Extension (s)		3.0	
Lane Grp Cap (vph)		38	
v/s Ratio Prot		c0.01	
v/s Ratio Perm			
v/c Ratio		0.61	
Uniform Delay, d1		29.9	
Progression Factor		1.00	
Incremental Delay, d2		24.3	
Delay (s)		54.2	
Level of Service		D	
Approach Delay (s)		54.2	
Approach LOS		D	

Intersection Summary

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	387	207	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.78				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.95				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1154				
Flt Permitted			0.98				0.33	1.00				
Satd. Flow (perm)			1483				607	1154				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	387	207	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			15.0				41.0	41.0				
Effective Green, g (s)			14.0				42.0	42.0				
Actuated g/C Ratio			0.13				0.38	0.38				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			189				232	441				
v/s Ratio Prot								0.52				
v/s Ratio Perm			0.06				0.15					
v/c Ratio			0.48				0.39	1.37				
Uniform Delay, d1			44.6				24.7	34.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			8.4				4.8	180.3				
Delay (s)			53.0				29.5	214.3				
Level of Service			D				C	F				
Approach Delay (s)			53.0					190.3				
Approach LOS			D					F				

Intersection Summary			
HCM Average Control Delay	241.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	143	10	10	181	384	10	40	10	253	431	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.78					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1211					3166					3181	
Flt Permitted	0.52					0.98					0.98	
Satd. Flow (perm)	632					3166					3181	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	301	143	10	10	181	384	10	40	10	253	431	20
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	0	4	0
Lane Group Flow (vph)	494	0	0	0	0	621	0	0	0	0	753	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	41.0					19.0					19.0	
Effective Green, g (s)	42.0					19.0					19.0	
Actuated g/C Ratio	0.38					0.17					0.17	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	241					547					549	
v/s Ratio Prot						c0.20					c0.24	
v/s Ratio Perm	c0.78											
v/c Ratio	2.05					1.14					1.37	
Uniform Delay, d1	34.0					45.5					45.5	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	486.6					81.4					178.4	
Delay (s)	520.6					126.9					223.9	
Level of Service	F					F					F	
Approach Delay (s)	520.6					126.9					223.9	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	102	0	637	660	31
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	102	0	637	660	31
Pedestrians	7					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				295	362	
pX, platoon unblocked	0.92	0.92	0.92			
vC, conflicting volume	1001	352	698			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	439	118	494			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	88	100			
cM capacity (veh/h)	501	832	973			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	102	212	425	440	251
Volume Left	0	0	0	0	0
Volume Right	102	0	0	0	31
cSH	832	973	1700	1700	1700
Volume to Capacity	0.12	0.00	0.25	0.26	0.15
Queue Length 95th (ft)	10	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.9	0.0		0.0	
Approach LOS	A				

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	32.2%	ICU Level of Service	A
Analysis Period (min)	15		
Description: CLaremont Avenue/Driveway			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	530	202	14	371	123	151	301	40	80	376	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.95		1.00	0.94		1.00	0.88	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.97		1.00	0.98		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1488			1701		1770	1486		1770	1293	
Flt Permitted		0.89			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1338			1662		1770	1486		1770	1293	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	80	530	202	14	371	123	151	301	40	80	376	110
RTOR Reduction (vph)	0	0	0	0	14	0	0	6	0	0	13	0
Lane Group Flow (vph)	0	812	0	0	494	0	151	335	0	80	473	0
Confl. Peds. (#/hr)			112			94			201			244
Confl. Bikes (#/hr)			5			1			25			45
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		35.0			35.0		7.5	25.0		6.0	23.0	
Effective Green, g (s)		36.0			36.0		7.0	26.0		7.0	24.0	
Actuated g/C Ratio		0.45			0.45		0.09	0.32		0.09	0.30	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		602			748		155	483		155	388	
v/s Ratio Prot							c0.09	0.23		0.05	c0.37	
v/s Ratio Perm		c0.61			0.30							
v/c Ratio		1.35			0.66		0.97	0.69		0.52	1.22	
Uniform Delay, d1		22.0			17.2		36.4	23.5		34.9	28.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		167.8			4.5		65.8	8.0		11.8	119.5	
Delay (s)		189.8			21.7		102.2	31.5		46.6	147.5	
Level of Service		F			C		F	C		D	F	
Approach Delay (s)		189.8			21.7			53.2			133.3	
Approach LOS		F			C			D			F	

Intersection Summary			
HCM Average Control Delay	112.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	126.2%	ICU Level of Service	H
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	400	220	288	930	530	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.96	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.95			1.00	0.96	
Flt Protected	0.97			0.99	1.00	
Satd. Flow (prot)	1709			3498	3241	
Flt Permitted	0.97			0.62	1.00	
Satd. Flow (perm)	1709			2179	3241	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	220	288	930	530	210
RTOR Reduction (vph)	25	0	0	0	53	0
Lane Group Flow (vph)	595	0	0	1218	687	0
Confl. Peds. (#/hr)		1				46
Confl. Bikes (#/hr)		3				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	27.0			45.0	45.0	
Effective Green, g (s)	27.0			45.0	45.0	
Actuated g/C Ratio	0.34			0.56	0.56	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	577			1226	1823	
v/s Ratio Prot	c0.35				0.21	
v/s Ratio Perm				c0.56		
v/c Ratio	1.03			0.99	0.38	
Uniform Delay, d1	26.5			17.4	9.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	45.9			24.0	0.1	
Delay (s)	72.4			41.3	9.8	
Level of Service	E			D	A	
Approach Delay (s)	72.4			41.3	9.8	
Approach LOS	E			D	A	

Intersection Summary			
HCM Average Control Delay	39.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBT
Lane Configurations												
Volume (vph)	10	20	10	40	10	80	20	413	273	10	30	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				4.0
Lane Util. Factor			1.00				1.00	1.00				1.00
Frpb, ped/bikes			1.00				1.00	0.72				0.81
Flpb, ped/bikes			1.00				1.00	1.00				1.00
Frt			0.93				1.00	0.94				0.96
Flt Protected			0.98				0.95	1.00				1.00
Satd. Flow (prot)			1483				1770	1061				1270
Flt Permitted			0.98				0.36	1.00				0.56
Satd. Flow (perm)			1483				673	1061				719
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	40	10	80	20	413	273	10	30	321
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	100	696	0	0	0	484
Confl. Peds. (#/hr)									197	197		
Confl. Bikes (#/hr)									74	74		
Parking (#/hr)			5					12				5
Turn Type	Perm	Perm				Perm	Perm				Perm	
Protected Phases			1					2				6
Permitted Phases	1	1				2	2				6	
Actuated Green, G (s)			7.0				46.0	46.0				46.0
Effective Green, g (s)			6.0				47.0	47.0				47.0
Actuated g/C Ratio			0.05				0.43	0.43				0.43
Clearance Time (s)			3.0				5.0	5.0				5.0
Lane Grp Cap (vph)			81				288	453				307
v/s Ratio Prot								0.66				
v/s Ratio Perm			0.06				0.15					c0.67
v/c Ratio			1.11				0.35	1.54				1.58
Uniform Delay, d1			52.0				21.2	31.5				31.5
Progression Factor			1.00				1.00	1.00				1.00
Incremental Delay, d2			133.3				3.3	252.3				274.6
Delay (s)			185.3				24.5	283.8				306.1
Level of Service			F				C	F				F
Approach Delay (s)			185.3					251.2				306.1
Approach LOS			F					F				F

Intersection Summary			
HCM Average Control Delay	263.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	120.8%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			

c Critical Lane Group

Movement	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR	SWR2
Lane Configurations												
Volume (vph)	123	10	10	139	721	20	50	10	274	445	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0					4.0		
Lane Util. Factor					0.95					0.95		
Frpb, ped/bikes					0.98					0.99		
Flpb, ped/bikes					1.00					1.00		
Frt					0.99					0.99		
Flt Protected					0.99					0.98		
Satd. Flow (prot)					3198					3175		
Flt Permitted					0.99					0.98		
Satd. Flow (perm)					3198					3175		
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	123	10	10	139	721	20	50	10	274	445	10	32
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	2	0	0
Lane Group Flow (vph)	0	0	0	0	937	0	0	0	0	769	0	0
Confl. Peds. (#/hr)	206	207					49					63
Confl. Bikes (#/hr)	58	68					8					9
Parking (#/hr)					5					7		
Turn Type			Split	Split				Split	Split			
Protected Phases			3	3	3			4	4	4		
Permitted Phases												
Actuated Green, G (s)					20.0					21.0		
Effective Green, g (s)					20.0					21.0		
Actuated g/C Ratio					0.18					0.19		
Clearance Time (s)					4.0					4.0		
Lane Grp Cap (vph)					581					606		
v/s Ratio Prot					c0.29					c0.24		
v/s Ratio Perm												
v/c Ratio					1.61					1.27		
Uniform Delay, d1					45.0					44.5		
Progression Factor					1.00					1.00		
Incremental Delay, d2					283.5					133.4		
Delay (s)					328.5					177.9		
Level of Service					F					F		
Approach Delay (s)					328.5					177.9		
Approach LOS					F					F		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	210	216	35	264	115	141	307	40	20	374	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		5.0	4.0		3.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93			0.95		1.00	0.97		1.00	0.90	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.96		1.00	0.98		1.00	0.97	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1703		1770	1525		1770	1330	
Flt Permitted		0.90			0.94		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1306			1608		1770	1525		1770	1330	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	60	210	216	35	264	115	141	307	40	20	374	90
RTOR Reduction (vph)	0	36	0	0	17	0	0	6	0	0	11	0
Lane Group Flow (vph)	0	450	0	0	397	0	141	341	0	20	453	0
Confl. Peds. (#/hr)			61			64			112			255
Confl. Bikes (#/hr)			3			8			13			15
Parking (#/hr)		2						8			16	
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		6			6		3	8		7	4	
Permitted Phases	6			6								
Actuated Green, G (s)		30.0			30.0		10.5	30.0		6.0	25.0	
Effective Green, g (s)		31.0			31.0		10.0	31.0		7.0	26.0	
Actuated g/C Ratio		0.39			0.39		0.12	0.39		0.09	0.32	
Clearance Time (s)		5.0			5.0		4.5	5.0		4.0	5.0	
Lane Grp Cap (vph)		506			623		221	591		155	432	
v/s Ratio Prot							c0.08	c0.22		0.01	c0.34	
v/s Ratio Perm		c0.34			0.25							
v/c Ratio		0.89			0.64		0.64	0.58		0.13	1.05	
Uniform Delay, d1		22.9			19.9		33.3	19.3		33.7	27.0	
Progression Factor		1.00			1.00		1.00	1.00		0.88	1.02	
Incremental Delay, d2		20.3			4.9		13.3	4.1		0.2	28.3	
Delay (s)		43.2			24.8		46.6	23.4		29.7	55.9	
Level of Service		D			C		D	C		C	E	
Approach Delay (s)		43.2			24.8			30.1			54.9	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		
Description: Alcatraz Avenue/College Avenue			

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	120	140	234	553	524	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.99			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.93			1.00	0.97	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1675			3487	3377	
Flt Permitted	0.98			0.63	1.00	
Satd. Flow (perm)	1675			2215	3377	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	128	149	249	588	557	160
RTOR Reduction (vph)	56	0	0	0	35	0
Lane Group Flow (vph)	221	0	0	837	682	0
Confl. Peds. (#/hr)		3				20
Confl. Bikes (#/hr)		1				8
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	12.0			26.8	26.8	
Effective Green, g (s)	12.0			26.8	26.8	
Actuated g/C Ratio	0.26			0.57	0.57	
Clearance Time (s)	4.0			4.0	4.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	429			1268	1934	
v/s Ratio Prot	c0.13				0.20	
v/s Ratio Perm				c0.38		
v/c Ratio	0.52			0.66	0.35	
Uniform Delay, d1	14.9			6.9	5.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	1.0			1.3	0.1	
Delay (s)	16.0			8.2	5.5	
Level of Service	B			A	A	
Approach Delay (s)	16.0			8.2	5.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	46.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL2	EBL	EBT	EBR	EBR2	NBL2	NBL	NBT	NBR	NBR2	SBL2	SBL
Lane Configurations												
Volume (vph)	10	20	10	30	20	70	20	387	207	10	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0				4.0	4.0				
Lane Util. Factor			1.00				1.00	1.00				
Frpb, ped/bikes			1.00				1.00	0.78				
Flpb, ped/bikes			1.00				1.00	1.00				
Frt			0.93				1.00	0.95				
Flt Protected			0.98				0.95	1.00				
Satd. Flow (prot)			1483				1770	1155				
Flt Permitted			0.98				0.35	1.00				
Satd. Flow (perm)			1483				658	1155				
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	20	10	30	20	70	20	387	207	10	30	10
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	90	0	0	0	90	604	0	0	0	0
Confl. Peds. (#/hr)									170	166		
Confl. Bikes (#/hr)									16	12		
Parking (#/hr)			5					12				
Turn Type	Perm	Perm				Perm	Perm				Perm	Perm
Protected Phases			1					2				
Permitted Phases	1	1				2	2				6	6
Actuated Green, G (s)			7.0				45.0	45.0				
Effective Green, g (s)			6.0				46.0	46.0				
Actuated g/C Ratio			0.05				0.42	0.42				
Clearance Time (s)			3.0				5.0	5.0				
Lane Grp Cap (vph)			81				275	483				
v/s Ratio Prot								0.52				
v/s Ratio Perm			0.06				0.14					
v/c Ratio			1.11				0.33	1.25				
Uniform Delay, d1			52.0				21.6	32.0				
Progression Factor			1.00				1.00	1.00				
Incremental Delay, d2			133.3				3.2	129.0				
Delay (s)			185.3				24.7	161.0				
Level of Service			F				C	F				
Approach Delay (s)			185.3					143.3				
Approach LOS			F					F				

Intersection Summary			
HCM Average Control Delay	164.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	121.4%	ICU Level of Service	H
Analysis Period (min)	15		
Description: College Avenue/Claremont Avenue/62nd Street			
c Critical Lane Group			

Movement	SBT	SBR	SBR2	NEL2	NEL	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	301	143	10	10	181	384	10	40	10	253	431	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0					4.0					4.0	
Lane Util. Factor	1.00					0.95					0.95	
Frpb, ped/bikes	0.78					0.98					0.99	
Flpb, ped/bikes	1.00					1.00					1.00	
Frt	0.96					0.99					0.99	
Flt Protected	1.00					0.98					0.98	
Satd. Flow (prot)	1212					3166					3181	
Flt Permitted	0.62					0.98					0.98	
Satd. Flow (perm)	758					3166					3181	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	301	143	10	10	181	384	10	40	10	253	431	20
RTOR Reduction (vph)	0	0	0	0	0	5	0	0	0	0	4	0
Lane Group Flow (vph)	494	0	0	0	0	620	0	0	0	0	753	0
Confl. Peds. (#/hr)		252	262					52				
Confl. Bikes (#/hr)		20	18					5				
Parking (#/hr)	5					5					7	
Turn Type				Split	Split				Split	Split		
Protected Phases	6			3	3	3			4	4	4	
Permitted Phases												
Actuated Green, G (s)	45.0					20.0					22.0	
Effective Green, g (s)	46.0					20.0					22.0	
Actuated g/C Ratio	0.42					0.18					0.20	
Clearance Time (s)	5.0					4.0					4.0	
Lane Grp Cap (vph)	317					576					636	
v/s Ratio Prot						c0.20					c0.24	
v/s Ratio Perm	c0.65											
v/c Ratio	1.56					1.08					1.18	
Uniform Delay, d1	32.0					45.0					44.0	
Progression Factor	1.00					1.00					1.00	
Incremental Delay, d2	266.2					59.8					98.1	
Delay (s)	298.2					104.8					142.1	
Level of Service	F					F					F	
Approach Delay (s)	298.2					104.8					142.1	
Approach LOS	F					F					F	

Intersection Summary

Movement	SWR2
Lane Configurations	
Volume (vph)	43
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	43
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	22
Confl. Bikes (#/hr)	
Parking (#/hr)	
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Appendix J
Traffic Congestion Management Program (CMP) Analysis Tables

FEHR PEERS

Safeway on College Avenue EIR
MTS Roadway System Analysis Summary - 2015 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Freeway Segments														
I-80/I-580 Eastbound														
Between	Powell Street	Ashby Avenue	4	8,722	2	8,722	8,724	0%	1.12	1.12	F	F	No	no change
I-80/I-580 Westbound														
Between	Ashby Avenue	Powell Street	4	7,844	3	7,844	7,847	0%	1.01	1.01	F	F	No	no change
I-880 Northbound														
Between	Broadway	I-980	5	5,946	2	5,946	5,948	0%	0.61	0.61	C	C	No	no change
I-880 Southbound														
Between	I-980	Broadway	5	6,591	3	6,591	6,594	0%	0.68	0.68	C	C	No	no change
I-580 Eastbound														
Between	I-580/I880	MacArthur Boulevard	4	8,714	2	8,714	8,716	0%	1.12	1.12	F	F	No	no change
Between	MacArthur Boulevard	I-980/SR 24	5	8,259	2	8,259	8,261	0%	0.85	0.85	D	D	No	no change
Between	I-980/SR 24	Oakland Avenue	5	8,270	3	8,270	8,273	0%	0.85	0.85	D	D	No	no change
I-580 Westbound														
Between	Oakland Avenue	I-980/SR 24	5	6,416	3	6,416	6,419	0%	0.66	0.66	C	C	No	no change
Between	I-980/SR 24	MacArthur Boulevard	5	7,408	2	7,408	7,410	0%	0.76	0.76	D	D	No	no change
Between	MacArthur Boulevard	I-580/I880	5	7,408	2	7,408	7,410	0%	0.76	0.76	D	D	No	no change
I-980 Eastbound														
Between	I-880	17th Street	2	2,911	2	2,911	2,913	0%	0.75	0.75	C	C	No	no change
Between	18th Street	27th Street	5	5,767	2	5,767	5,769	0%	0.59	0.59	C	C	No	no change
Between	27th Street	I-580	4	6,102	2	6,102	6,104	0%	0.78	0.78	D	D	No	no change
I-980 Westbound														
Between	I-580	27th Street	3	3,295	3	3,295	3,298	0%	0.56	0.56	B	B	No	no change
Between	27th Street	18th Street	5	3,332	3	3,332	3,335	0%	0.34	0.34	A	A	No	no change
Between	17th Street	I-880	3	3,844	3	3,844	3,847	0%	0.66	0.66	C	C	No	no change
SR 13 Northbound														
Between	Broadway Terrace	SR 24	3	3,859	1	3,859	3,860	0%	0.66	0.66	C	C	No	no change
SR 13 Southbound														
Between	SR 24	Broadway Terrace	3	3,845	1	3,845	3,846	0%	0.66	0.66	C	C	No	no change
SR 24 Eastbound														
Between	I-580	Telegraph Avenue	4	7,471	6	7,471	7,477	0%	0.96	0.96	E	E	No	no change
Between	Telegraph Avenue	Broadway	4	7,678	0	7,678	7,678	0%	0.98	0.98	E	E	No	no change
Between	Broadway	SR 13	5	8,201	5	8,201	8,206	0%	0.84	0.84	D	D	No	no change
Between	SR 13	Caldecott Tunnel	4	9,353	5	9,353	9,358	0%	1.20	1.20	F	F	No	no change
SR 24 Westbound														
Between	Caldecott Tunnel	SR 13	4	5,426	8	5,426	5,434	0%	0.70	0.70	C	C	No	no change
Between	SR 13	Broadway	5	4,310	7	4,310	4,317	0%	0.44	0.44	B	B	No	no change
Between	Broadway	Telegraph Avenue	4	3,897	0	3,897	3,897	0%	0.50	0.50	B	B	No	no change
Between	Telegraph Avenue	I-580	4	4,604	9	4,604	4,613	0%	0.59	0.59	C	C	No	no change
Arterials														
College Avenue Northbound														
Between	Broadway	Manila Avenue	1	389	5	389	394	0%	0.49	0.49	B	B	No	no change
Between	Manila Avenue	Shafter Avenue	1	246	15	246	261	0%	0.31	0.33	A	A	No	no change
Between	Shafter Avenue	Miles Avenue	1	195	16	195	211	0%	0.24	0.26	A	A	No	no change
Between	Miles Avenue	Claremont Avenue	1	297	27	297	324	0%	0.37	0.41	B	B	Yes	no change
Between	Claremont Avenue	63rd Street	1	568	22	568	590	0%	0.71	0.74	C	C	No	no change
Between	63rd Street	Alcatraz Avenue	1	586	36	586	622	0%	0.73	0.78	C	D	Yes	change
Between	Alcatraz Avenue	Ashby Avenue	1	543	24	543	567	0%	0.68	0.71	C	C	No	no change

Safeway on College Avenue EIR
MTS Roadway System Analysis Summary - 2015 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Between	Ashby Avenue	Dwight Way	1	653	12	653	665	0%	0.82	0.83	D	D	No	no change
College Avenue Southbound														
Between	Dwight Way	Ashby Avenue	1	663	12	663	675	0%	0.83	0.84	D	D	No	no change
Between	Ashby Avenue	Alcatraz Avenue	1	656	26	656	682	0%	0.82	0.85	D	D	No	no change
Between	Alcatraz Avenue	63rd Street	1	643	38	643	681	0%	0.80	0.85	D	D	Yes	no change
Between	63rd Street	Claremont Avenue	1	629	19	629	648	0%	0.79	0.81	D	D	No	no change
Between	Claremont Avenue	Miles Avenue	1	382	25	382	407	0%	0.48	0.51	B	B	No	no change
Between	Miles Avenue	Shafter Avenue	1	421	19	421	440	0%	0.53	0.55	B	B	No	no change
Between	Shafter Avenue	Manila Avenue	1	304	14	304	318	0%	0.38	0.40	B	B	No	no change
Between	Manila Avenue	Broadway	1	528	5	528	533	0%	0.66	0.67	C	C	No	no change
Claremont Avenue Northbound														
Between	Telegraph Avenue	SR 24 EB Ramp	2	557	3	557	560	0%	0.35	0.35	B	B	No	no change
Between	SR 24 EB Ramp	SR 24 WB Ramp	2	1,644	11	1,644	1,655	0%	1.03	1.03	F	F	No	no change
Between	SR 24 WB Ramp	Forest Street	2	1,595	13	1,595	1,608	0%	1.00	1.01	F	F	No	no change
Between	Forest Street	College Avenue	2	1,425	19	1,425	1,444	0%	0.89	0.90	D	D	No	no change
Between	College Avenue	Mystic Street	2	866	24	866	890	0%	0.54	0.56	B	B	No	no change
Between	Mystic Street	Alcatraz Avenue	2	998	10	998	1,008	0%	0.62	0.63	C	C	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,122	10	1,122	1,132	0%	0.70	0.71	C	C	No	no change
Between	Ashby Avenue	Domingo Avenue	2	1,286	3	1,286	1,289	0%	0.80	0.81	D	D	No	no change
Between	Domingo Avenue	Grizzly Peak Boulevar	1	746	2	746	748	0%	0.93	0.94	E	E	No	no change
Claremont Avenue Southbound														
Between	Grizzly Peak Bouleval	Domingo Avenue	1	651	2	651	653	0%	0.81	0.82	D	D	No	no change
Between	Domingo Avenue	Ashby Avenue	2	1,770	3	1,770	1,773	0%	1.11	1.11	F	F	No	no change
Between	Ashby Avenue	Alcatraz Avenue	2	902	11	902	913	0%	0.56	0.57	B	B	No	no change
Between	Alcatraz Avenue	Mystic Street	2	891	11	891	902	0%	0.56	0.56	B	B	No	no change
Between	Mystic Street	College Avenue	2	799	24	799	823	0%	0.50	0.51	B	B	No	no change
Between	College Avenue	Forest Street	2	1,185	18	1,185	1,203	0%	0.74	0.75	C	C	No	no change
Between	Forest Street	SR 24 WB Ramp	2	1,552	12	1,552	1,564	0%	0.97	0.98	E	E	No	no change
Between	SR 24 WB Ramp	SR 24 EB Ramp	2	295	4	295	299	0%	0.18	0.19	A	A	No	no change
Between	SR 24 EB Ramp	Telegraph Avenue	2	268	3	268	271	0%	0.17	0.17	A	A	No	no change
Ashby Avenue Eastbound														
Between	Telegraph Avenue	College Avenue	1	906	5	906	911	0%	1.13	1.14	F	F	No	no change
Between	College Avenue	Claremont Avenue	1	903	4	903	907	0%	1.13	1.13	F	F	No	no change
Between	Claremont Avenue	Tunnel Road	1	908	4	908	912	0%	1.14	1.14	F	F	No	no change
Ashby Avenue Westbound														
Between	Tunnel Road	Claremont Avenue	1	864	4	864	868	0%	1.08	1.09	F	F	No	no change
Between	Claremont Avenue	College Avenue	1	887	5	887	892	0%	1.11	1.12	F	F	No	no change
Between	College Avenue	Telegraph Avenue	1	772	4	772	776	0%	0.97	0.97	E	E	No	no change
Broadway Northbound														
Between	MacArthur Boulevard	40th Street	3	1,005	2	1,005	1,007	0%	0.42	0.42	B	B	No	no change
Between	40th Street	51st Street	3	1,065	3	1,065	1,068	0%	0.44	0.45	B	B	No	no change
Between	51st Street	College Avenue	3	1,325	4	1,325	1,329	0%	0.55	0.55	B	B	No	no change
Between	College Avenue	SR 24	2	722	2	722	724	0%	0.45	0.45	B	B	No	no change
Broadway Southbound														
Between	SR 24	College Avenue	2	509	2	509	511	0%	0.32	0.32	A	A	No	no change
Between	College Avenue	51st Street	3	946	4	946	950	0%	0.39	0.40	B	B	No	no change
Between	51st Street	40th Street	3	456	3	456	459	0%	0.19	0.19	A	A	No	no change
Between	40th Street	MacArthur Boulevard	3	449	2	449	451	0%	0.19	0.19	A	A	No	no change

Safeway on College Avenue EIR
MTS Roadway System Analysis Summary - 2015 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Telegraph Northbound														
Between	51st Street	Claremont Avenue	2	1,670	1	1,670	1,671	0%	1.04	1.04	F	F	No	no change
Between	Claremont Avenue	SR 24	2	1,836	1	1,836	1,837	0%	1.15	1.15	F	F	No	no change
Between	SR 24	Alcatraz Avenue	2	1,591	1	1,591	1,592	0%	0.99	0.99	E	E	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,420	4	1,420	1,424	0%	0.89	0.89	D	D	No	no change
Telegraph Southbound														
Between	Ashby Avenue	Alcatraz Avenue	2	1,892	5	1,892	1,897	0%	1.18	1.19	F	F	No	no change
Between	Alcatraz Avenue	SR 24	2	1,785	1	1,785	1,786	0%	1.12	1.12	F	F	No	no change
Between	SR 24	Claremont Avenue	2	1,328	1	1,328	1,329	0%	0.83	0.83	D	D	No	no change
Between	Claremont Avenue	51st Street	2	830	1	830	831	0%	0.52	0.52	B	B	No	no change
Shattuck Avenue Northbound														
Between	52nd Street	Alcatraz Avenue	1	935	1	935	936	0%	1.17	1.17	F	F	No	no change
Between	Alcatraz Avenue	Ashby Avenue	1	937	1	937	938	0%	1.17	1.17	F	F	No	no change
Shattuck Avenue Southbound														
Between	Ashby Avenue	Alcatraz Avenue	1	968	1	968	969	0%	1.21	1.21	F	F	No	no change
Between	Alcatraz Avenue	52nd Avenue	1	899	1	899	900	0%	1.12	1.13	F	F	No	no change
Adeline Street/MLK Northbound														
Between	62nd Street	Alcatraz Avenue	3	2,715	1	2,715	2,716	0%	1.13	1.13	F	F	No	no change
Between	Alcatraz Avenue	Woolsey Street	3	2,647	1	2,647	2,648	0%	1.10	1.10	F	F	No	no change
Adeline Street/MLK Southbound														
Between	Woolsey Street	Alcatraz Avenue	3	2,677	1	2,677	2,678	0%	1.12	1.12	F	F	No	no change
Between	Alcatraz Avenue	62nd Street	3	2,652	1	2,652	2,653	0%	1.11	1.11	F	F	No	no change
San Pablo Avenue Northbound														
Between	Powell Street	Alcatraz Avenue	2	1,333	1	1,333	1,334	0%	0.83	0.83	D	D	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,595	1	1,595	1,596	0%	1.00	1.00	F	F	No	no change
San Pablo Avenue Southbound														
Between	Ashby Avenue	Alcatraz Avenue	2	1,364	1	1,364	1,365	0%	0.85	0.85	D	D	No	no change
Between	Alcatraz Avenue	Powell Street	2	1,312	1	1,312	1,313	0%	0.82	0.82	D	D	No	no change

Fehr & Peers, 2010.

Safeway on College Avenue EIR
MTS Roadway System Analysis Summary - 2035 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Freeway Segments														
I-80/I-580 Eastbound														
Between	Powell Street	Ashby Avenue	4	10,425	2	10,425	10,427	0%	1.34	1.34	F	F	No	no change
I-80/I-580 Westbound														
Between	Ashby Avenue	Powell Street	4	8,387	3	8,387	8,390	0%	1.08	1.08	F	F	No	no change
I-880 Northbound														
Between	Broadway	I-980	5	6,308	2	6,308	6,310	0%	0.65	0.65	C	C	No	no change
I-880 Southbound														
Between	I-980	Broadway	5	7,324	3	7,324	7,327	0%	0.75	0.75	C	C	No	no change
I-580 Eastbound														
Between	I-580/I880	MacArthur Boulevard	4	9,925	2	9,925	9,927	0%	1.27	1.27	F	F	No	no change
Between	MacArthur Boulevard	I-980/SR 24	5	9,289	2	9,289	9,291	0%	0.95	0.95	E	E	No	no change
Between	I-980/SR 24	Oakland Avenue	5	9,340	3	9,340	9,343	0%	0.96	0.96	E	E	No	no change
I-580 Westbound														
Between	Oakland Avenue	I-980/SR 24	5	6,626	3	6,626	6,629	0%	0.68	0.68	C	C	No	no change
Between	I-980/SR 24	MacArthur Boulevard	5	8,131	2	8,131	8,133	0%	0.83	0.83	D	D	No	no change
Between	MacArthur Boulevard	I-580/I880	5	8,131	2	8,131	8,133	0%	0.83	0.83	D	D	No	no change
I-980 Eastbound														
Between	I-880	17th Street	2	2,783	2	2,783	2,785	0%	0.71	0.71	C	C	No	no change
Between	18th Street	27th Street	5	6,213	2	6,213	6,215	0%	0.64	0.64	C	C	No	no change
Between	27th Street	I-580	4	6,933	2	6,933	6,935	0%	0.89	0.89	D	D	No	no change
I-980 Westbound														
Between	I-580	27th Street	3	4,164	3	4,164	4,167	0%	0.71	0.71	C	C	No	no change
Between	27th Street	18th Street	5	4,001	3	4,001	4,004	0%	0.41	0.41	B	B	No	no change
Between	17th Street	I-880	3	4,305	3	4,305	4,308	0%	0.74	0.74	C	C	No	no change
SR 13 Northbound														
Between	Broadway Terrace	SR 24	3	4,476	1	4,476	4,477	0%	0.77	0.77	D	D	No	no change
SR 13 Southbound														
Between	SR 24	Broadway Terrace	3	5,136	1	5,136	5,137	0%	0.88	0.88	D	D	No	no change
SR 24 Eastbound														
Between	I-580	Telegraph Avenue	4	8,330	6	8,330	8,336	0%	1.07	1.07	F	F	No	no change
Between	Telegraph Avenue	Broadway	4	8,942	0	8,942	8,942	0%	1.15	1.15	F	F	No	no change
Between	Broadway	SR 13	5	9,426	5	9,426	9,431	0%	0.97	0.97	E	E	No	no change
Between	SR 13	Caldecott Tunnel	4	8,483	5	8,483	8,488	0%	1.09	1.09	F	F	No	no change
SR 24 Westbound														
Between	Caldecott Tunnel	SR 13	4	9,985	8	9,985	9,993	0%	1.28	1.28	F	F	No	no change
Between	SR 13	Broadway	5	6,690	7	6,690	6,697	0%	0.69	0.69	C	C	No	no change
Between	Broadway	Telegraph Avenue	4	5,614	0	5,614	5,614	0%	0.72	0.72	C	C	No	no change
Between	Telegraph Avenue	I-580	4	5,902	9	5,902	5,911	0%	0.76	0.76	D	D	No	no change
Arterials														
College Avenue Northbound														
Between	Broadway	Manila Avenue	1	633	5	633	638	0%	0.79	0.80	D	D	No	no change
Between	Manila Avenue	Shafter Avenue	1	371	15	371	386	0%	0.46	0.48	B	B	No	no change
Between	Shafter Avenue	Miles Avenue	1	307	16	307	323	0%	0.38	0.40	B	B	No	no change
Between	Miles Avenue	Claremont Avenue	1	635	27	635	662	0%	0.79	0.83	D	D	Yes	no change
Between	Claremont Avenue	63rd Street	1	672	22	672	694	0%	0.84	0.87	D	D	No	no change
Between	63rd Street	Alcatraz Avenue	1	683	36	683	719	0%	0.85	0.90	D	D	Yes	no change
Between	Alcatraz Avenue	Ashby Avenue	1	660	24	660	684	0%	0.83	0.86	D	D	No	no change

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Safeway on College Avenue EIR MTS Roadway System Analysis Summary - 2035 PM														
Between	Ashby Avenue	Dwight Way	1	775	12	775	787	0%	0.97	0.98	E	E	No	no change
College Avenue Southbound														
Between	Dwight Way	Ashby Avenue	1	744	12	744	756	0%	0.93	0.95	E	E	No	no change
Between	Ashby Avenue	Alcatraz Avenue	1	699	26	699	725	0%	0.87	0.91	D	E	Yes	change
Between	Alcatraz Avenue	63rd Street	1	610	38	610	648	0%	0.76	0.81	D	D	Yes	no change
Between	63rd Street	Claremont Avenue	1	604	19	604	623	0%	0.76	0.78	D	D	No	no change
Between	Claremont Avenue	Miles Avenue	1	440	25	440	465	0%	0.55	0.58	B	B	No	no change
Between	Miles Avenue	Shafter Avenue	1	515	19	515	534	0%	0.64	0.67	C	C	No	no change
Between	Shafter Avenue	Manila Avenue	1	404	14	404	418	0%	0.51	0.52	B	B	No	no change
Between	Manila Avenue	Broadway	1	607	5	607	612	0%	0.76	0.77	D	D	No	no change
Claremont Avenue Northbound														
Between	Telegraph Avenue	SR 24 EB Ramp	2	957	3	957	960	0%	0.60	0.60	C	C	No	no change
Between	SR 24 EB Ramp	SR 24 WB Ramp	2	1,776	11	1,776	1,787	0%	1.11	1.12	F	F	No	no change
Between	SR 24 WB Ramp	Forest Street	2	1,691	13	1,691	1,704	0%	1.06	1.07	F	F	No	no change
Between	Forest Street	College Avenue	2	1,767	19	1,767	1,786	0%	1.10	1.12	F	F	No	no change
Between	College Avenue	Mystic Street	2	1,623	24	1,623	1,647	0%	1.01	1.03	F	F	No	no change
Between	Mystic Street	Alcatraz Avenue	2	1,714	10	1,714	1,724	0%	1.07	1.08	F	F	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,801	10	1,801	1,811	0%	1.13	1.13	F	F	No	no change
Between	Ashby Avenue	Domingo Avenue	2	1,388	3	1,388	1,391	0%	0.87	0.87	D	D	No	no change
Between	Domingo Avenue	Grizzly Peak Boulevar	1	794	2	794	796	0%	0.99	0.99	E	E	No	no change
Claremont Avenue Southbound														
Between	Grizzly Peak Boulevai	Domingo Avenue	1	386	2	386	388	0%	0.48	0.49	B	B	No	no change
Between	Domingo Avenue	Ashby Avenue	2	995	3	995	998	0%	0.62	0.62	C	C	No	no change
Between	Ashby Avenue	Alcatraz Avenue	2	1,219	11	1,219	1,230	0%	0.76	0.77	D	D	No	no change
Between	Alcatraz Avenue	Mystic Street	2	1,214	11	1,214	1,225	0%	0.76	0.77	D	D	No	no change
Between	Mystic Street	College Avenue	2	1,197	24	1,197	1,221	0%	0.75	0.76	C	D	No	change
Between	College Avenue	Forest Street	2	1,576	18	1,576	1,594	0%	0.99	0.99	E	E	No	no change
Between	Forest Street	SR 24 WB Ramp	2	1,781	12	1,781	1,793	0%	1.11	1.12	F	F	No	no change
Between	SR 24 WB Ramp	SR 24 EB Ramp	2	506	4	506	510	0%	0.32	0.32	A	A	No	no change
Between	SR 24 EB Ramp	Telegraph Avenue	2	426	3	426	429	0%	0.27	0.27	A	A	No	no change
Ashby Avenue Eastbound														
Between	Telegraph Avenue	College Avenue	1	947	5	947	952	0%	1.18	1.19	F	F	No	no change
Between	College Avenue	Claremont Avenue	1	968	4	968	972	0%	1.21	1.22	F	F	No	no change
Between	Claremont Avenue	Tunnel Road	1	926	4	926	930	0%	1.16	1.16	F	F	No	no change
Ashby Avenue Westbound														
Between	Tunnel Road	Claremont Avenue	1	838	4	838	842	0%	1.05	1.05	F	F	No	no change
Between	Claremont Avenue	College Avenue	1	919	5	919	924	0%	1.15	1.16	F	F	No	no change
Between	College Avenue	Telegraph Avenue	1	783	4	783	787	0%	0.98	0.98	E	E	No	no change
Broadway Northbound														
Between	MacArthur Boulevard	40th Street	3	1,900	0	1,900	1,900	0%	0.79	0.79	D	D	No	no change
Between	40th Street	51st Street	3	2,064	3	2,064	2,067	0%	0.86	0.86	D	D	No	no change
Between	51st Street	College Avenue	3	2,194	4	2,194	2,198	0%	0.91	0.92	E	E	No	no change
Between	College Avenue	SR 24	2	1,126	2	1,126	1,128	0%	0.70	0.71	C	C	No	no change
Broadway Southbound														
Between	SR 24	College Avenue	2	918	2	918	920	0%	0.57	0.58	B	B	No	no change
Between	College Avenue	51st Street	3	1,506	4	1,506	1,510	0%	0.63	0.63	C	C	No	no change
Between	51st Street	40th Street	3	762	3	762	765	0%	0.32	0.32	A	A	No	no change
Between	40th Street	MacArthur Boulevard	3	617	2	617	619	0%	0.26	0.26	A	A	No	no change

Safeway on College Avenue EIR
MTS Roadway System Analysis Summary - 2035 PM

Link Location	Segment Limits		# Lanes	Model Volume	Project Trips	No Project Volume	With Project Volume	% Increase	V/C Ratio - No Project	V/C Ratio - With Project	No Project LOS	With Project LOS	Change in V/C >3%	Change in LOS
Telegraph Northbound														
Between	51st Street	Claremont Avenue	2	2,185	1	2,185	2,186	0%	1.37	1.37	F	F	No	no change
Between	Claremont Avenue	SR 24	2	1,973	1	1,973	1,974	0%	1.23	1.23	F	F	No	no change
Between	SR 24	Alcatraz Avenue	2	1,936	1	1,936	1,937	0%	1.21	1.21	F	F	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,854	4	1,854	1,858	0%	1.16	1.16	F	F	No	no change
Telegraph Southbound														
Between	Ashby Avenue	Alcatraz Avenue	2	1,850	5	1,850	1,855	0%	1.16	1.16	F	F	No	no change
Between	Alcatraz Avenue	SR 24	2	1,687	1	1,687	1,688	0%	1.05	1.06	F	F	No	no change
Between	SR 24	Claremont Avenue	2	1,350	1	1,350	1,351	0%	0.84	0.84	D	D	No	no change
Between	Claremont Avenue	51st Street	2	1,220	1	1,220	1,221	0%	0.76	0.76	D	D	No	no change
Shattuck Avenue Northbound														
Between	52nd Street	Alcatraz Avenue	1	1,014	1	1,014	1,015	0%	1.27	1.27	F	F	No	no change
Between	Alcatraz Avenue	Ashby Avenue	1	995	1	995	996	0%	1.24	1.25	F	F	No	no change
Shattuck Avenue Southbound														
Between	Ashby Avenue	Alcatraz Avenue	1	937	1	937	938	0%	1.17	1.17	F	F	No	no change
Between	Alcatraz Avenue	52nd Avenue	1	879	1	879	880	0%	1.10	1.10	F	F	No	no change
Adeline Street/MLK Northbound														
Between	62nd Street	Alcatraz Avenue	3	2,820	1	2,820	2,821	0%	1.18	1.18	F	F	No	no change
Between	Alcatraz Avenue	Woolsey Street	3	2,774	1	2,774	2,775	0%	1.16	1.16	F	F	No	no change
Adeline Street/MLK Southbound														
Between	Woolsey Street	Alcatraz Avenue	3	2,821	1	2,821	2,822	0%	1.18	1.18	F	F	No	no change
Between	Alcatraz Avenue	62nd Street	3	2,769	1	2,769	2,770	0%	1.15	1.15	F	F	No	no change
San Pablo Avenue Northbound														
Between	Powell Street	Alcatraz Avenue	2	1,890	1	1,890	1,891	0%	1.18	1.18	F	F	No	no change
Between	Alcatraz Avenue	Ashby Avenue	2	1,940	1	1,940	1,941	0%	1.21	1.21	F	F	No	no change
San Pablo Avenue Southbound														
Between	Ashby Avenue	Alcatraz Avenue	2	1,733	1	1,733	1,734	0%	1.08	1.08	F	F	No	no change
Between	Alcatraz Avenue	Powell Street	2	1,721	1	1,721	1,722	0%	1.08	1.08	F	F	No	no change

Fehr & Peers, 2010.

Appendix K
Queuing Summary

FEHR PEERS

Table 1

Existing Queue Lengths

Intersection/Movement	Available Storage (feet)	95th Percentile Queue (feet)													
		No Project		Plus Project		Plus Project Mitigated		Alternative 3 Plus Project		Alternative 3 Plus Project Mitigated		Alternative Plus 4 Project		Alternative 4 Plus Project Mitigated	
		PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour
5. Alcatraz Avenue and College Avenue															
Eastbound Through/Left/Right	225	**485**	205	**500**	215	**490**	**260**	**495**	**235**	**480**	**235**	**505**	**215**	**485**	**240**
Westbound Through/Left/Right	560	115	100	115	100	90	85	160	155	135	135	160	150	135	140
Northbound Left [1]	100	n/a	n/a	n/a	n/a	**145**	**145**	n/a	n/a	**110**	**105**	n/a	n/a	**110**	**105**
Northbound Through/Left/Right [1]	275	260	265	**355**	**400**	205	205	190	200	195	190	185	195	165	160
Southbound Left [1]	100	n/a	n/a	n/a	n/a	55	20	n/a	n/a	105	95	n/a	n/a	55	5
Southbound Through/Left/Right [1]	900	510	155	545	170	440	360	570	220	355	280	540	170	445	160
6. Alcatraz Avenue and Claremont Avenue															
Eastbound Left/Right	560	265	30	240	35	175	75	635	110	235	105	430	60	195	40
Northbound Through/Left	275	5	5	5	5	100	35	15	15	175	65	15	15	140	45
Southbound Through/Right	175	0	0	0	0	70	40	0	0	95	50	0	0	75	40
7. 63rd Street and College Avenue															
Eastbound Through/Left/Right	575	20	20	35	35	35	35	10	15	10	15	25	30	25	30
Westbound Through/Left/Right	n/a	10	20	115	285	115	285	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Northbound Left [2]	100	n/a	n/a	5	5	5	5	n/a	n/a	n/a	n/a	5	5	5	5
Northbound Through/Right [3]	250	5	5	0	0	0	0	5	5	5	5	0	0	0	0
Southbound Left [2]	100	n/a	n/a	10	15	10	15	n/a	n/a	n/a	n/a	10	15	10	15
Southbound Through/Right [3]	275	5	10	0	0	0	0	0	0	0	0	0	0	0	0
8.Mystic Street and Claremont Avenue															
Eastbound Through/Left/Right	n/a	45	20	110	100	110	100	230	180	230	180	250	260	250	260
Westbound Through/Left/Right	150	15	10	25	20	25	20	20	20	20	20	25	20	25	20
Northbound Through/Left/Right	600	0	5	115	65	115	65	165	120	165	120	115	65	115	65
Southbound Through/Left/Right	275	5	5	90	80	90	80	205	210	205	210	90	80	90	80
Northwestbound Through/Left/Right [4]	375	n/a	n/a	35	30	35	30	35	30	35	30	35	30	35	30
9. College Avenue and Claremont Avenue															
Eastbound Through/Left/Right	550	90	80	90	80	130	110	90	80	130	110	90	80	130	110
Northbound Left	100	60	65	60	65	50	55	60	65	50	60	60	65	50	60
Northbound Through/Right	400	**480**	**445**	**530**	**515**	**480**	**455**	**575**	**565**	**530**	**535**	**530**	**515**	**480**	**480**
Southbound Through/Left/Right	250	**510**	**585**	**540**	**655**	**485**	**570**	**480**	**575**	**400**	**515**	**480**	**575**	**400**	**515**
Northeastbound Through/Left/Right	850	320	240	340	265	330	265	340	265	325	250	340	265	330	250
Southwestbound Through/Left/Right	600	230	260	250	295	240	280	285	335	275	300	285	335	275	300
17. South Safeway Driveway/Claremont Avenue															
Eastbound Right [5]	n/a	10	10	10	10	10	10	10	15	10	15	10	15	10	15
Northbound Through [5]	300	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Southbound Through/Right	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Fehr & Peers, 2011.

1. Left-turn pocket assumed only under mitigated conditions
2. Left-turn pocket would be provide with the Project
3. Under No Project conditions, movement would consist of through/left/right
4. The Synchro software is unable to analyze 5-legged unsignalized intersections, therefore the Westbound and Northwestbound approaches were consolidated as one approach in the model under No Project conditions
5. Under No Project conditions, approach would also provide left-turn access; left-turns are prohibited under Plus Project conditions

Bold indicates where maximum queue length exceeds available storage

Table 2

2015 Queue Lengths

Intersection/Movement	Available Storage (feet)	95th Percentile Queue (feet)													
		No Project		Plus Project		Plus Project Mitigated		Alternative 3 Plus Project		Alternative 3 Plus Project Mitigated		Alternative Plus 4 Project		Alternative 4 Plus Project Mitigated	
		PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour
5. Alcatraz Avenue and College Avenue															
Eastbound Through/Left/Right	225	**555**	245	**575**	285	**555**	**305**	**570**	**305**	**535**	**280**	**575**	**290**	**550**	**290**
Westbound Through/Left/Right	560	155	130	155	130	125	110	210	190	170	165	210	190	175	170
Northbound Left[1]	100	n/a	n/a	n/a	n/a	**175**	**165**	n/a	n/a	**160**	**110**	n/a	n/a	**140**	**110**
Northbound Through/Left/Right[1]	275	**330**	**365**	**430**	**490**	225	240	210	230	205	220	215	230	180	195
Southbound Left[1]	100	n/a	n/a	n/a	n/a	65	25	n/a	n/a	120	95	n/a	n/a	65	5
Southbound Through/Left/Right[1]	900	535	155	570	170	460	380	590	220	365	305	565	170	455	165
6. Alcatraz Avenue and Claremont Avenue															
Eastbound Left/Right	560	**575**	45	510	50	210	85	**995**	175	300	125	**745**	90	235	50
Northbound Through/Left	275	10	5	10	5	150	50	20	15	230	90	20	15	200	65
Southbound Through/Right	175	0	0	0	0	95	50	0	0	110	65	0	0	95	45
7. 63rd Street and College Avenue															
Eastbound Through/Left/Right	575	40	70	70	120	60	120	15	25	15	25	40	75	40	75
Westbound Through/Left/Right	n/a	15	20	150	320	135	320	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Northbound Left[2]	100	n/a	n/a	5	5	5	5	n/a	n/a	n/a	n/a	5	5	5	5
Northbound Through/Right[3]	250	5	5	0	0	0	0	5	5	5	5	0	0	0	0
Southbound Left[2]	100	n/a	n/a	10	15	10	15	n/a	n/a	n/a	n/a	10	15	10	15
Southbound Through/Right[3]	275	5	10	0	0	0	0	0	0	0	0	0	0	0	0
8.Mystic Street and Claremont Avenue															
Eastbound Through/Left/Right	n/a	50	25	110	100	110	100	255	215	255	215	255	265	255	265
Westbound Through/Left/Right	150	20	15	30	30	30	30	30	25	30	25	30	30	30	30
Northbound Through/Left/Right	600	0	5	145	85	145	85	200	145	200	145	145	85	145	85
Southbound Through/Left/Right	275	5	5	115	95	115	95	245	140	245	140	115	95	115	95
Northwestbound Through/Left/Right[4]	375	n/a	n/a	40	30	40	30	40	30	40	30	40	30	40	30
9. College Avenue and Claremont Avenue															
Eastbound Through/Left/Right	550	125	125	125	125	195	195	125	125	195	195	125	125	195	195
Northbound Left	100	70	75	70	75	65	65	70	75	60	65	70	75	65	65
Northbound Through/Right	400	**600**	**490**	**650**	**555**	**610**	**505**	**690**	**610**	**645**	**575**	**650**	**555**	**610**	**520**
Southbound Through/Left/Right	250	**600**	**680**	**650**	**750**	**570**	**665**	**585**	**675**	**485**	**615**	**585**	**675**	**505**	**610**
Northeastbound Through/Left/Right	850	400	280	420	305	395	295	420	305	405	295	420	305	410	300
Southwestbound Through/Left/Right	600	295	320	315	350	305	340	350	395	340	360	350	395	325	360
17. South Safeway Driveway/Claremont Avenue															
Eastbound Right[5]	n/a	10	15	10	10	10	10	10	15	10	15	10	15	10	15
Northbound Through[5]	300	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Southbound Through/Right	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Fehr & Peers, 2010.

1. Left-turn pocket assumed only under mitigated conditions
2. Left-turn pocket would be provide with the Project
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4. The Synchro software is unable to analyze 5-legged unsignalized intersections, therefore the Westbound and Northwestbound approaches were consolidated as one approach in the model under No Project conditions
5. Under No Project conditions, approach would also provide left-turn access; left-turns are prohibited under Plus Project conditions

Bold indicates where maximum queue length exceeds available storage

Table 1

2035 Queue Lengths

Intersection/Movement	Available Storage (feet)	95th Percentile Queue (feet)													
		No Project		Plus Project		Plus Project Mitigated		Alternative 3 Plus Project		Alternative 3 Plus Project Mitigated		Alternative Plus 4 Project		Alternative 4 Plus Project Mitigated	
		PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour	PM Peak Hour	SAT Peak Hour
5. Alcatraz Avenue and College Avenue															
Eastbound Through/Left/Right	225	**795**	**375**	**810**	**390**	**755**	**390**	**820**	**405**	**740**	**385**	**820**	**400**	**755**	**390**
Westbound Through/Left/Right	560	290	215	290	215	225	180	385	285	285	250	385	285	295	255
Northbound Left[1]	100	n/a	n/a	n/a	n/a	**205**	**190**	n/a	n/a	**195**	**145**	n/a	n/a	**195**	**145**
Northbound Through/Left/Right[1]	275	**485**	**480**	**540**	**550**	**315**	265	**340**	**315**	**285**	235	**380**	**355**	245	220
Southbound Left[1]	100	n/a	n/a	n/a	n/a	100	30	n/a	n/a	**185**	**110**	n/a	n/a	90	10
Southbound Through/Left/Right[1]	900	590	150	625	165	495	425	645	210	410	345	620	165	485	155
6. Alcatraz Avenue and Claremont Avenue															
Eastbound Left/Right	560	**>700**	290	**>700**	265	505	145	**>700**	**720**	**625**	205	**>700**	455	530	140
Northbound Through/Left	275	25	15	25	15	**405**	120	45	35	**480**	215	45	35	**465**	170
Southbound Through/Right	175	0	0	0	0	130	95	0	0	130	120	0	0	120	95
7. 63rd Street and College Avenue															
Eastbound Through/Left/Right	575	60	110	60	180	20	25	20	40	20	40	30	125	30	125
Westbound Through/Left/Right	n/a	20	30	125	450	45	50	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Northbound Left[2]	100	n/a	n/a	5	5	15	10	n/a	n/a	n/a	n/a	5	5	5	5
Northbound Through/Right[3]	250	5	5	0	0	170	**280**	5	5	5	5	0	0	0	0
Southbound Left[2]	100	n/a	n/a	15	20	30	45	n/a	n/a	n/a	n/a	15	15	15	15
Southbound Through/Right[3]	275	5	10	0	0	125	150	0	0	0	0	0	0	0	0
8.Mystic Street and Claremont Avenue															
Eastbound Through/Left/Right	n/a	120	45	105	100	105	100	240	255	240	255	240	255	240	255
Westbound Through/Left/Right	150	45	20	30	30	30	30	30	30	30	30	30	30	30	30
Northbound Through/Left/Right	600	5	5	275	140	275	140	435	245	195	245	280	140	280	140
Southbound Through/Left/Right	275	5	5	175	140	175	140	**365**	**320**	295	**320**	175	140	175	140
Northwestbound Through/Left/Right[4]	375	n/a	n/a	40	30	40	30	40	30	30	30	40	30	40	30
9. College Avenue and Claremont Avenue															
Eastbound Through/Left/Right	550	115	115	115	115	180	180	115	115	180	180	115	115	180	180
Northbound Left	100	110	95	110	100	100	85	110	95	95	90	110	95	95	90
Northbound Through/Right	400	**915**	**730**	**955**	**785**	**920**	**740**	**985**	**820**	**945**	**795**	**955**	**785**	**920**	**755**
Southbound Through/Left/Right	250	**635**	**765**	**710**	**670**	**750**	**740**	**650**	**600**	**675**	**700**	**650**	**600**	**690**	**700**
Northeastbound Through/Left/Right	850	635	370	650	390	625	375	650	390	640	375	650	390	640	375
Southwestbound Through/Left/Right	600	460	435	480	460	470	450	515	500	500	465	515	500	490	465
17. South Safeway Driveway/Claremont Avenue															
Eastbound Right[5]	n/a	15	15	5	10	5	10	10	10	10	10	10	10	10	10
Northbound Through[5]	300	5	5	0	0	0	0	0	0	0	0	0	0	0	0
Southbound Through/Right	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Fehr & Peers, 2010.

1. Left-turn pocket assumed only under mitigated conditions
2. Left-turn pocket would be provide with the Project
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5. Under No Project conditions, approach would also provide left-turn access; left-turns are prohibited under Plus Project conditions

Bold indicates where maximum queue length exceeds available storage

Appendix L
CalEEMod Outputs and Air Quality Dispersal Maps

Baseline – CalEEMod Annual

Safeway Oakland

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Supermarket	24.26	1000sqft
User Defined Retail	8	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	5	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - user defined supermarket 24,260sqft

Vehicle Trips - custom trip lengths and trip rates to match traffic

Vechicle Emission Factors -

Energy Use - site specific energy use

Water And Wastewater - site specific information

Solid Waste - assume flare

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.13	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	547.11	547.11	0.02	0.01	550.52
Mobile	2.71	5.53	22.86	0.02	1.25	0.14	1.39	0.05	0.14	0.20	0.00	1,511.02	1,511.02	0.13	0.00	1,513.71
Waste						0.00	0.00		0.00	0.00	29.31	0.00	29.31	1.45	0.00	59.83
Water						0.00	0.00		0.00	0.00	0.00	1.29	1.29	0.00	0.00	1.62
Total	**2.85**	**5.62**	**22.94**	**0.02**	**1.25**	**0.14**	**1.40**	**0.05**	**0.14**	**0.21**	**29.31**	**2,059.42**	**2,088.73**	**1.60**	**0.01**	**2,125.68**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.13	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	547.11	547.11	0.02	0.01	550.52
Mobile	2.71	5.53	22.86	0.02	1.25	0.14	1.39	0.05	0.14	0.20	0.00	1,511.02	1,511.02	0.13	0.00	1,513.71
Waste						0.00	0.00		0.00	0.00	29.31	0.00	29.31	1.45	0.00	59.83
Water						0.00	0.00		0.00	0.00	0.00	1.29	1.29	0.00	0.00	1.62
Total	**2.85**	**5.62**	**22.94**	**0.02**	**1.25**	**0.14**	**1.40**	**0.05**	**0.14**	**0.21**	**29.31**	**2,059.42**	**2,088.73**	**1.60**	**0.01**	**2,125.68**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.71	5.53	22.86	0.02	1.25	0.14	1.39	0.05	0.14	0.20	0.00	1,511.02	1,511.02	0.13	0.00	1,513.71
Unmitigated	2.71	5.53	22.86	0.02	1.25	0.14	1.39	0.05	0.14	0.20	0.00	1,511.02	1,511.02	0.13	0.00	1,513.71
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Supermarket	2,480.34	4,308.33	4037.83	1,836,961	1,836,961
User Defined Retail	1,302.24	1,302.24	1302.24	750,309	750,309
Total	3,782.58	5,610.57	5,340.07	2,587,270	2,587,270

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Supermarket	9.50	2.70	7.30	6.50	74.50	19.00
User Defined Retail	9.50	7.30	7.30	2.00	79.00	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	447.34	447.34	0.02	0.01	450.14
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	447.34	447.34	0.02	0.01	450.14
NaturalGas Mitigated	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	99.77	99.77	0.00	0.00	100.38
NaturalGas Unmitigated	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	99.77	99.77	0.00	0.00	100.38
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Supermarket	1.84085e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	98.23	98.23	0.00	0.00	98.83
User Defined Retail	28743.2	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.53	1.53	0.00	0.00	1.54
Total		**0.01**	**0.09**	**0.08**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**99.76**	**99.76**	**0.00**	**0.00**	**100.37**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Supermarket	1.84085e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	98.23	98.23	0.00	0.00	98.83
User Defined Retail	28743.2	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.53	1.53	0.00	0.00	1.54
Total		**0.01**	**0.09**	**0.08**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**99.76**	**99.76**	**0.00**	**0.00**	**100.37**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Supermarket	1.52838e+006					444.62	0.02	0.01	447.41
User Defined Retail	9340.14					2.72	0.00	0.00	2.73
Total						**447.34**	**0.02**	**0.01**	**450.14**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Supermarket	1.52838e+006					444.62	0.02	0.01	447.41
User Defined Retail	9340.14					2.72	0.00	0.00	2.73
Total						**447.34**	**0.02**	**0.01**	**450.14**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.13	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.13	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.10					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.13**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.03					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.10					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.13**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					1.29	0.00	0.00	1.62
Unmitigated					1.29	0.00	0.00	1.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Supermarket	1.27 / 0					1.17	0.00	0.00	1.47
User Defined Retail	0.106255 / 0.0651242					0.12	0.00	0.00	0.15
Total						**1.29**	**0.00**	**0.00**	**1.62**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Supermarket	1.27 / 0					1.17	0.00	0.00	1.47
User Defined Retail	0.106255 / 0.0651242					0.12	0.00	0.00	0.15
Total						**1.29**	**0.00**	**0.00**	**1.62**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					29.31	1.45	0.00	59.83
Unmitigated					29.31	1.45	0.00	59.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Supermarket	136.83					28.41	1.41	0.00	58.00
User Defined Retail	4.31					0.90	0.04	0.00	1.83
Total						**29.31**	**1.45**	**0.00**	**59.83**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Supermarket	136.83					28.41	1.41	0.00	58.00
User Defined Retail	4.31					0.90	0.04	0.00	1.83
Total						**29.31**	**1.45**	**0.00**	**59.83**

9.0 Vegetation

Project – CalEEMod Annual

Safeway Oakland

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Quality Restaurant	2.74	1000sqft
Strip Mall	7.91	1000sqft
Supermarket	51.51	1000sqft

1.2 Other Project Characteristics

Urbanization Urban

Wind Speed (m/s) 2.2

Utility Company Pacific Gas & Electric Company

Climate Zone 5

Precipitation Freq (Days) 63

1.3 User Entered Comments

Project Characteristics -

Land Use - user defined supermarket 24,260sqft

Vehicle Trips - custom trip lengths and trip rates to match traffic

Vechicle Emission Factors -

Energy Use - site specific energy use

Water And Wastewater - site specific information

Solid Waste - assume flare

Energy Mitigation -

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	602.93	602.93	0.02	0.01	606.69
Mobile	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Waste						0.00	0.00		0.00	0.00	62.58	0.00	62.58	3.10	0.00	127.74
Water						0.00	0.00		0.00	0.00	0.00	3.58	3.58	0.00	0.00	4.47
Total	**4.20**	**8.47**	**32.84**	**0.03**	**2.26**	**0.22**	**2.49**	**0.10**	**0.22**	**0.33**	**62.58**	**3,093.37**	**3,155.95**	**3.30**	**0.01**	**3,229.62**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	600.41	600.41	0.02	0.01	604.15
Mobile	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Waste						0.00	0.00		0.00	0.00	62.58	0.00	62.58	3.10	0.00	127.74
Water						0.00	0.00		0.00	0.00	0.00	3.58	3.58	0.00	0.00	4.47
Total	**4.20**	**8.47**	**32.84**	**0.03**	**2.26**	**0.22**	**2.49**	**0.10**	**0.22**	**0.33**	**62.58**	**3,090.85**	**3,153.43**	**3.30**	**0.01**	**3,227.08**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Unmitigated	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Quality Restaurant	246.46	258.55	197.72	286,134	286,134
Strip Mall	350.57	332.54	161.60	494,349	494,349
Supermarket	5,266.38	9,147.66	8573.32	3,900,324	3,900,324
Total	5,863.42	9,738.74	8,932.64	4,680,807	4,680,807

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00
Supermarket	9.50	2.70	7.30	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	473.56	473.56	0.02	0.01	476.52
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	474.89	474.89	0.02	0.01	477.87
NaturalGas Mitigated	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	126.86	126.86	0.00	0.00	127.63
NaturalGas Unmitigated	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	128.04	128.04	0.00	0.00	128.82
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Quality Restaurant	465827	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	24.86	24.86	0.00	0.00	25.01
Strip Mall	37968	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.03	2.03	0.00	0.00	2.04
Supermarket	1.89557e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	101.15	101.15	0.00	0.00	101.77
Total		**0.01**	**0.11**	**0.10**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**128.04**	**128.04**	**0.00**	**0.00**	**128.82**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Quality Restaurant	448570	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	23.94	23.94	0.00	0.00	24.08
Strip Mall	33103.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.77	1.77	0.00	0.00	1.78
Supermarket	1.89557e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	101.15	101.15	0.00	0.00	101.77
Total		**0.01**	**0.11**	**0.10**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**126.86**	**126.86**	**0.00**	**0.00**	**127.63**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Quality Restaurant	82857.6					24.10	0.00	0.00	24.26
Strip Mall	91835.1					26.72	0.00	0.00	26.88
Supermarket	1.45773e+006					424.07	0.02	0.01	426.73
Total						**474.89**	**0.02**	**0.01**	**477.87**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Quality Restaurant	81517.7					23.71	0.00	0.00	23.86
Strip Mall	88584.1					25.77	0.00	0.00	25.93
Supermarket	1.45773e+006					424.07	0.02	0.01	426.73
Total						**473.55**	**0.02**	**0.01**	**476.52**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.07					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.07					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					3.58	0.00	0.00	4.47
Unmitigated					3.58	0.00	0.00	4.47
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Quality Restaurant	0.831682 / 0.0530861					0.78	0.00	0.00	0.98
Strip Mall	0.585914 / 0.359108					0.67	0.00	0.00	0.81
Supermarket	2.31 / 0					2.12	0.00	0.00	2.68
Total						**3.57**	**0.00**	**0.00**	**4.47**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Quality Restaurant	0.831682 / 0.0530861					0.78	0.00	0.00	0.98
Strip Mall	0.585914 / 0.359108					0.67	0.00	0.00	0.81
Supermarket	2.31 / 0					2.12	0.00	0.00	2.68
Total						**3.57**	**0.00**	**0.00**	**4.47**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					62.58	3.10	0.00	127.74
Unmitigated					62.58	3.10	0.00	127.74
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Quality Restaurant	2.5					0.52	0.03	0.00	1.06
Strip Mall	8.31					1.73	0.09	0.00	3.52
Supermarket	290.52					60.33	2.99	0.00	123.15
Total						**62.58**	**3.11**	**0.00**	**127.73**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Quality Restaurant	2.5					0.52	0.03	0.00	1.06
Strip Mall	8.31					1.73	0.09	0.00	3.52
Supermarket	290.52					60.33	2.99	0.00	123.15
Total						**62.58**	**3.11**	**0.00**	**127.73**

9.0 Vegetation

Project – CalEEMod Construction

Safeway Oakland

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Quality Restaurant	2.74	1000sqft
Strip Mall	7.91	1000sqft
Supermarket	51.51	1000sqft

1.2 Other Project Characteristics

Urbanization Urban **Wind Speed (m/s)** 2.2 **Utility Company** Pacific Gas & Electric Company

Climate Zone 5 **Precipitation Freq (Days)** 63

1.3 User Entered Comments

Project Characteristics -

Land Use - user defined supermarket 24,260sqft

Construction Phase - Adjusted Architectural coating dates to avoid overlap with building construction

Off-road Equipment - Client data says no equipment will be used in this phase.

Off-road Equipment - Entered client specigied data for forklift unit amount, crane and tractor hours, and all horsepower

Off-road Equipment - Entered client-specified data for tractor unit amount, tractor and dozer hours, and all horsepower

Off-road Equipment - Off-highway trucks represents water truck. Entered client-specified data for water truck and all other horsepower.

Trips and VMT - Demolition hauling trips based on 11.7 trips/day*22 working days; Grading hauling trips based on 24.22 trips/day*32 working days; demolition hauling length from client data.

Demolition -

Grading -

Vehicle Trips - custom trip lengths and trip rates to match traffic

Vechicle Emission Factors -

Energy Use - site specific energy use

Water And Wastewater - site specific information

Solid Waste - assume flare

Energy Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.40	3.17	1.95	0.00	0.44	0.17	0.61	0.05	0.17	0.22	0.00	357.94	357.94	0.03	0.00	358.59
2013	0.75	0.22	0.15	0.00	0.00	0.01	0.02	0.00	0.01	0.01	0.00	27.58	27.58	0.00	0.00	27.63
Total	**1.15**	**3.39**	**2.10**	**0.00**	**0.44**	**0.18**	**0.63**	**0.05**	**0.18**	**0.23**	**0.00**	**385.52**	**385.52**	**0.03**	**0.00**	**386.22**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.40	3.17	1.95	0.00	0.10	0.17	0.27	0.05	0.17	0.22	0.00	357.94	357.94	0.03	0.00	358.59
2013	0.75	0.22	0.15	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	27.58	27.58	0.00	0.00	27.63
Total	**1.15**	**3.39**	**2.10**	**0.00**	**0.10**	**0.18**	**0.28**	**0.05**	**0.18**	**0.23**	**0.00**	**385.52**	**385.52**	**0.03**	**0.00**	**386.22**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	602.93	602.93	0.02	0.01	606.69
Mobile	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Waste						0.00	0.00		0.00	0.00	62.58	0.00	62.58	3.10	0.00	127.74
Water						0.00	0.00		0.00	0.00	0.00	3.58	3.58	0.00	0.00	4.47
Total	**4.20**	**8.47**	**32.84**	**0.03**	**2.26**	**0.22**	**2.49**	**0.10**	**0.22**	**0.33**	**62.58**	**3,093.37**	**3,155.95**	**3.30**	**0.01**	**3,229.62**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	600.41	600.41	0.02	0.01	604.15
Mobile	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Waste						0.00	0.00		0.00	0.00	62.58	0.00	62.58	3.10	0.00	127.74
Water						0.00	0.00		0.00	0.00	0.00	3.58	3.58	0.00	0.00	4.47
Total	**4.20**	**8.47**	**32.84**	**0.03**	**2.26**	**0.22**	**2.49**	**0.10**	**0.22**	**0.33**	**62.58**	**3,090.85**	**3,153.43**	**3.30**	**0.01**	**3,227.08**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Demolition - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.53	11.53	0.00	0.00	11.56
Total	**0.02**	**0.12**	**0.08**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**	**0.00**	**11.53**	**11.53**	**0.00**	**0.00**	**11.56**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.11	0.05	0.00	0.08	0.00	0.08	0.00	0.00	0.00	0.00	14.30	14.30	0.00	0.00	14.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.01**	**0.11**	**0.06**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**15.42**	**15.42**	**0.00**	**0.00**	**15.42**

3.2 Demolition - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	11.53	11.53	0.00	0.00	11.56
Total	**0.02**	**0.12**	**0.08**	**0.00**	**0.01**	**0.01**	**0.02**	**0.00**	**0.01**	**0.01**	**0.00**	**11.53**	**11.53**	**0.00**	**0.00**	**11.56**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.11	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.30	14.30	0.00	0.00	14.30
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.01**	**0.11**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**15.42**	**15.42**	**0.00**	**0.00**	**15.42**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.08	0.00	0.08	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.60	0.31	0.00		0.03	0.03		0.03	0.03	0.00	55.81	55.81	0.01	0.00	55.93
Total	**0.07**	**0.60**	**0.31**	**0.00**	**0.08**	**0.03**	**0.11**	**0.04**	**0.03**	**0.07**	**0.00**	**55.81**	**55.81**	**0.01**	**0.00**	**55.93**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.02	0.23	0.10	0.00	0.23	0.01	0.24	0.00	0.01	0.01	0.00	29.05	29.05	0.00	0.00	29.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	1.63	0.00	0.00	1.63
Total	**0.02**	**0.23**	**0.11**	**0.00**	**0.23**	**0.01**	**0.24**	**0.00**	**0.01**	**0.01**	**0.00**	**30.68**	**30.68**	**0.00**	**0.00**	**30.70**

3.3 Grading - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.08	0.00	0.08	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.07	0.60	0.31	0.00		0.03	0.03		0.03	0.03	0.00	55.81	55.81	0.01	0.00	55.93
Total	**0.07**	**0.60**	**0.31**	**0.00**	**0.08**	**0.03**	**0.11**	**0.04**	**0.03**	**0.07**	**0.00**	**55.81**	**55.81**	**0.01**	**0.00**	**55.93**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.02	0.23	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	29.05	29.05	0.00	0.00	29.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	1.63	0.00	0.00	1.63
Total	**0.02**	**0.23**	**0.11**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**30.68**	**30.68**	**0.00**	**0.00**	**30.70**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.25	1.90	1.10	0.00		0.11	0.11		0.11	0.11	0.00	197.81	197.81	0.02	0.00	198.22
Total	**0.25**	**1.90**	**1.10**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**197.81**	**197.81**	**0.02**	**0.00**	**198.22**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.02	0.18	0.10	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.00	25.59	25.59	0.00	0.00	25.60
Worker	0.02	0.02	0.17	0.00	0.02	0.00	0.03	0.00	0.00	0.00	0.00	21.11	21.11	0.00	0.00	21.14
Total	**0.04**	**0.20**	**0.27**	**0.00**	**0.03**	**0.01**	**0.04**	**0.00**	**0.01**	**0.01**	**0.00**	**46.70**	**46.70**	**0.00**	**0.00**	**46.74**

3.4 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.25	1.90	1.10	0.00		0.11	0.11		0.11	0.11	0.00	197.81	197.81	0.02	0.00	198.22
Total	**0.25**	**1.90**	**1.10**	**0.00**		**0.11**	**0.11**		**0.11**	**0.11**	**0.00**	**197.81**	**197.81**	**0.02**	**0.00**	**198.22**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.02	0.18	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	25.59	25.59	0.00	0.00	25.60
Worker	0.02	0.02	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.11	21.11	0.00	0.00	21.14
Total	**0.04**	**0.20**	**0.27**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**46.70**	**46.70**	**0.00**	**0.00**	**46.74**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.03	0.20	0.12	0.00		0.01	0.01		0.01	0.01	0.00	21.98	21.98	0.00	0.00	22.02
Total	**0.03**	**0.20**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**21.98**	**21.98**	**0.00**	**0.00**	**22.02**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	2.85	0.00	0.00	2.85
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30	2.30	0.00	0.00	2.30
Total	**0.00**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.15**	**5.15**	**0.00**	**0.00**	**5.15**

3.4 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.03	0.20	0.12	0.00		0.01	0.01		0.01	0.01	0.00	21.98	21.98	0.00	0.00	22.02
Total	**0.03**	**0.20**	**0.12**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**21.98**	**21.98**	**0.00**	**0.00**	**22.02**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.85	2.85	0.00	0.00	2.85
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.30	2.30	0.00	0.00	2.30
Total	**0.00**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.15**	**5.15**	**0.00**	**0.00**	**5.15**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46	0.00	0.00	0.46
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.46**	**0.46**	**0.00**	**0.00**	**0.46**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.46	0.00	0.00	0.46
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.46**	**0.46**	**0.00**	**0.00**	**0.46**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Unmitigated	3.88	8.35	32.74	0.03	2.26	0.22	2.48	0.10	0.22	0.32	0.00	2,486.86	2,486.86	0.18	0.00	2,490.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Quality Restaurant	246.46	258.55	197.72	286,134	286,134
Strip Mall	350.57	332.54	161.60	494,349	494,349
Supermarket	5,266.38	9,147.66	8573.32	3,900,324	3,900,324
Total	5,863.42	9,738.74	8,932.64	4,680,807	4,680,807

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Supermarket	9.50	2.70	7.30	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	473.56	473.56	0.02	0.01	476.52
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	474.89	474.89	0.02	0.01	477.87
NaturalGas Mitigated	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	126.86	126.86	0.00	0.00	127.63
NaturalGas Unmitigated	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01	0.00	128.04	128.04	0.00	0.00	128.82
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Quality Restaurant	465827	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	24.86	24.86	0.00	0.00	25.01
Strip Mall	37968	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.03	2.03	0.00	0.00	2.04
Supermarket	1.89557e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	101.15	101.15	0.00	0.00	101.77
Total		**0.01**	**0.11**	**0.10**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**128.04**	**128.04**	**0.00**	**0.00**	**128.82**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Quality Restaurant	448570	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	23.94	23.94	0.00	0.00	24.08
Strip Mall	33103.3	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.77	1.77	0.00	0.00	1.78
Supermarket	1.89557e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	101.15	101.15	0.00	0.00	101.77
Total		**0.01**	**0.11**	**0.10**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**126.86**	**126.86**	**0.00**	**0.00**	**127.63**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Quality Restaurant	82857.6					24.10	0.00	0.00	24.26
Strip Mall	91835.1					26.72	0.00	0.00	26.88
Supermarket	1.45773e+006					424.07	0.02	0.01	426.73
Total						**474.89**	**0.02**	**0.01**	**477.87**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Quality Restaurant	81517.7					23.71	0.00	0.00	23.86
Strip Mall	88584.1					25.77	0.00	0.00	25.93
Supermarket	1.45773e+006					424.07	0.02	0.01	426.73
Total						**473.55**	**0.02**	**0.01**	**476.52**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.07					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.07					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					3.58	0.00	0.00	4.47
Unmitigated					3.58	0.00	0.00	4.47
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Quality Restaurant	0.831682 / 0.0530861					0.78	0.00	0.00	0.98
Strip Mall	0.585914 / 0.359108					0.67	0.00	0.00	0.81
Supermarket	2.31 / 0					2.12	0.00	0.00	2.68
Total						**3.57**	**0.00**	**0.00**	**4.47**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Quality Restaurant	0.831682 / 0.0530861					0.78	0.00	0.00	0.98
Strip Mall	0.585914 / 0.359108					0.67	0.00	0.00	0.81
Supermarket	2.31 / 0					2.12	0.00	0.00	2.68
Total						**3.57**	**0.00**	**0.00**	**4.47**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					62.58	3.10	0.00	127.74
Unmitigated					62.58	3.10	0.00	127.74
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Quality Restaurant	2.5					0.52	0.03	0.00	1.06
Strip Mall	8.31					1.73	0.09	0.00	3.52
Supermarket	290.52					60.33	2.99	0.00	123.15
Total						**62.58**	**3.11**	**0.00**	**127.73**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Quality Restaurant	2.5					0.52	0.03	0.00	1.06
Strip Mall	8.31					1.73	0.09	0.00	3.52
Supermarket	290.52					60.33	2.99	0.00	123.15
Total						**62.58**	**3.11**	**0.00**	**127.73**

9.0 Vegetation

Safeway Oakland

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Quality Restaurant	2.74	1000sqft
Strip Mall	7.91	1000sqft
Supermarket	51.51	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	5	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - user defined supermarket 24,260sqft

Construction Phase - Adjusted Architectural coating dates to avoid overlap with building construction

Off-road Equipment - Client data says no equipment will be used in this phase.

Off-road Equipment - Entered client specigied data for forklift unit amount, crane and tractor hours, and all horsepower

Off-road Equipment - Entered client-specified data for tractor unit amount, tractor and dozer hours, and all horsepower

Off-road Equipment - Off-highway trucks represents water truck. Entered client-specified data for water truck and all other horsepower.

Trips and VMT - Demolition hauling trips based on 11.7 trips/day*22 working days; Grading hauling trips based on 24.22 trips/day*32 working days; demolition hauling length from client data.

Demolition -

Grading -

Vehicle Trips - custom trip lengths and trip rates to match traffic

Vechicle Emission Factors -

Energy Use - site specific energy use

Water And Wastewater - site specific information

Solid Waste - assume flare

Energy Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	5.85	52.21	26.50	0.06	23.22	2.36	25.58	2.56	2.36	4.92	0.00	5,977.38	0.00	0.48	0.00	5,987.39
2013	65.10	18.81	13.23	0.03	0.45	1.03	1.48	0.02	1.03	1.05	0.00	2,673.77	0.00	0.22	0.00	2,678.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	5.85	52.21	26.50	0.06	5.04	2.36	7.40	2.56	2.36	4.92	0.00	5,977.38	0.00	0.48	0.00	5,987.39
2013	65.10	18.81	13.23	0.03	0.02	1.03	1.05	0.02	1.03	1.05	0.00	2,673.77	0.00	0.22	0.00	2,678.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		773.36		0.01	0.01	778.07
Mobile	36.53	68.71	238.60	0.22	21.58	1.75	23.33	0.75	1.75	2.50		24,198.35		1.58		24,231.49
Total	**38.32**	**69.35**	**239.14**	**0.22**	**21.58**	**1.75**	**23.38**	**0.75**	**1.75**	**2.55**		**24,971.71**		**1.59**	**0.01**	**25,009.56**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		766.23		0.01	0.01	770.90
Mobile	36.53	68.71	238.60	0.22	21.58	1.75	23.33	0.75	1.75	2.50		24,198.35		1.58		24,231.49
Total	**38.32**	**69.35**	**239.14**	**0.22**	**21.58**	**1.75**	**23.38**	**0.75**	**1.75**	**2.55**		**24,964.58**		**1.59**	**0.01**	**25,002.39**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Demolition - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.13	0.00	1.13	0.00	0.00	0.00						0.00
Off-Road	1.64	11.34	7.65	0.01		0.86	0.86		0.86	0.86		1,155.89		0.15		1,158.99
Total	**1.64**	**11.34**	**7.65**	**0.01**	**1.13**	**0.86**	**1.99**	**0.00**	**0.86**	**0.86**		**1,155.89**		**0.15**		**1,158.99**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.80	10.24	4.03	0.01	9.03	0.35	9.39	0.05	0.35	0.40		1,435.30		0.04		1,436.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.08	0.91	0.00	0.15	0.00	0.15	0.01	0.00	0.01		124.52		0.01		124.69
Total	**0.89**	**10.32**	**4.94**	**0.01**	**9.18**	**0.35**	**9.54**	**0.06**	**0.35**	**0.41**		**1,559.82**		**0.05**		**1,560.80**

3.2 Demolition - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.13	0.00	1.13	0.00	0.00	0.00						0.00
Off-Road	1.64	11.34	7.65	0.01		0.86	0.86		0.86	0.86	0.00	1,155.89		0.15		1,158.99
Total	**1.64**	**11.34**	**7.65**	**0.01**	**1.13**	**0.86**	**1.99**	**0.00**	**0.86**	**0.86**	**0.00**	**1,155.89**		**0.15**		**1,158.99**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.80	10.24	4.03	0.01	0.05	0.35	0.40	0.05	0.35	0.40		1,435.30		0.04		1,436.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.08	0.91	0.00	0.01	0.00	0.01	0.01	0.00	0.01		124.52		0.01		124.69
Total	**0.89**	**10.32**	**4.94**	**0.01**	**0.06**	**0.35**	**0.41**	**0.06**	**0.35**	**0.41**		**1,559.82**		**0.05**		**1,560.80**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.97	0.00	4.97	2.49	0.00	2.49						0.00
Off-Road	4.59	37.50	19.64	0.04		1.86	1.86		1.86	1.86		3,845.86		0.41		3,854.50
Total	**4.59**	**37.50**	**19.64**	**0.04**	**4.97**	**1.86**	**6.83**	**2.49**	**1.86**	**4.35**		**3,845.86**		**0.41**		**3,854.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.17	14.62	5.95	0.02	18.10	0.49	18.59	0.07	0.49	0.56		2,007.01		0.06		2,008.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.08	0.91	0.00	0.15	0.00	0.15	0.01	0.00	0.01		124.52		0.01		124.69
Total	**1.26**	**14.70**	**6.86**	**0.02**	**18.25**	**0.49**	**18.74**	**0.08**	**0.49**	**0.57**		**2,131.53**		**0.07**		**2,132.88**

3.3 Grading - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.97	0.00	4.97	2.49	0.00	2.49						0.00
Off-Road	4.59	37.50	19.64	0.04		1.86	1.86		1.86	1.86	0.00	3,845.86		0.41		3,854.50
Total	**4.59**	**37.50**	**19.64**	**0.04**	**4.97**	**1.86**	**6.83**	**2.49**	**1.86**	**4.35**	**0.00**	**3,845.86**		**0.41**		**3,854.50**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.17	14.62	5.95	0.02	0.07	0.49	0.56	0.07	0.49	0.56		2,007.01		0.06		2,008.19
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.08	0.91	0.00	0.01	0.00	0.01	0.01	0.00	0.01		124.52		0.01		124.69
Total	**1.26**	**14.70**	**6.86**	**0.02**	**0.08**	**0.49**	**0.57**	**0.08**	**0.49**	**0.57**		**2,131.53**		**0.07**		**2,132.88**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.37	18.35	10.65	0.02		1.09	1.09		1.09	1.09		2,107.27		0.21		2,111.73
Total	**2.37**	**18.35**	**10.65**	**0.02**		**1.09**	**1.09**		**1.09**	**1.09**		**2,107.27**		**0.21**		**2,111.73**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.15	1.82	0.89	0.00	0.09	0.05	0.15	0.01	0.05	0.06		273.64		0.01		273.79
Worker	0.17	0.17	1.81	0.00	0.30	0.01	0.31	0.01	0.01	0.02		249.03		0.02		249.38
Total	**0.32**	**1.99**	**2.70**	**0.00**	**0.39**	**0.06**	**0.46**	**0.02**	**0.06**	**0.08**		**522.67**		**0.03**		**523.17**

3.4 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.37	18.35	10.65	0.02		1.09	1.09		1.09	1.09	0.00	2,107.27		0.21		2,111.73
Total	**2.37**	**18.35**	**10.65**	**0.02**		**1.09**	**1.09**		**1.09**	**1.09**	**0.00**	**2,107.27**		**0.21**		**2,111.73**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.15	1.82	0.89	0.00	0.01	0.05	0.06	0.01	0.05	0.06		273.64		0.01		273.79
Worker	0.17	0.17	1.81	0.00	0.01	0.01	0.02	0.01	0.01	0.02		249.03		0.02		249.38
Total	**0.32**	**1.99**	**2.70**	**0.00**	**0.02**	**0.06**	**0.08**	**0.02**	**0.06**	**0.08**		**522.67**		**0.03**		**523.17**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.20	16.96	10.43	0.02		0.97	0.97		0.97	0.97		2,107.27		0.20		2,111.39
Total	**2.20**	**16.96**	**10.43**	**0.02**		**0.97**	**0.97**		**0.97**	**0.97**		**2,107.27**		**0.20**		**2,111.39**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.14	1.67	0.83	0.00	0.09	0.05	0.14	0.01	0.05	0.06		273.84		0.01		273.98
Worker	0.16	0.15	1.64	0.00	0.30	0.01	0.31	0.01	0.01	0.02		243.87		0.02		244.20
Total	**0.30**	**1.82**	**2.47**	**0.00**	**0.39**	**0.06**	**0.45**	**0.02**	**0.06**	**0.08**		**517.71**		**0.03**		**518.18**

3.4 Building Construction - 2013

<u>Mitigated Construction On-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.20	16.96	10.43	0.02		0.97	0.97		0.97	0.97	0.00	2,107.27		0.20		2,111.39
Total	**2.20**	**16.96**	**10.43**	**0.02**		**0.97**	**0.97**		**0.97**	**0.97**	**0.00**	**2,107.27**		**0.20**		**2,111.39**

<u>Mitigated Construction Off-Site</u>

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.14	1.67	0.83	0.00	0.01	0.05	0.06	0.01	0.05	0.06		273.84		0.01		273.98
Worker	0.16	0.15	1.64	0.00	0.01	0.01	0.02	0.01	0.01	0.02		243.87		0.02		244.20
Total	**0.30**	**1.82**	**2.47**	**0.00**	**0.02**	**0.06**	**0.08**	**0.02**	**0.06**	**0.08**		**517.71**		**0.03**		**518.18**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.58					0.00	0.00		0.00	0.00						0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**62.58**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.03	0.03	0.33	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.77		0.00		48.84
Total	**0.03**	**0.03**	**0.33**	**0.00**	**0.06**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**		**48.77**		**0.00**		**48.84**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.58					0.00	0.00		0.00	0.00						0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00		0.00
Total	**62.58**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.03	0.03	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00		48.77		0.00		48.84
Total	**0.03**	**0.03**	**0.33**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**48.77**		**0.00**		**48.84**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.53	68.71	238.60	0.22	21.58	1.75	23.33	0.75	1.75	2.50		24,198.35		1.58		24,231.49
Unmitigated	36.53	68.71	238.60	0.22	21.58	1.75	23.33	0.75	1.75	2.50		24,198.35		1.58		24,231.49
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Quality Restaurant	246.46	258.55	197.72	286,134	286,134
Strip Mall	350.57	332.54	161.60	494,349	494,349
Supermarket	5,266.38	9,147.66	8573.32	3,900,324	3,900,324
Total	5,863.42	9,738.74	8,932.64	4,680,807	4,680,807

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Supermarket	9.50	2.70	7.30	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		766.23		0.01	0.01	770.90
NaturalGas Unmitigated	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		773.36		0.01	0.01	778.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Quality Restaurant	1276.24	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01		150.15		0.00	0.00	151.06
Strip Mall	104.022	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		12.24		0.00	0.00	12.31
Supermarket	5193.34	0.06	0.51	0.43	0.00		0.00	0.04		0.00	0.04		610.98		0.01	0.01	614.70
Total		**0.07**	**0.65**	**0.55**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**773.37**		**0.01**	**0.01**	**778.07**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Quality Restaurant	1.22896	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01		144.58		0.00	0.00	145.46
Strip Mall	0.0906941	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		10.67		0.00	0.00	10.73
Supermarket	5.19334	0.06	0.51	0.43	0.00		0.00	0.04		0.00	0.04		610.98		0.01	0.01	614.70
Total		**0.07**	**0.64**	**0.54**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**766.23**		**0.01**	**0.01**	**770.89**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.39					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.33					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.39					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.33					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Safeway Oakland

Alameda County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Quality Restaurant	2.74	1000sqft
Strip Mall	7.91	1000sqft
Supermarket	51.51	1000sqft

1.2 Other Project Characteristics

Urbanization Urban | **Wind Speed (m/s)** 2.2 | **Utility Company** Pacific Gas & Electric Company

Climate Zone 5 | **Precipitation Freq (Days)** 63

1.3 User Entered Comments

Project Characteristics -

Land Use - user defined supermarket 24,260sqft

Construction Phase - Adjusted Architectural coating dates to avoid overlap with building construction

Off-road Equipment - Client data says no equipment will be used in this phase.

Off-road Equipment - Entered client specigied data for forklift unit amount, crane and tractor hours, and all horsepower

Off-road Equipment - Entered client-specified data for tractor unit amount, tractor and dozer hours, and all horsepower

Off-road Equipment - Off-highway trucks represents water truck. Entered client-specified data for water truck and all other horsepower.

Trips and VMT - Demolition hauling trips based on 11.7 trips/day*22 working days; Grading hauling trips based on 24.22 trips/day*32 working days; demolition hauling length from client data.

Demolition -

Grading -

Vehicle Trips - custom trip lengths and trip rates to match traffic

Vechicle Emission Factors -

Energy Use - site specific energy use

Water And Wastewater - site specific information

Solid Waste - assume flare

Energy Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	5.89	52.24	27.20	0.06	23.22	2.36	25.58	2.56	2.36	4.93	0.00	5,952.93	0.00	0.48	0.00	5,962.97
2013	65.12	18.82	13.29	0.03	0.45	1.03	1.48	0.02	1.03	1.05	0.00	2,639.59	0.00	0.22	0.00	2,644.23
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	5.89	52.24	27.20	0.06	5.04	2.36	7.41	2.56	2.36	4.93	0.00	5,952.93	0.00	0.48	0.00	5,962.97
2013	65.12	18.82	13.29	0.03	0.02	1.03	1.05	0.02	1.03	1.05	0.00	2,639.59	0.00	0.22	0.00	2,644.23
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		773.36		0.01	0.01	778.07
Mobile	35.43	70.03	290.36	0.21	21.58	1.85	23.43	0.75	1.85	2.60		22,189.80		1.71		22,225.72
Total	**37.22**	**70.67**	**290.90**	**0.21**	**21.58**	**1.85**	**23.48**	**0.75**	**1.85**	**2.65**		**22,963.16**		**1.72**	**0.01**	**23,003.79**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		766.23		0.01	0.01	770.90
Mobile	35.43	70.03	290.36	0.21	21.58	1.85	23.43	0.75	1.85	2.60		22,189.80		1.71		22,225.72
Total	**37.22**	**70.67**	**290.90**	**0.21**	**21.58**	**1.85**	**23.48**	**0.75**	**1.85**	**2.65**		**22,956.03**		**1.72**	**0.01**	**22,996.62**

3.0 Construction Detail

3.1 Mitigation Measures Construction

3.2 Demolition - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.13	0.00	1.13	0.00	0.00	0.00						0.00
Off-Road	1.64	11.34	7.65	0.01		0.86	0.86		0.86	0.86		1,155.89		0.15		1,158.99
Total	**1.64**	**11.34**	**7.65**	**0.01**	**1.13**	**0.86**	**1.99**	**0.00**	**0.86**	**0.86**		**1,155.89**		**0.15**		**1,158.99**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.82	10.27	4.38	0.01	9.03	0.36	9.39	0.05	0.36	0.41		1,430.02		0.04		1,430.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.85	0.00	0.15	0.00	0.15	0.01	0.00	0.01		110.99		0.01		111.16
Total	**0.91**	**10.36**	**5.23**	**0.01**	**9.18**	**0.36**	**9.54**	**0.06**	**0.36**	**0.42**		**1,541.01**		**0.05**		**1,542.01**

3.2 Demolition - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.13	0.00	1.13	0.00	0.00	0.00						0.00
Off-Road	1.64	11.34	7.65	0.01		0.86	0.86		0.86	0.86	0.00	1,155.89		0.15		1,158.99
Total	**1.64**	**11.34**	**7.65**	**0.01**	**1.13**	**0.86**	**1.99**	**0.00**	**0.86**	**0.86**	**0.00**	**1,155.89**		**0.15**		**1,158.99**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.82	10.27	4.38	0.01	0.05	0.36	0.41	0.05	0.36	0.41		1,430.02		0.04		1,430.85
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.85	0.00	0.01	0.00	0.01	0.01	0.00	0.01		110.99		0.01		111.16
Total	**0.91**	**10.36**	**5.23**	**0.01**	**0.06**	**0.36**	**0.42**	**0.06**	**0.36**	**0.42**		**1,541.01**		**0.05**		**1,542.01**

3.3 Grading - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.97	0.00	4.97	2.49	0.00	2.49						0.00
Off-Road	4.59	37.50	19.64	0.04		1.86	1.86		1.86	1.86		3,845.86		0.41		3,854.50
Total	**4.59**	**37.50**	**19.64**	**0.04**	**4.97**	**1.86**	**6.83**	**2.49**	**1.86**	**4.35**		**3,845.86**		**0.41**		**3,854.50**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.21	14.64	6.71	0.02	18.10	0.50	18.60	0.07	0.50	0.57		1,996.08		0.06		1,997.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.85	0.00	0.15	0.00	0.15	0.01	0.00	0.01		110.99		0.01		111.16
Total	**1.30**	**14.73**	**7.56**	**0.02**	**18.25**	**0.50**	**18.75**	**0.08**	**0.50**	**0.58**		**2,107.07**		**0.07**		**2,108.48**

3.3 Grading - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.97	0.00	4.97	2.49	0.00	2.49						0.00
Off-Road	4.59	37.50	19.64	0.04		1.86	1.86		1.86	1.86	0.00	3,845.86		0.41		3,854.50
Total	**4.59**	**37.50**	**19.64**	**0.04**	**4.97**	**1.86**	**6.83**	**2.49**	**1.86**	**4.35**	**0.00**	**3,845.86**		**0.41**		**3,854.50**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.21	14.64	6.71	0.02	0.07	0.50	0.57	0.07	0.50	0.57		1,996.08		0.06		1,997.32
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.85	0.00	0.01	0.00	0.01	0.01	0.00	0.01		110.99		0.01		111.16
Total	**1.30**	**14.73**	**7.56**	**0.02**	**0.08**	**0.50**	**0.58**	**0.08**	**0.50**	**0.58**		**2,107.07**		**0.07**		**2,108.48**

3.4 Building Construction - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.37	18.35	10.65	0.02		1.09	1.09		1.09	1.09		2,107.27		0.21		2,111.73
Total	**2.37**	**18.35**	**10.65**	**0.02**		**1.09**	**1.09**		**1.09**	**1.09**		**2,107.27**		**0.21**		**2,111.73**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.16	1.81	1.08	0.00	0.09	0.06	0.15	0.01	0.06	0.06		271.39		0.01		271.55
Worker	0.18	0.18	1.70	0.00	0.30	0.01	0.31	0.01	0.01	0.02		221.98		0.02		222.32
Total	**0.34**	**1.99**	**2.78**	**0.00**	**0.39**	**0.07**	**0.46**	**0.02**	**0.07**	**0.08**		**493.37**		**0.03**		**493.87**

3.4 Building Construction - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.37	18.35	10.65	0.02		1.09	1.09		1.09	1.09	0.00	2,107.27		0.21		2,111.73
Total	**2.37**	**18.35**	**10.65**	**0.02**		**1.09**	**1.09**		**1.09**	**1.09**	**0.00**	**2,107.27**		**0.21**		**2,111.73**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.16	1.81	1.08	0.00	0.01	0.06	0.06	0.01	0.06	0.06		271.39		0.01		271.55
Worker	0.18	0.18	1.70	0.00	0.01	0.01	0.02	0.01	0.01	0.02		221.98		0.02		222.32
Total	**0.34**	**1.99**	**2.78**	**0.00**	**0.02**	**0.07**	**0.08**	**0.02**	**0.07**	**0.08**		**493.37**		**0.03**		**493.87**

3.4 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.20	16.96	10.43	0.02		0.97	0.97		0.97	0.97		2,107.27		0.20		2,111.39
Total	**2.20**	**16.96**	**10.43**	**0.02**		**0.97**	**0.97**		**0.97**	**0.97**		**2,107.27**		**0.20**		**2,111.39**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.15	1.66	1.01	0.00	0.09	0.05	0.14	0.01	0.05	0.06		271.57		0.01		271.72
Worker	0.17	0.17	1.53	0.00	0.30	0.01	0.31	0.01	0.01	0.02		217.29		0.01		217.60
Total	**0.32**	**1.83**	**2.54**	**0.00**	**0.39**	**0.06**	**0.45**	**0.02**	**0.06**	**0.08**		**488.86**		**0.02**		**489.32**

3.4 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.20	16.96	10.43	0.02		0.97	0.97		0.97	0.97	0.00	2,107.27		0.20		2,111.39
Total	**2.20**	**16.96**	**10.43**	**0.02**		**0.97**	**0.97**		**0.97**	**0.97**	**0.00**	**2,107.27**		**0.20**		**2,111.39**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.15	1.66	1.01	0.00	0.01	0.05	0.06	0.01	0.05	0.06		271.57		0.01		271.72
Worker	0.17	0.17	1.53	0.00	0.01	0.01	0.02	0.01	0.01	0.02		217.29		0.01		217.60
Total	**0.32**	**1.83**	**2.54**	**0.00**	**0.02**	**0.06**	**0.08**	**0.02**	**0.06**	**0.08**		**488.86**		**0.02**		**489.32**

3.5 Architectural Coating - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.58					0.00	0.00		0.00	0.00						0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**62.58**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.03	0.03	0.31	0.00	0.06	0.00	0.06	0.00	0.00	0.00		43.46		0.00		43.52
Total	**0.03**	**0.03**	**0.31**	**0.00**	**0.06**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**		**43.46**		**0.00**		**43.52**

3.5 Architectural Coating - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	62.58					0.00	0.00		0.00	0.00						0.00
Off-Road	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00		0.00		0.00
Total	**62.58**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**		**0.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.03	0.03	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00		43.46		0.00		43.52
Total	**0.03**	**0.03**	**0.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**43.46**		**0.00**		**43.52**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	35.43	70.03	290.36	0.21	21.58	1.85	23.43	0.75	1.85	2.60		22,189.80		1.71		22,225.72
Unmitigated	35.43	70.03	290.36	0.21	21.58	1.85	23.43	0.75	1.85	2.60		22,189.80		1.71		22,225.72
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Quality Restaurant	246.46	258.55	197.72	286,134	286,134
Strip Mall	350.57	332.54	161.60	494,349	494,349
Supermarket	5,266.38	9,147.66	8573.32	3,900,324	3,900,324
Total	5,863.42	9,738.74	8,932.64	4,680,807	4,680,807

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Quality Restaurant	9.50	7.30	7.30	12.00	69.00	19.00
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Supermarket	9.50	2.70	7.30	6.50	74.50	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		766.23		0.01	0.01	770.90
NaturalGas Unmitigated	0.07	0.64	0.54	0.00		0.00	0.05		0.00	0.05		773.36		0.01	0.01	778.07
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Quality Restaurant	1276.24	0.01	0.13	0.11	0.00		0.00	0.01		0.00	0.01		150.15		0.00	0.00	151.06
Strip Mall	104.022	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		12.24		0.00	0.00	12.31
Supermarket	5193.34	0.06	0.51	0.43	0.00		0.00	0.04		0.00	0.04		610.98		0.01	0.01	614.70
Total		**0.07**	**0.65**	**0.55**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**773.37**		**0.01**	**0.01**	**778.07**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Quality Restaurant	1.22896	0.01	0.12	0.10	0.00		0.00	0.01		0.00	0.01		144.58		0.00	0.00	145.46
Strip Mall	0.0906941	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		10.67		0.00	0.00	10.73
Supermarket	5.19334	0.06	0.51	0.43	0.00		0.00	0.04		0.00	0.04		610.98		0.01	0.01	614.70
Total		**0.07**	**0.64**	**0.54**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**766.23**		**0.01**	**0.01**	**770.89**

6.0 Area Detail

6.1 Mitigation Measures Area

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Mitigated	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.72	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

SubCategory	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Architectural Coating	0.39					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.33					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.39					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.33					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.72**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

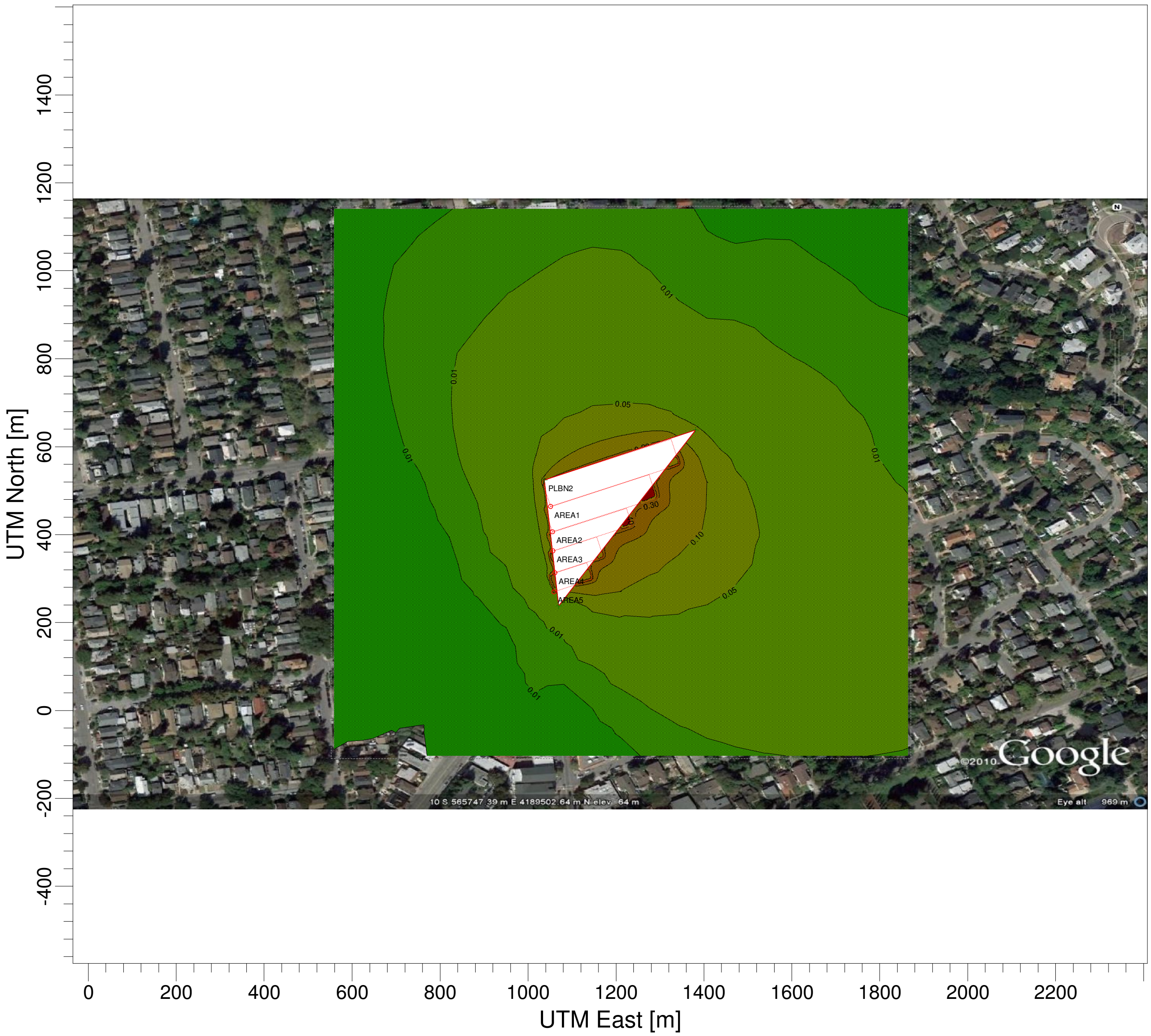
8.1 Mitigation Measures Waste

9.0 Vegetation

Air Quality Dispersal Maps and Calculations

PROJECT TITLE:

CLAREMONT COLLEGE SAFEWAY
ANNUAL AVERAGE PM2.5



PLOT FILE OF ANNUAL VALUES FOR SOURCE GROUP: ALL ug/m^3

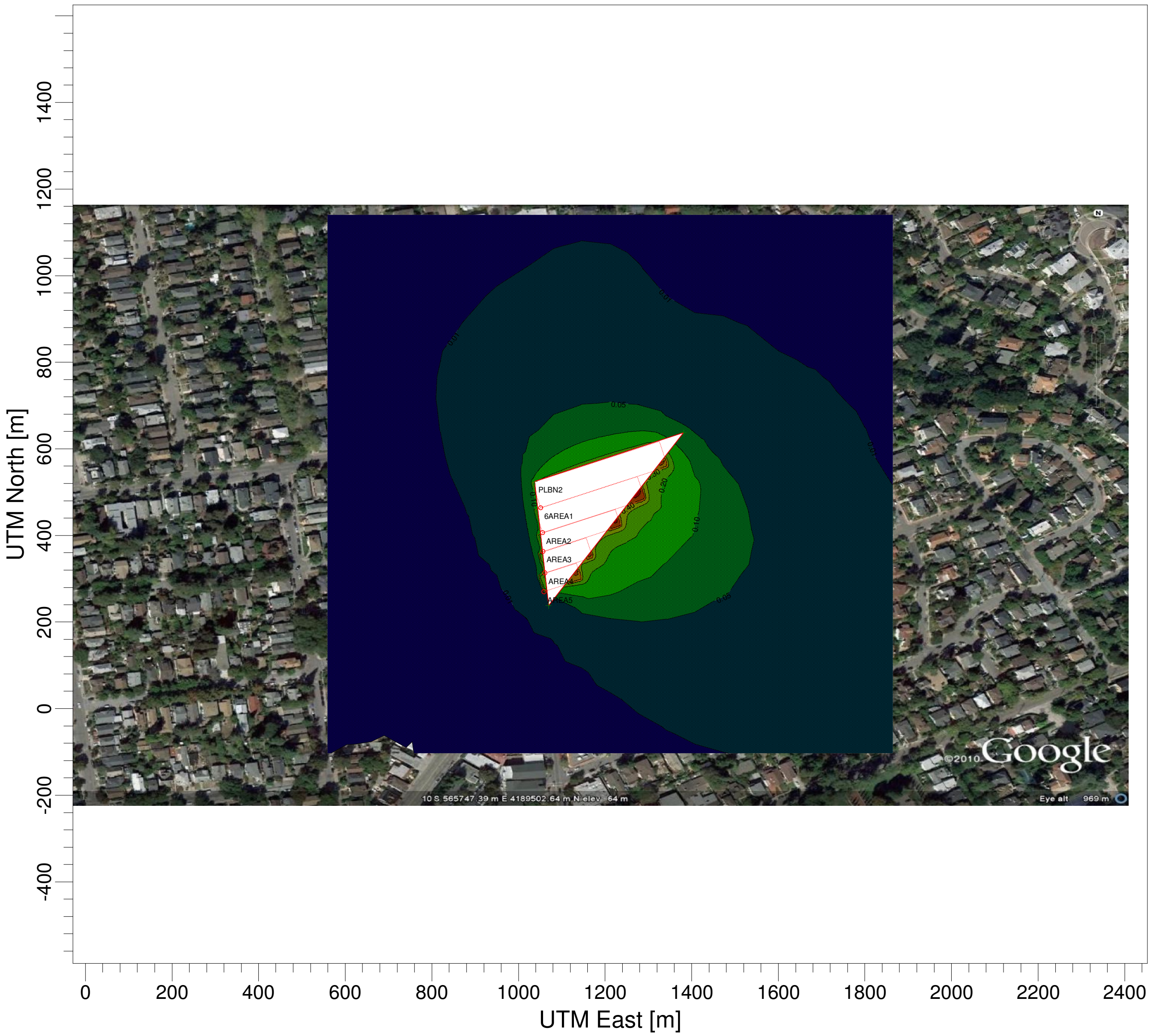
0.001 0.005 0.010 0.050 0.100 0.200 0.300 0.400 0.500

COMMENTS:	SOURCES:	COMPANY NAME:	
	5	**Donald Ballanti, CCM**	
	RECEPTORS: **3004**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:15,363 (0 — 0.5 km)	
	MAX: **0.59184 ug/m^3**	DATE: **2/10/2011**	PROJECT NO.:

AERMOD View - Lakes Environmental Software C:\Users\Weatherman\My Documents\Business\Project Files\Claremont Safeway\safepm25\safepm25.isc

PROJECT TITLE:

CLAREMONT COLLEGE SAFEWAY
ANNUAL AVERAGE DPM



PLOT FILE OF ANNUAL VALUES FOR SOURCE GROUP: ALL

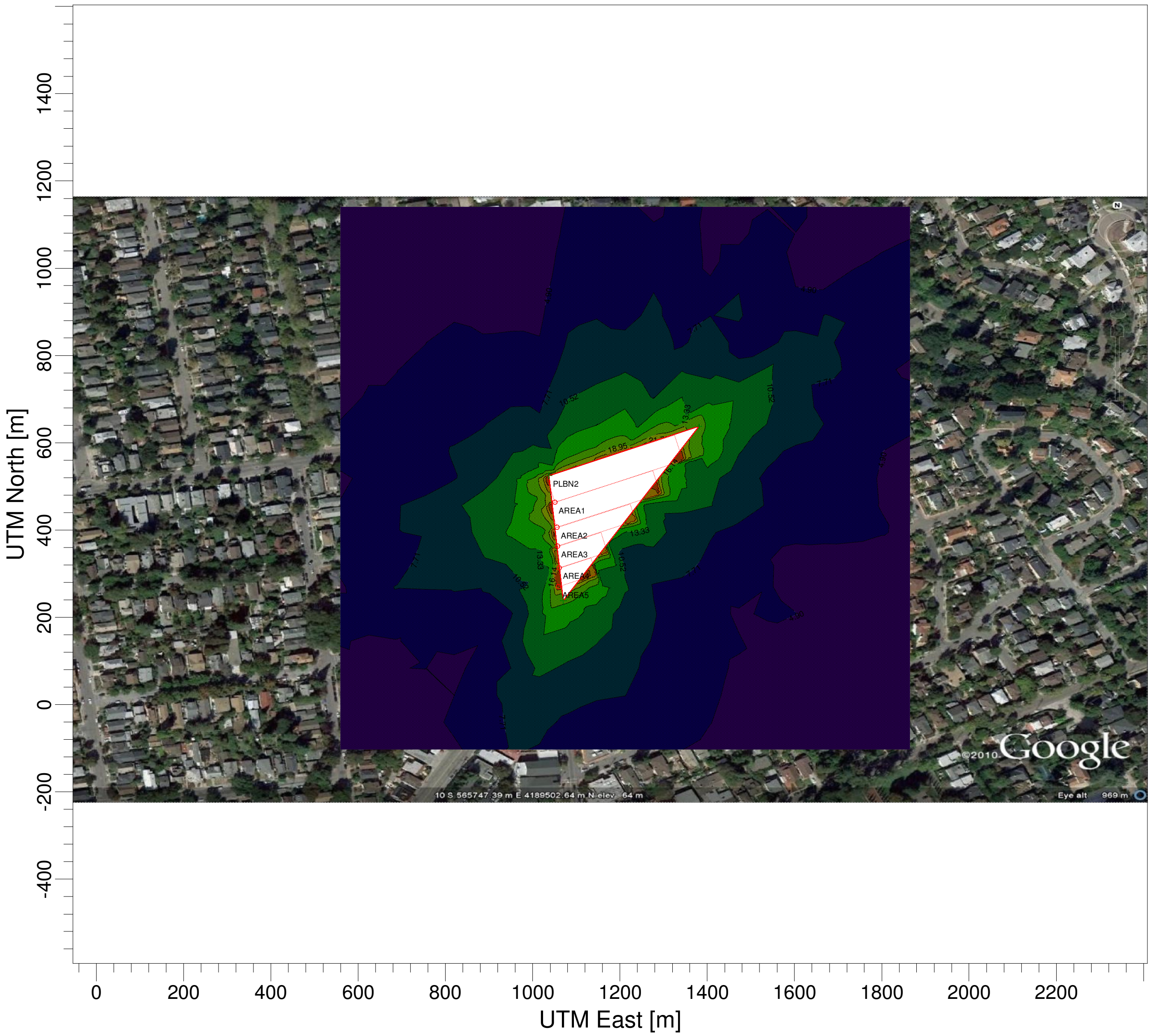
ug/m^3

0.001 | 0.010 | 0.050 | 0.100 | 0.200 | 0.300 | 0.400 | 0.500 | 0.600

COMMENTS:	SOURCES:	COMPANY NAME:	
	5	**Donald Ballanti, CCM**	
	RECEPTORS: **3004**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:15,599 (0 — 0.5 km)	
	MAX: **0.64363 ug/m^3**	DATE: **2/8/2011**	PROJECT NO.:

PROJECT TITLE:

Claremont College Safeway
Max 1-Hour DPM for Acrolein Analysis



PLOT FILE OF HIGH 1ST HIGH 1-HR VALUES FOR SOURCE GROUP: ALL ug/m^3

2.086 4.896 7.707 10.517 13.328 16.138 18.949 21.759 24.569 27.380

COMMENTS:	SOURCES: 5	COMPANY NAME: Donald Ballanti, CCM	
	RECEPTORS: 3003	MODELER:	
	OUTPUT TYPE: Concentration	SCALE: 1:15,479 (0 – 0.5 km)	
	MAX: 27.37991 ug/m^3	DATE: 2/8/2011	PROJECT NO.:

SPREADSHEET TO CALCULATE DPM/PM2.5 EMISSIONS
CONSTRUCTION OF SAFEWAY STORE AT CLAREMONT AND COLLEGE
EQUIPMENT:

Time Slice	Length (days)	MAXIMUM LBS/DAY DPM	PM2.5	MAXIMUM GM/DAY DPM	PM2.5	WEIGHTED AVERAGE DPM	PM2.5	
1	22	0.57	0.57	258.78	258.78	0.044155	0.044155	
2	32	1.24	1.24	562.96	562.96	0.139718	0.139718	
3	207	0.6	0.6	272.4	272.4	0.437324	0.437324	
4	23	0	0	0	0	0	0	
	284					**0.621197**	**0.621197**	LBS/DAY
						282.02	282.02	GMS/DAY

ON-SITE TRUCKS:

Time Slice	TRUCKS/DAY	EMISSION FACTORS TRAVEL (GM/MILE) DPM	PM2.5	EMISSION FACTORS IDLE (GM-IDLE-HOUR) DPM	PM2.5	MAXIMUM GM/DAY DPM	PM2.5	Length (days)	WEIGHTED AVERAGE DPM	PM2.5
1	12	1.59	1.46	1.39	1.28	3.30	3.04	22	0.26	0.24
2	24	1.59	1.46	1.39	1.28	6.60	6.08	32	0.74	0.68
3	0	1.59	1.46	1.39	1.28	0.00	0.00	207	0.00	0.00
4	0	1.59	1.46	1.39	1.28	0.00	0.00	23	0.00	0.00
									1.00	0.92

	Daily Emissions Maximum	**Average**	**Emission gm/sec Maximum**	**Average**	**Emission g/sec/m2 Maximum**	**Average**
DPM	**569.56**	**283.02**	**0.0175791358**	**0.0087352908**	**0.0000003555**	**0.0000001767**
PM2.5	**569.04**	**282.94**	**0.0175628148**	**0.0087328197**	**0.0000003552**	**0.0000001766**

Appendix M

Hourly Statistical Noise Levels

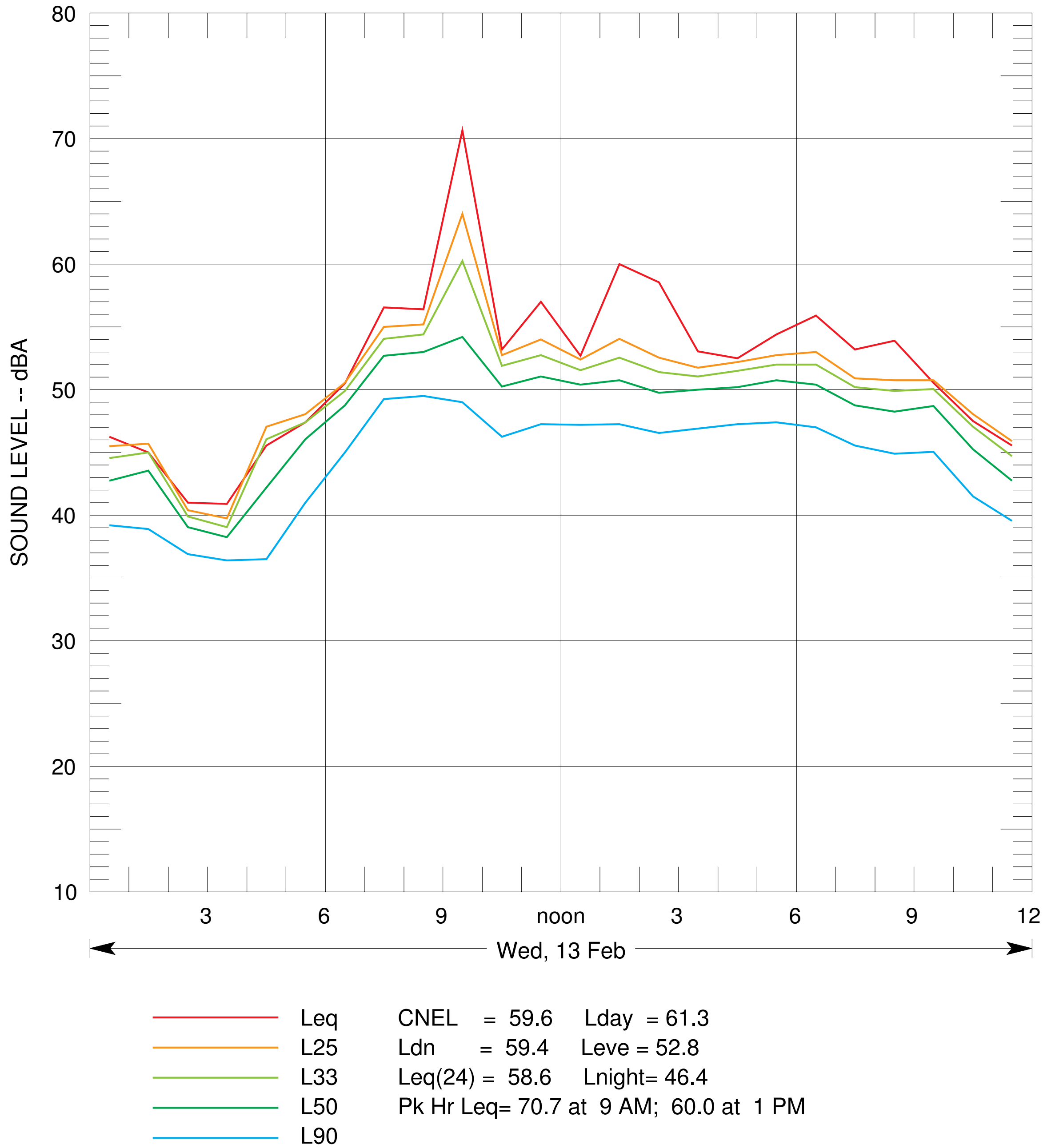


FIGURE B-1 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

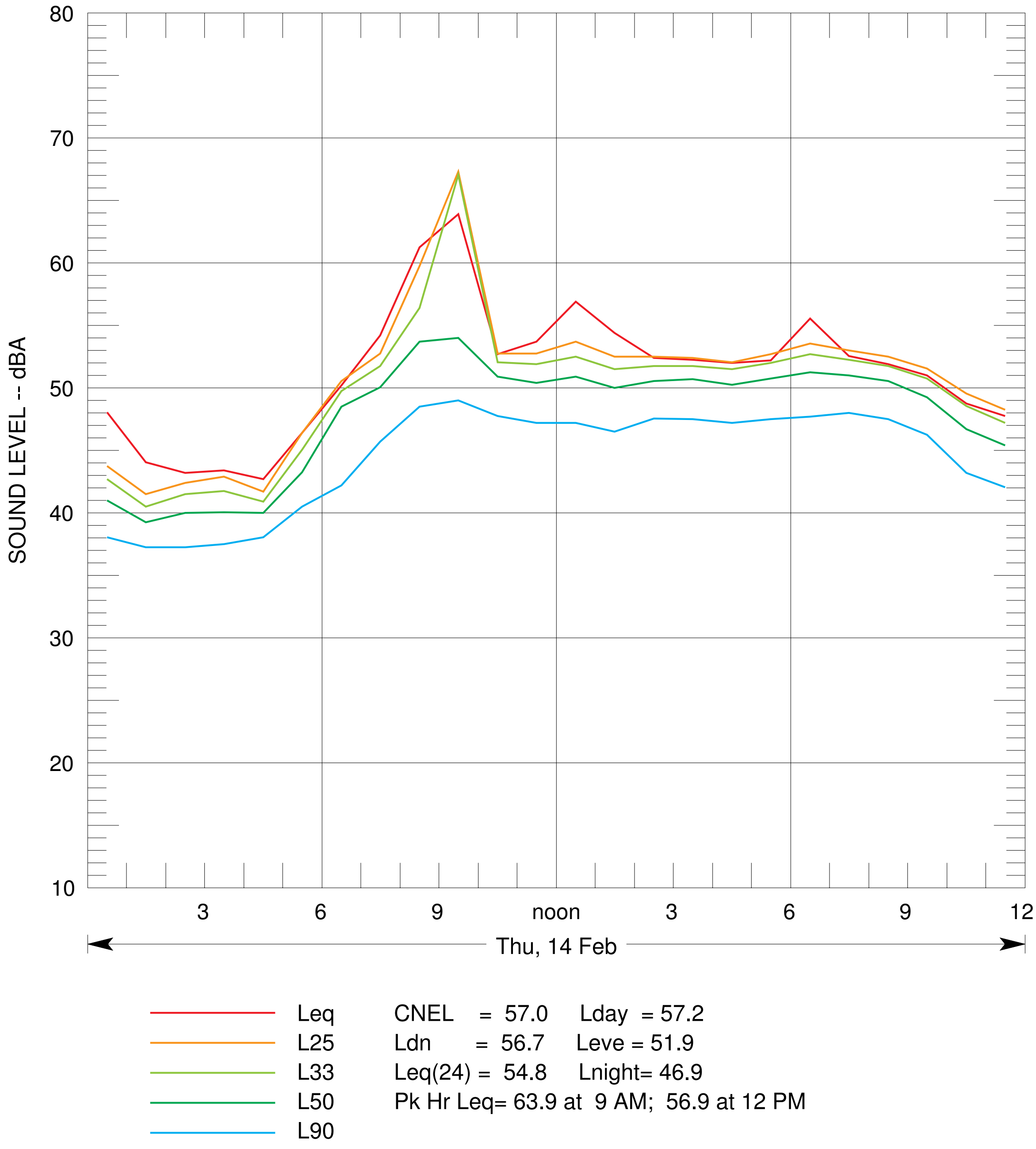


FIGURE B-2 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

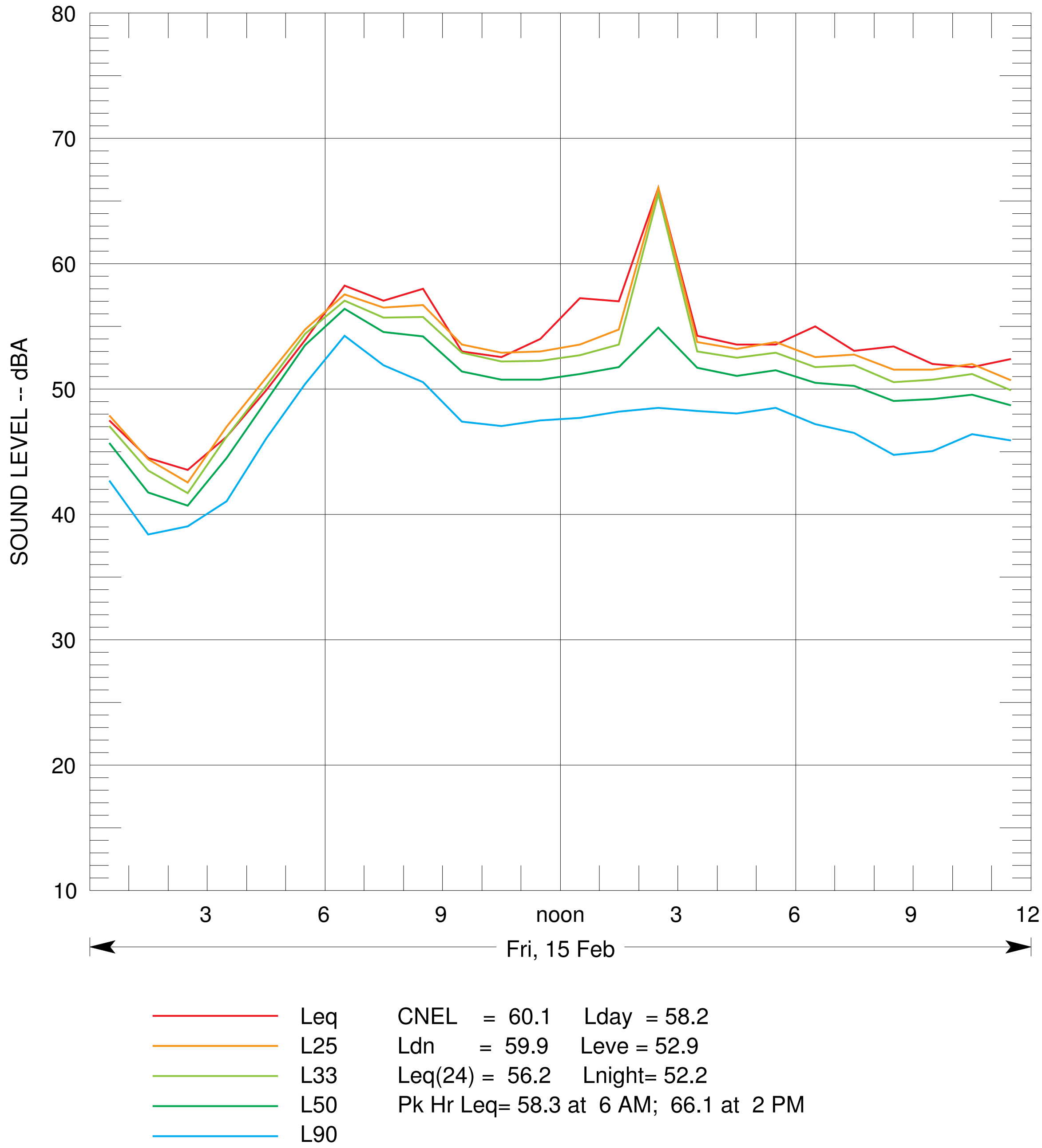


FIGURE B-3 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

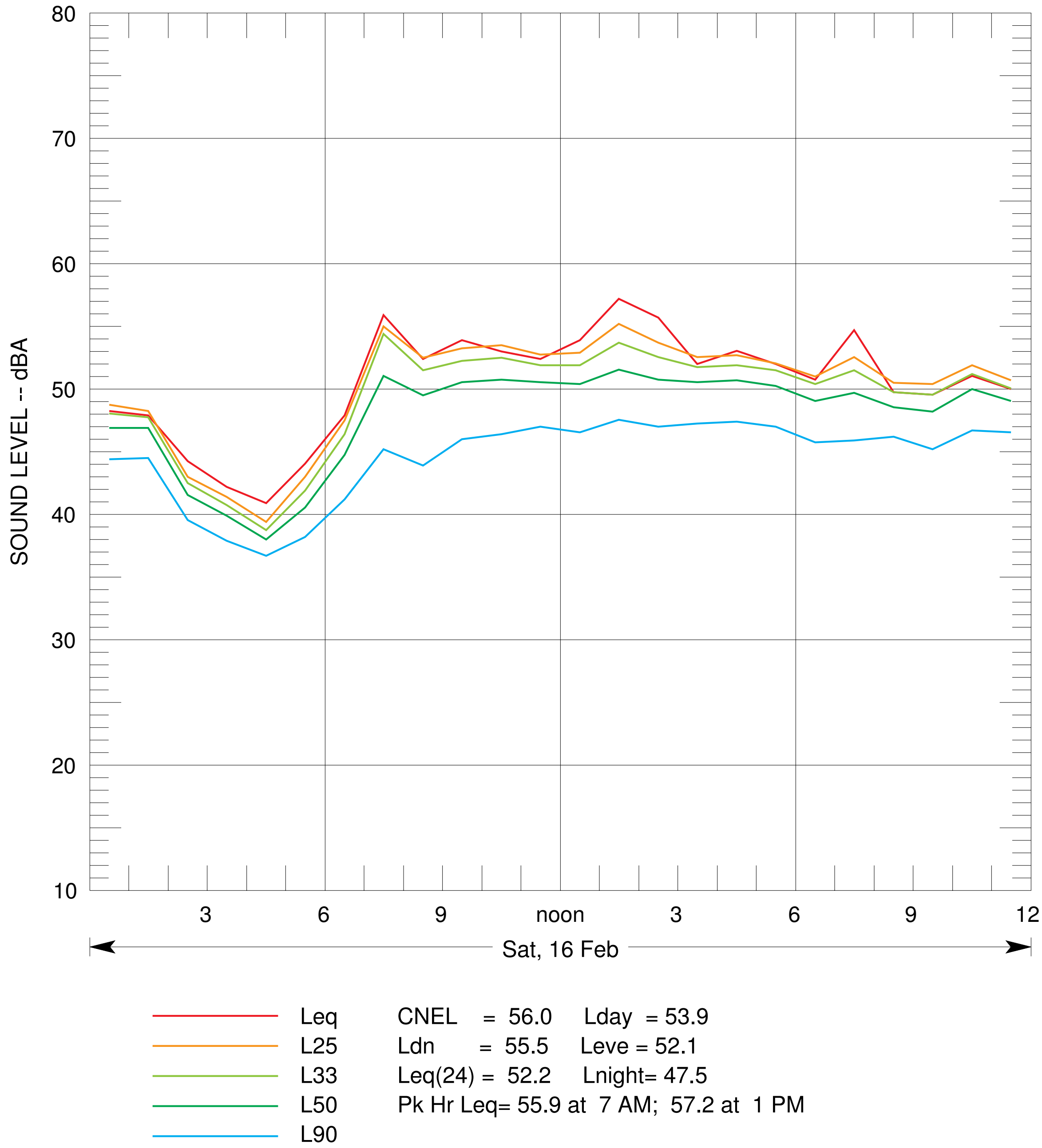


FIGURE B-4 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

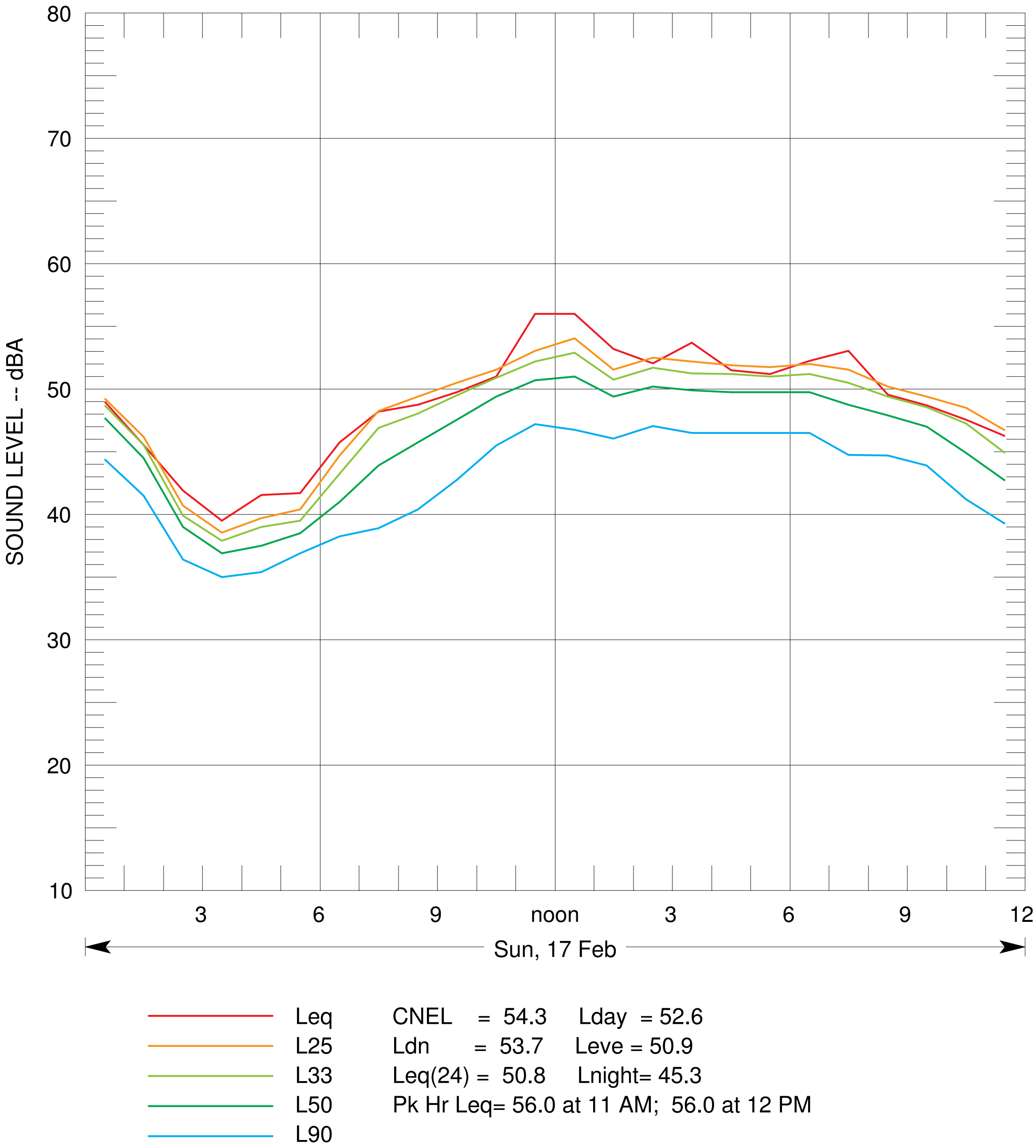


FIGURE B-5 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

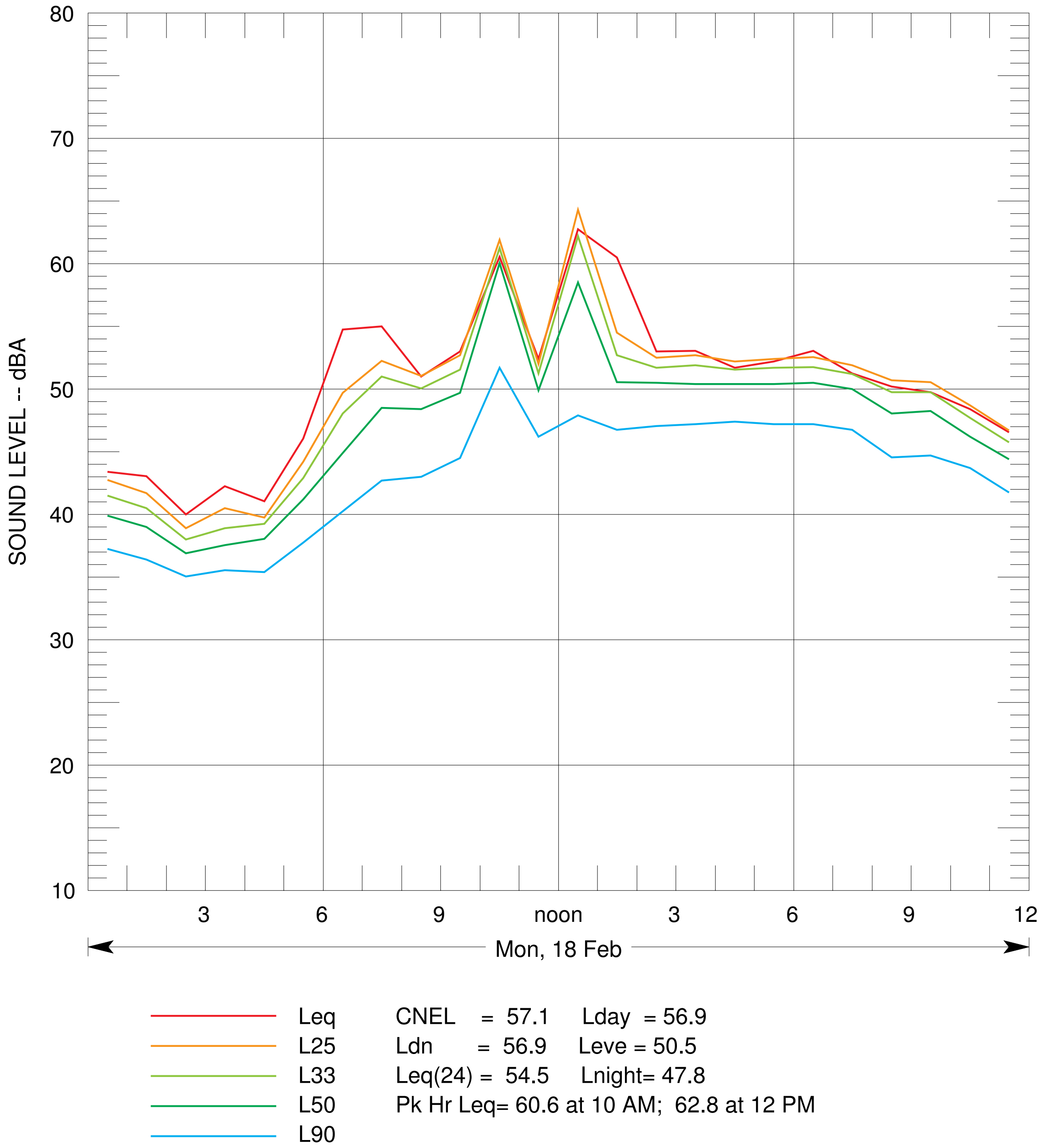


FIGURE B-6 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

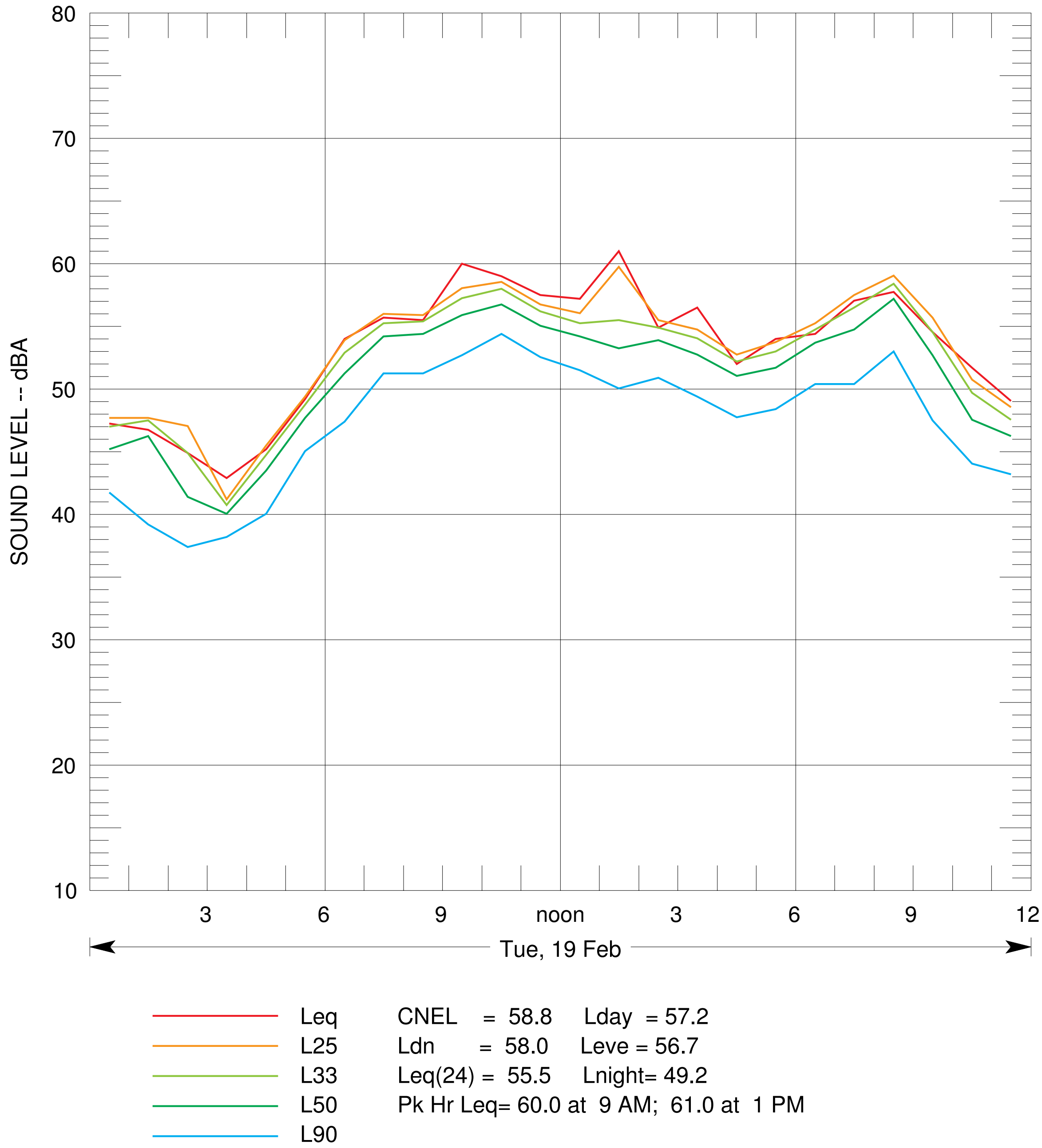


FIGURE B-7 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-1 (2712 ALCATRAZ)

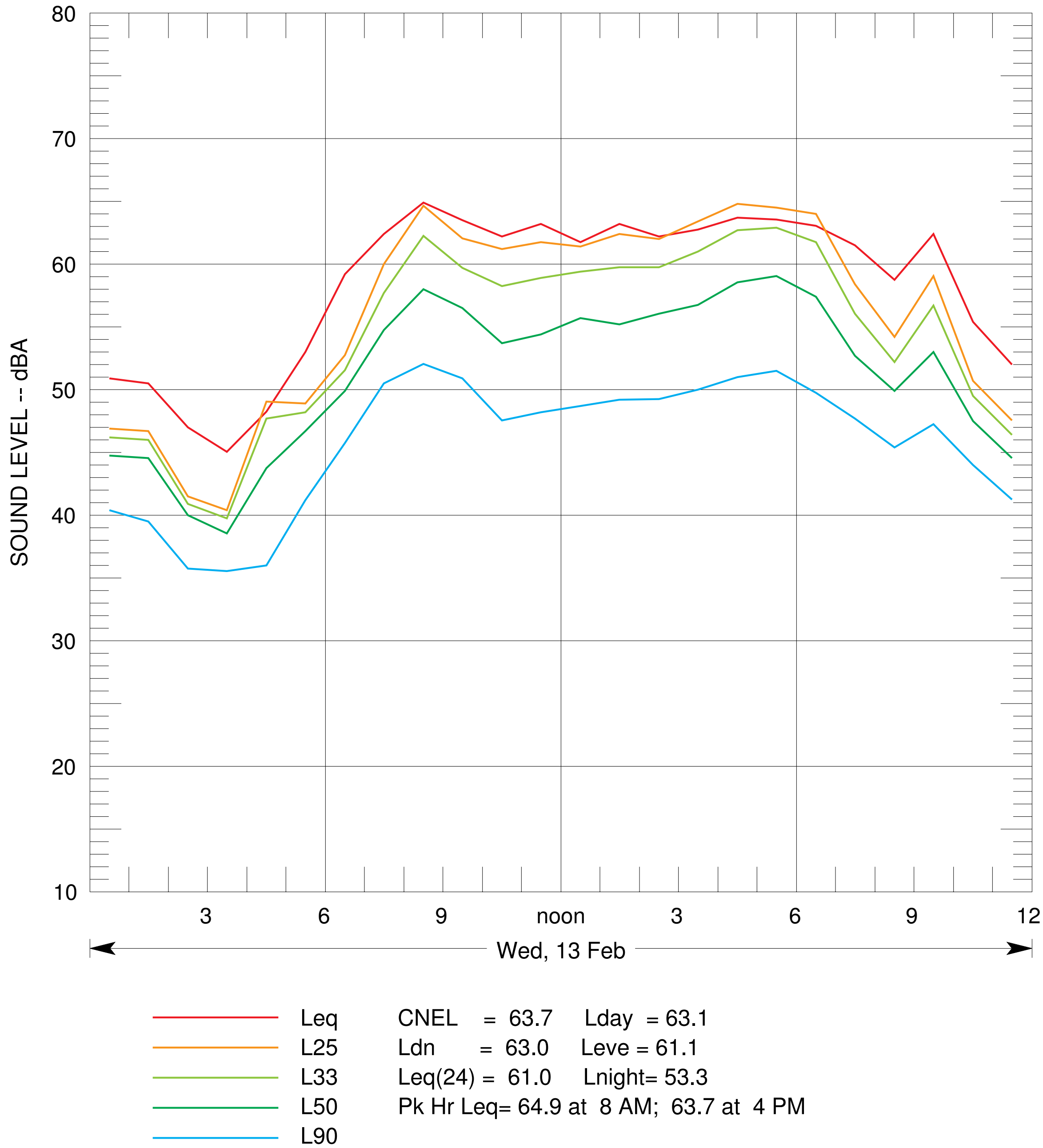


FIGURE B-8 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

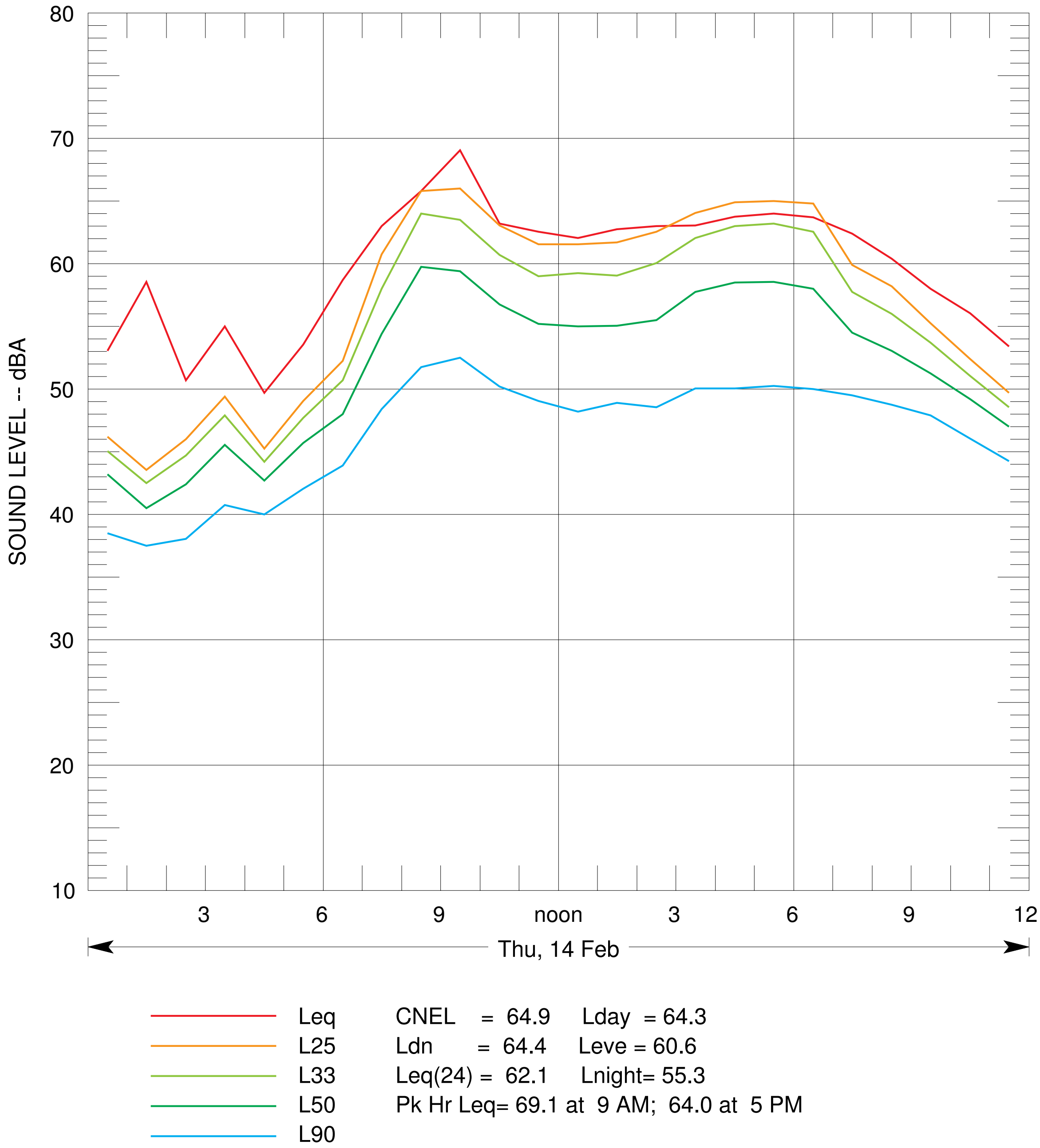


FIGURE B-9 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

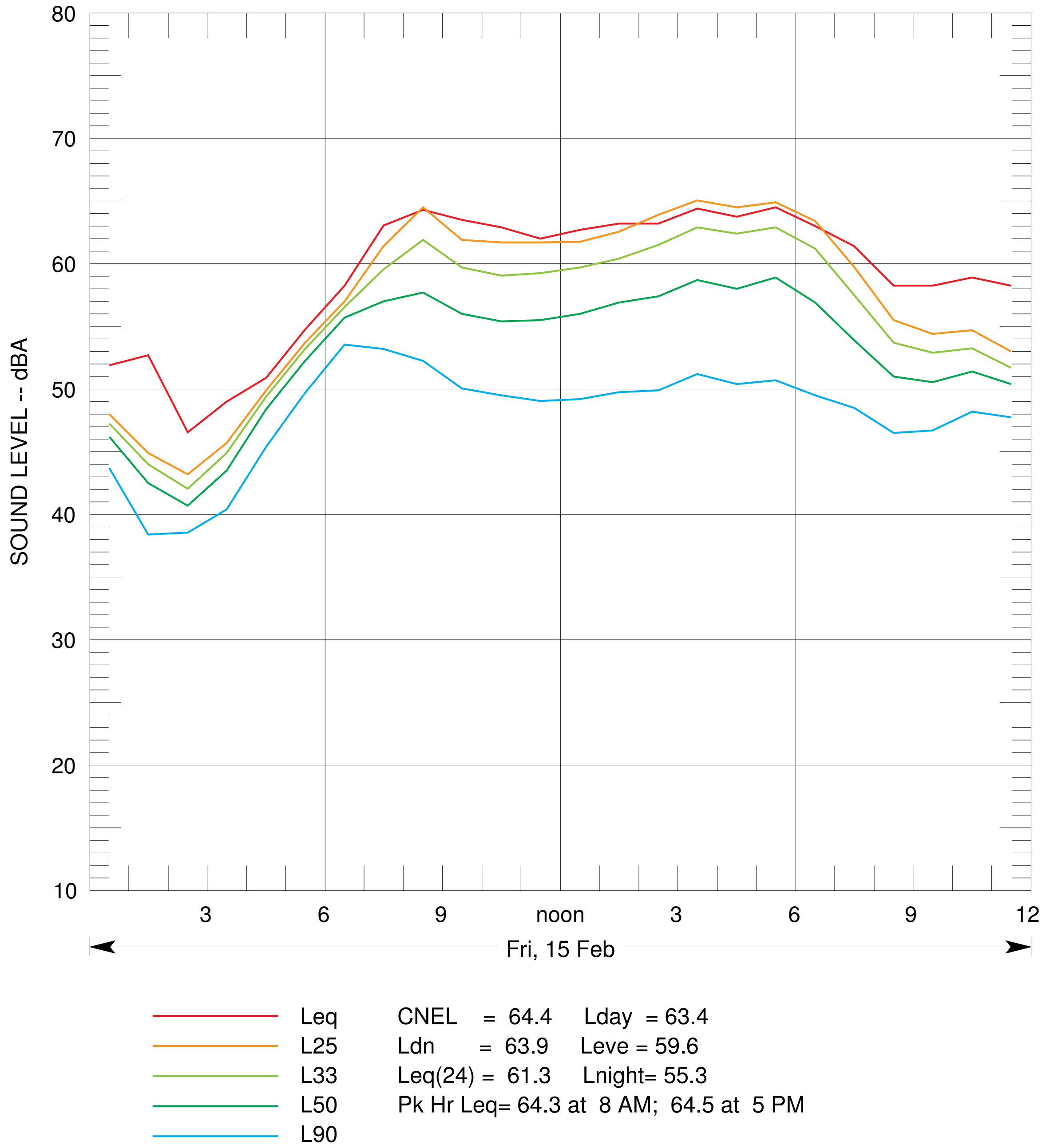


FIGURE B-10 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

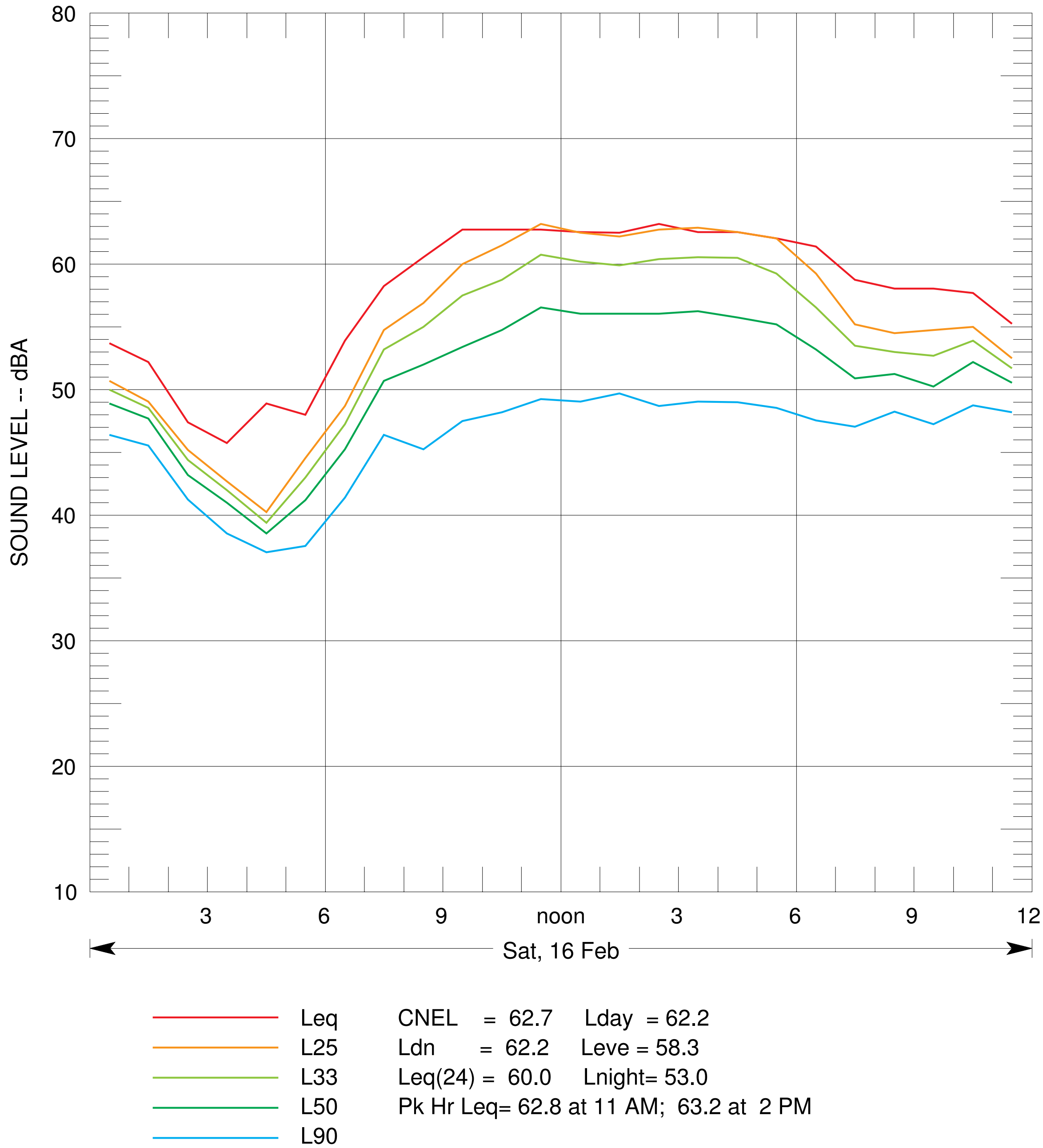


FIGURE B-11 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

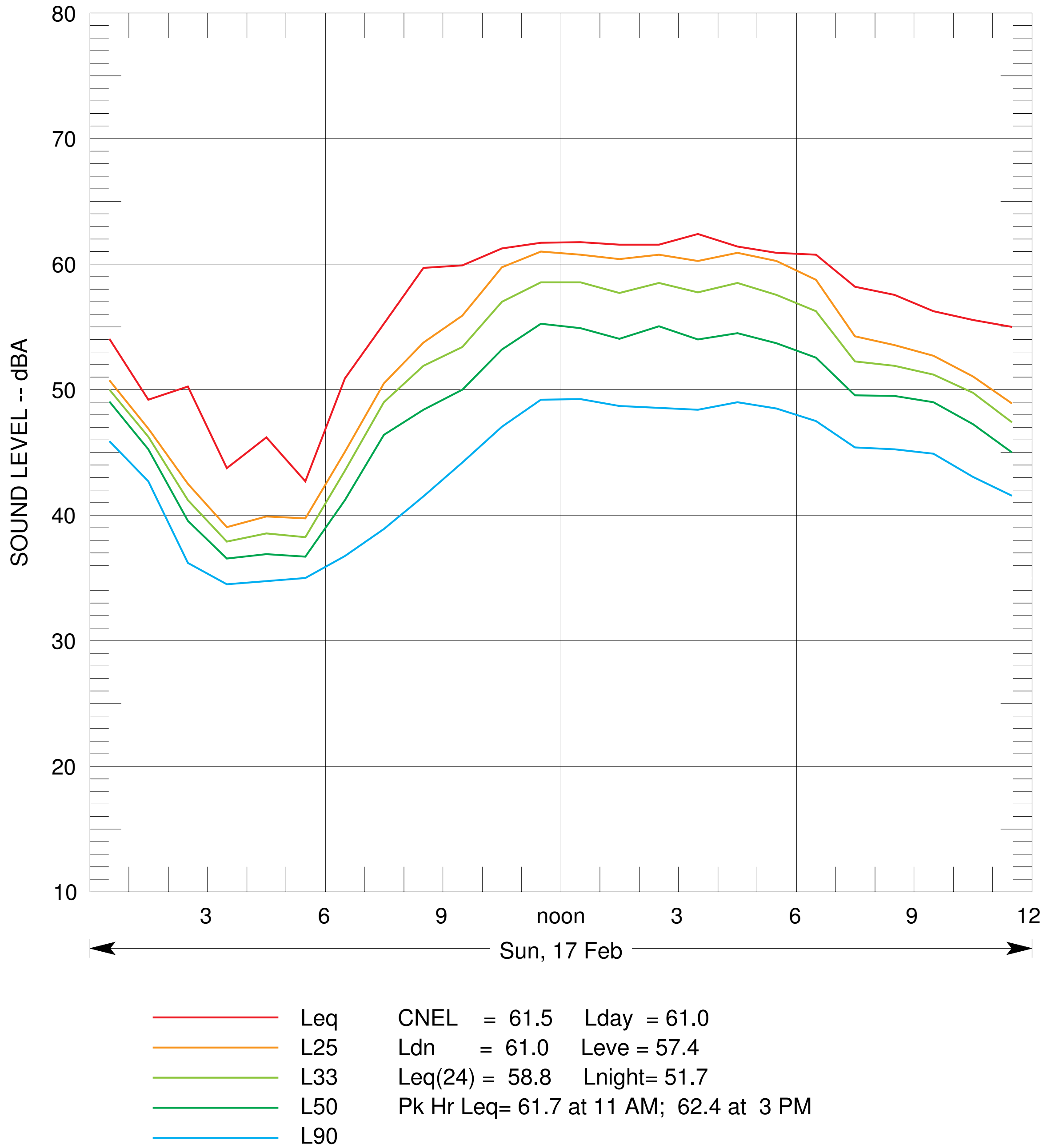
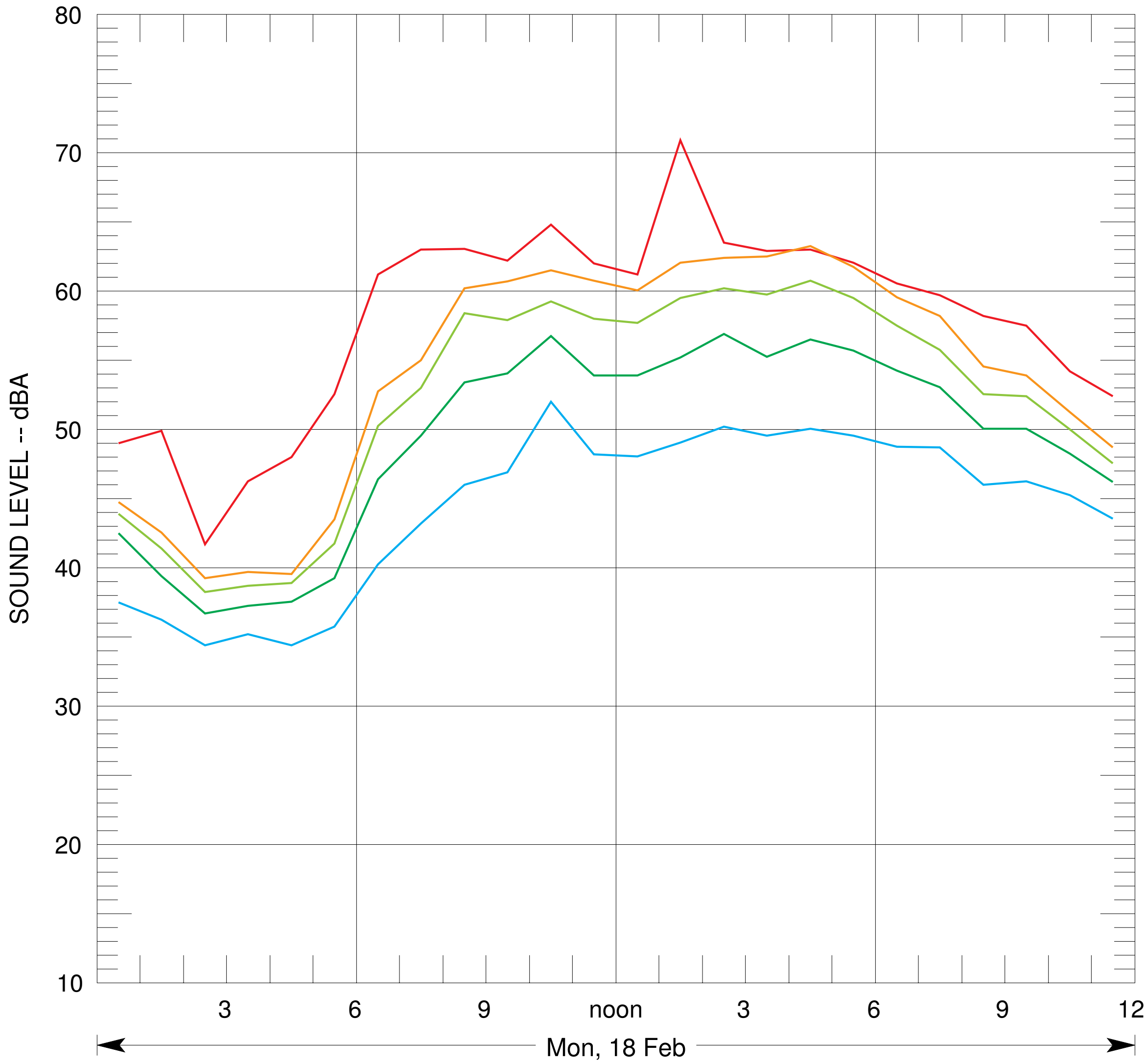


FIGURE B-12 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)



Leq — CNEL = 64.1 Lday = 64.4
L25 — Ldn = 63.8 Leve = 58.6
L33 — Leq(24) = 61.9 Lnight= 53.9
L50 — Pk Hr Leq= 64.8 at 10 AM; 70.9 at 1 PM
L90

FIGURE B-13 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

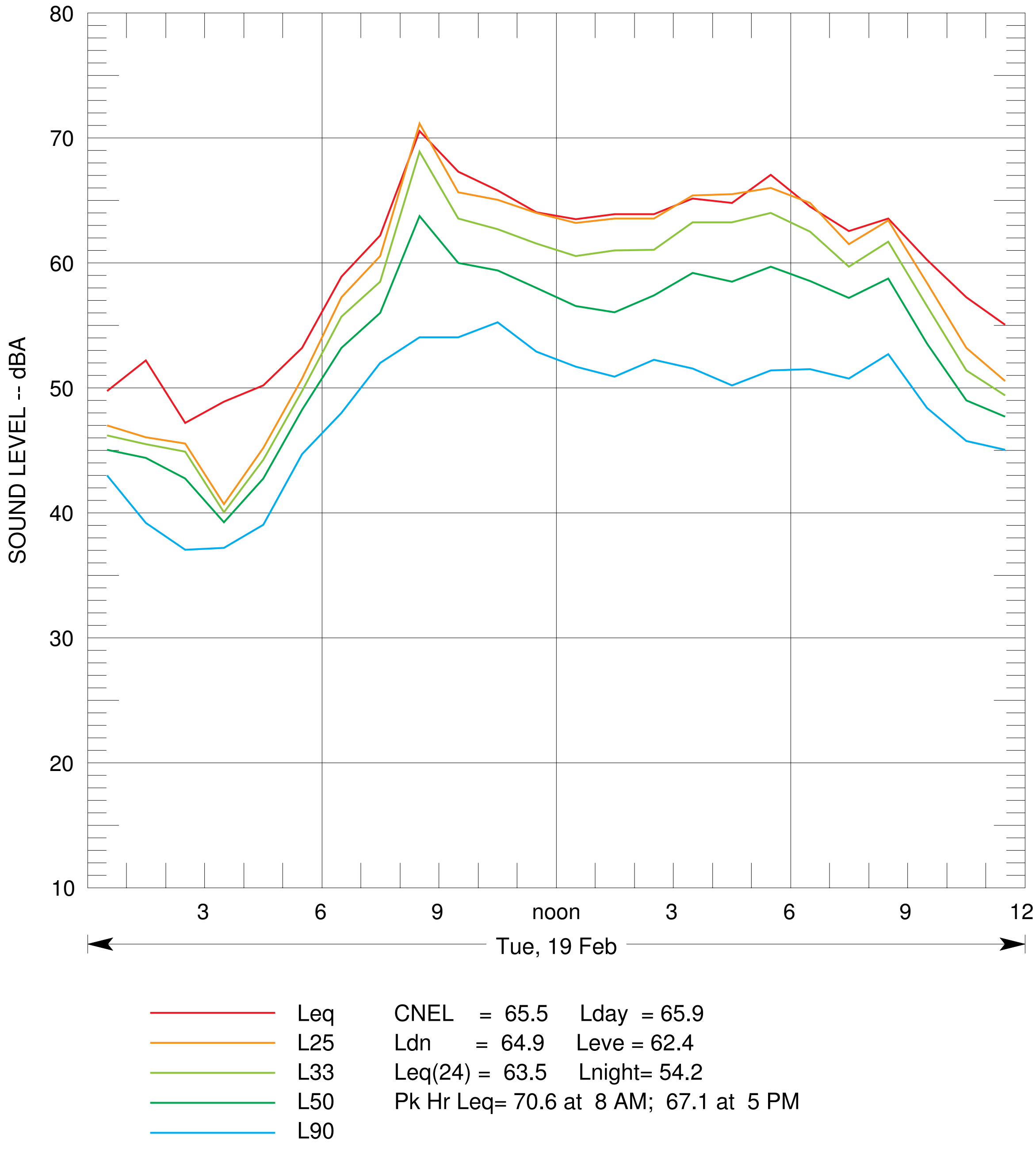


FIGURE B-14 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-2 (ALCATRAZ AND LEWISTON)

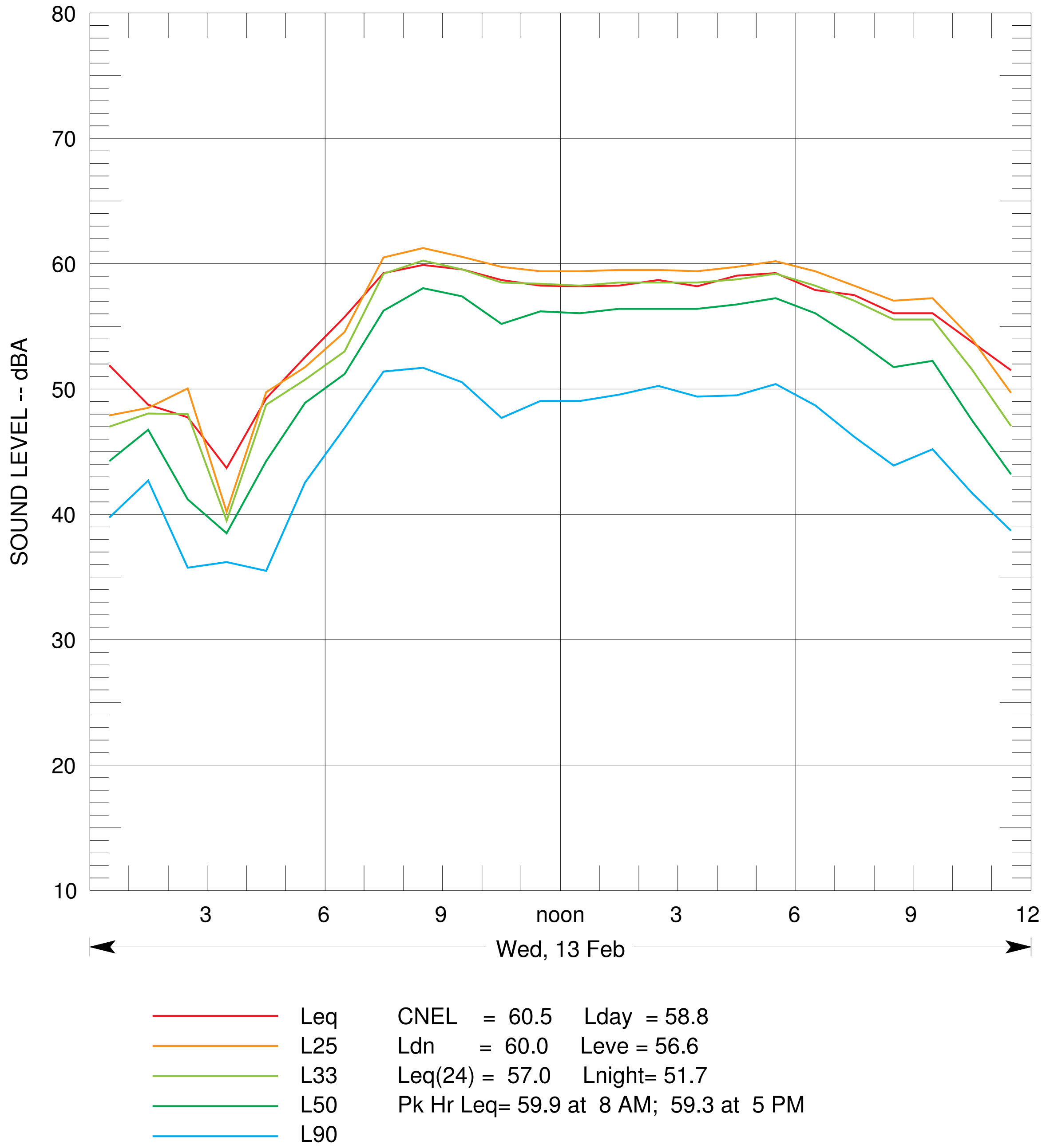


FIGURE B-15 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

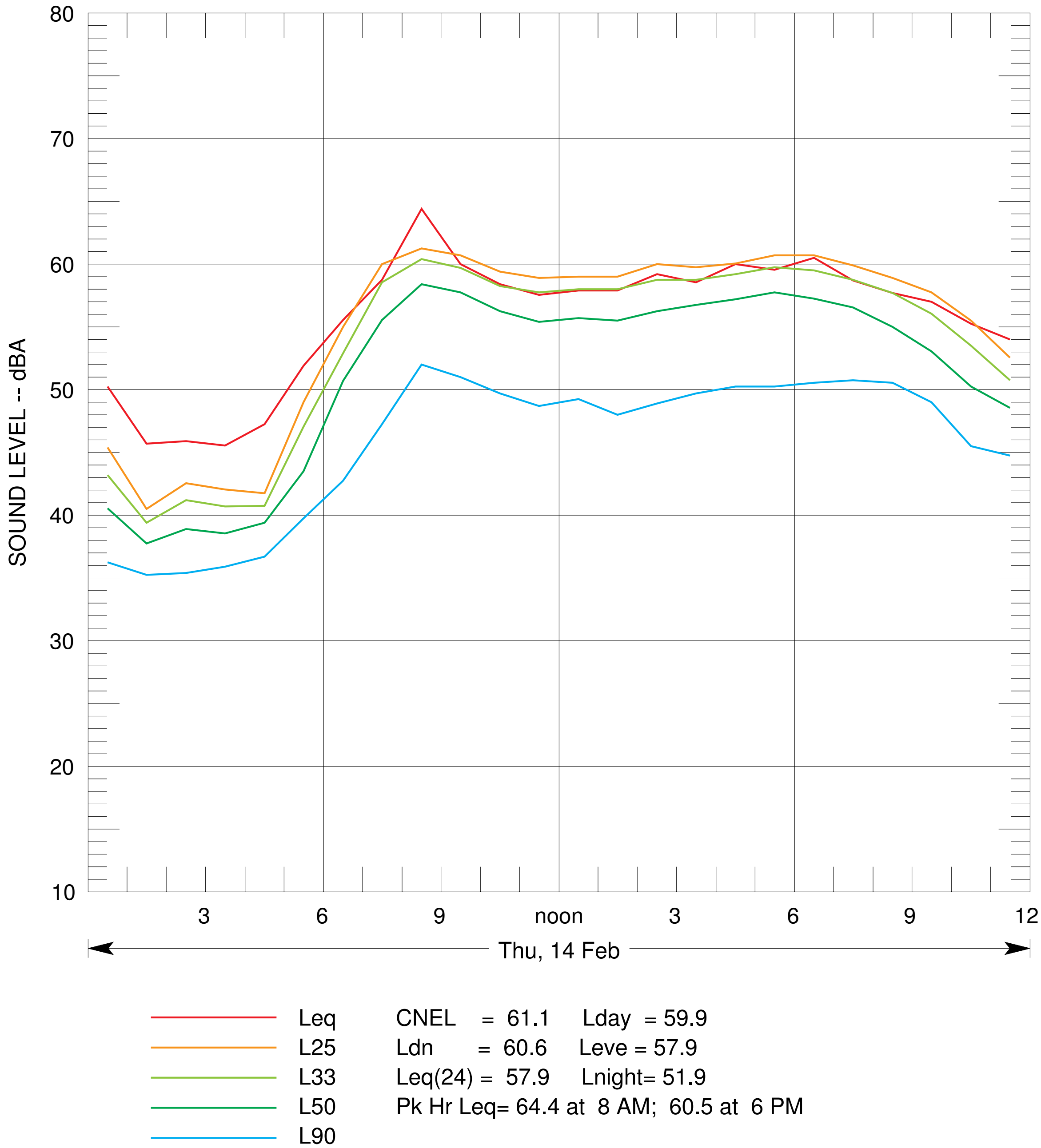


FIGURE B-16 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

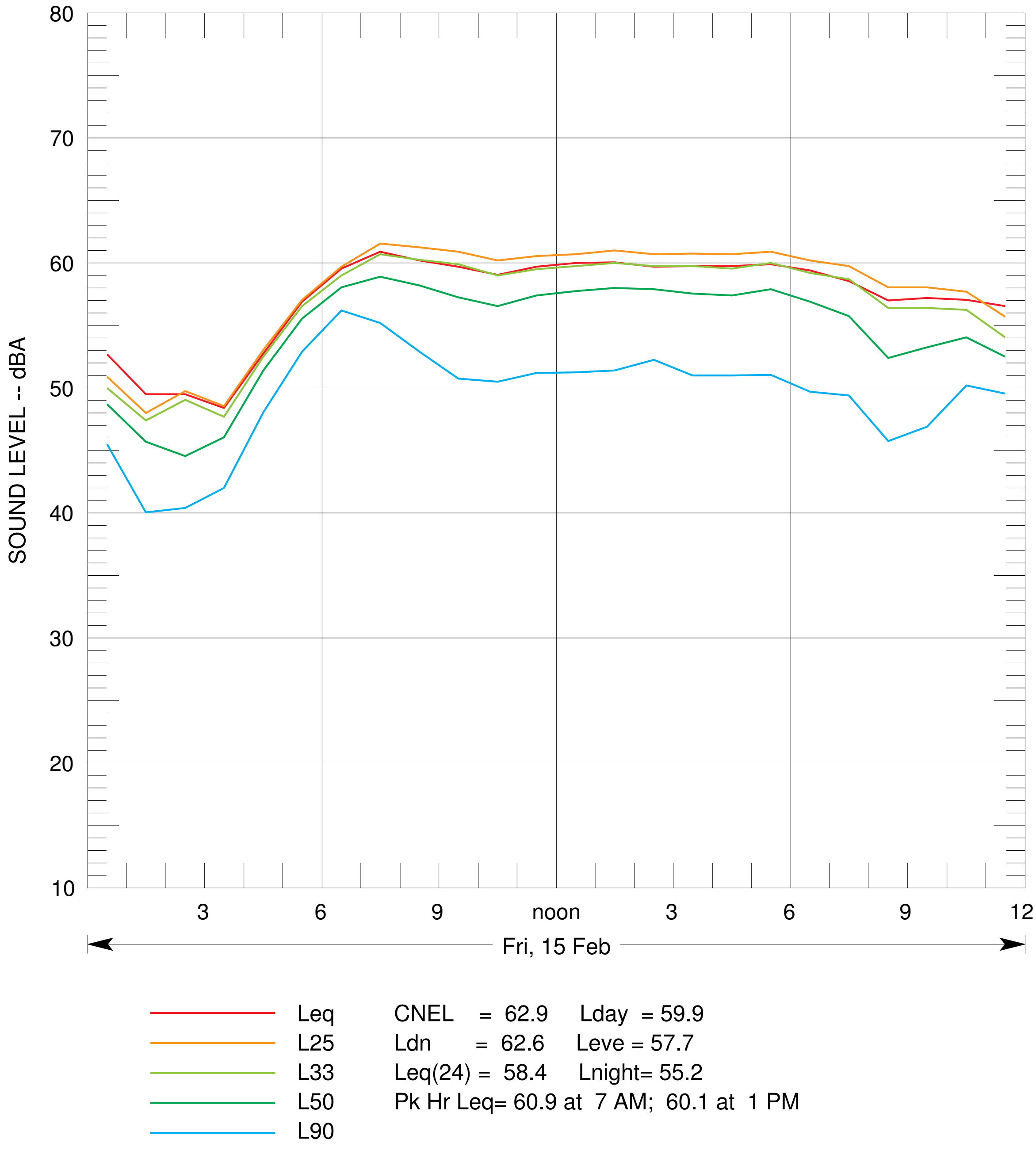


FIGURE B-17 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

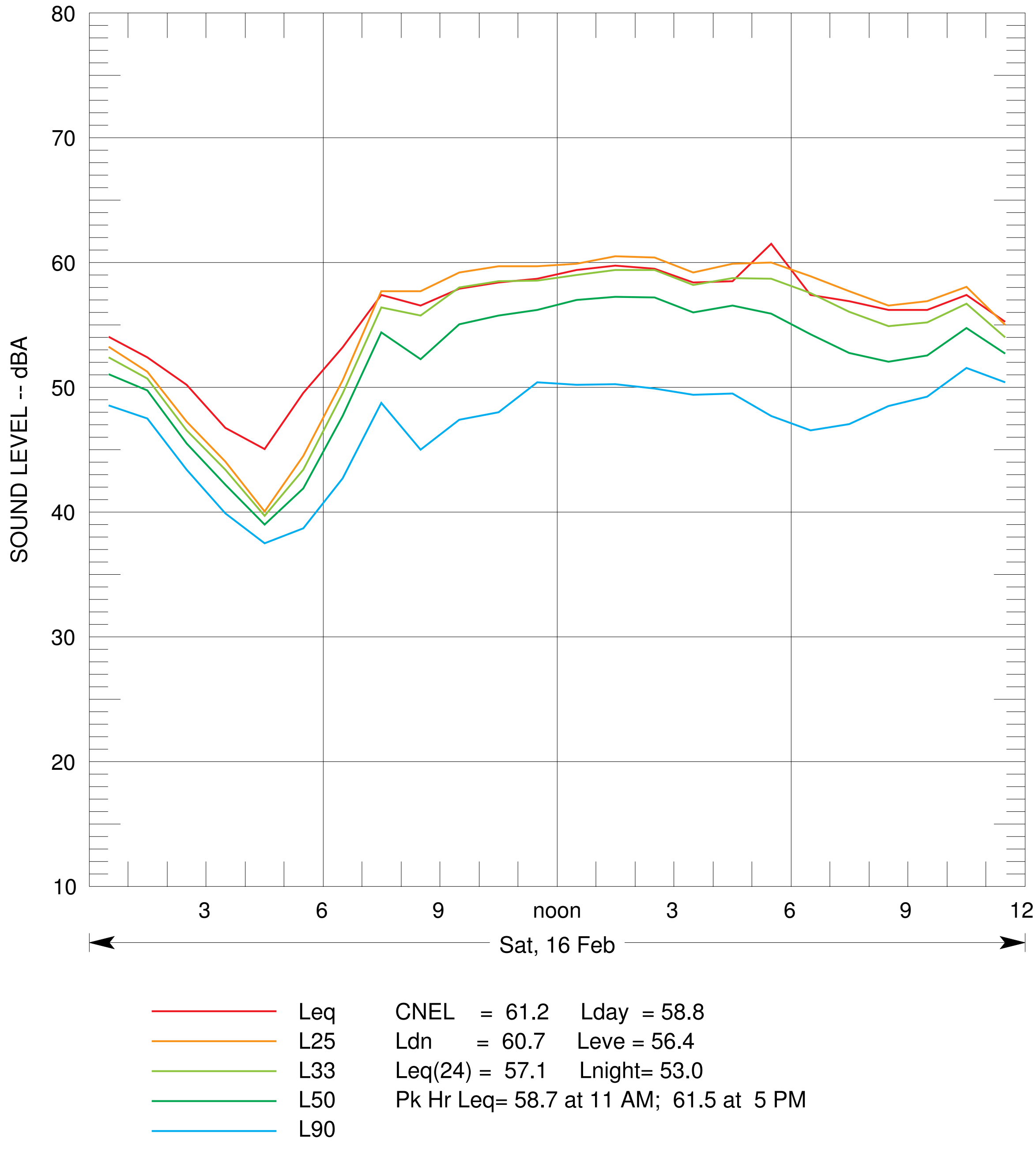
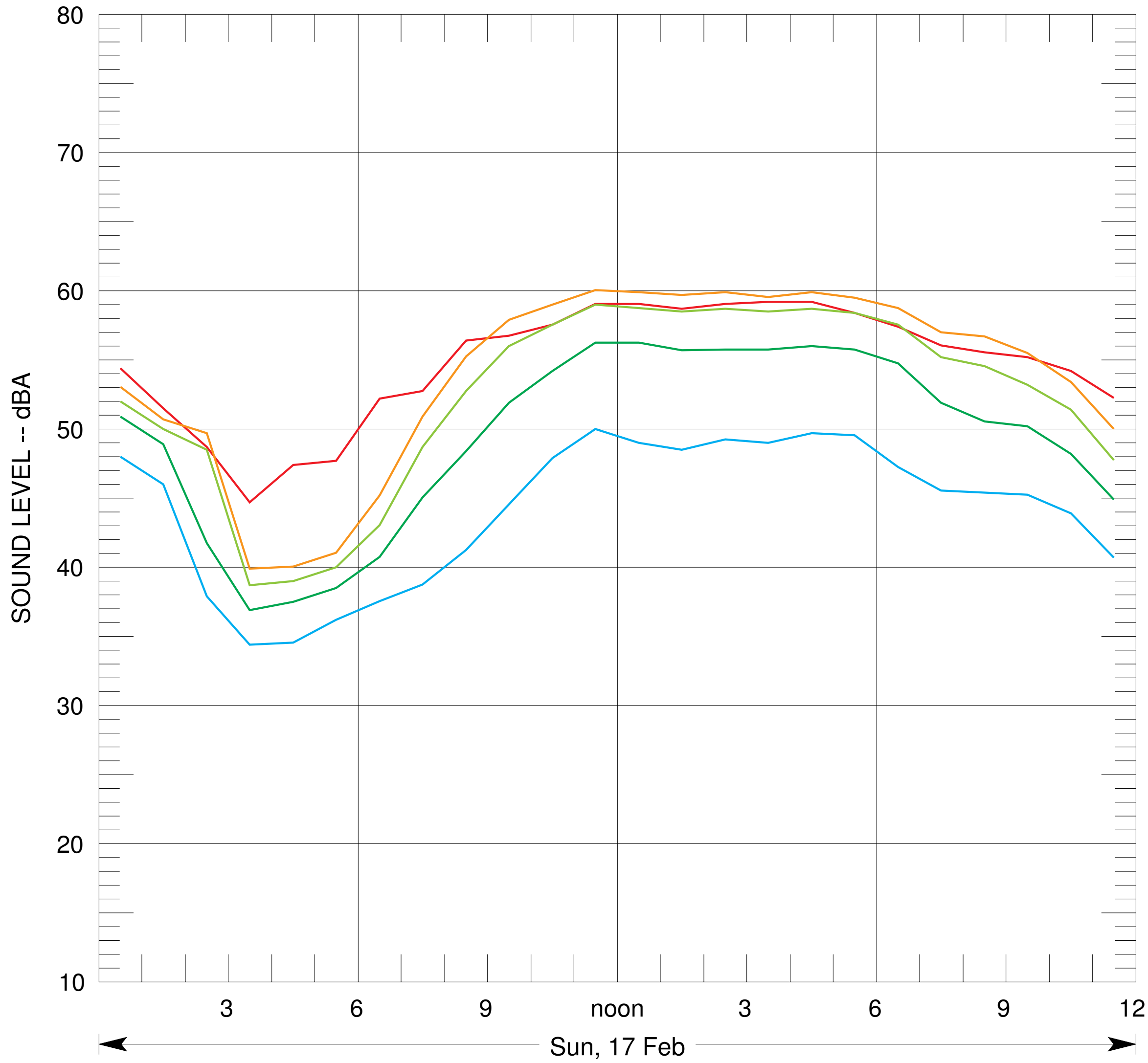


FIGURE B-18 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)



Leq CNEL = 59.9 Lday = 58.1
L25 Ldn = 59.5 Leve = 55.6
L33 Leq(24) = 56.2 Lnight= 51.4
L50 Pk Hr Leq= 59.1 at 11 AM; 59.2 at 4 PM
L90

FIGURE B-19 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

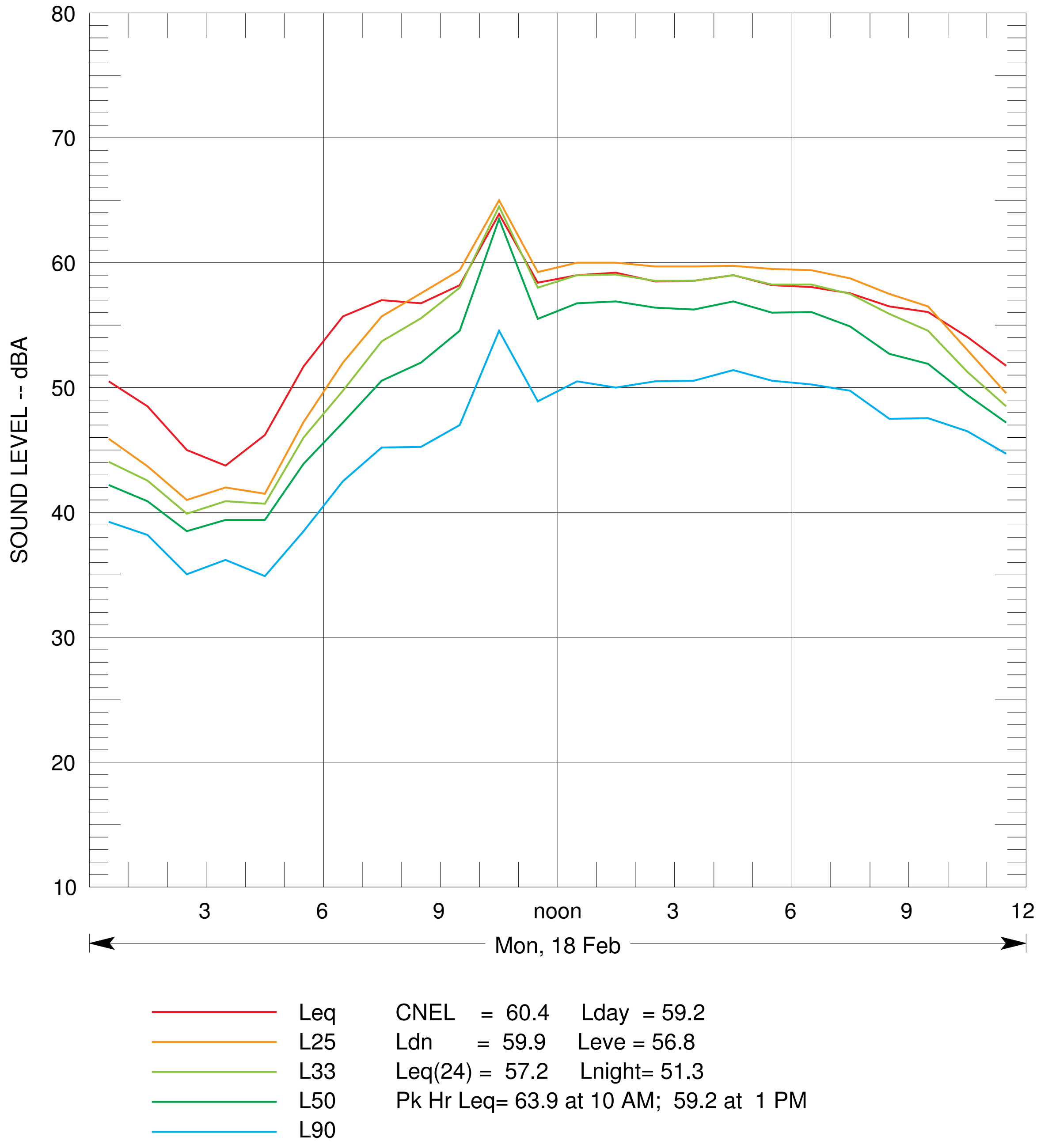


FIGURE B-20 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

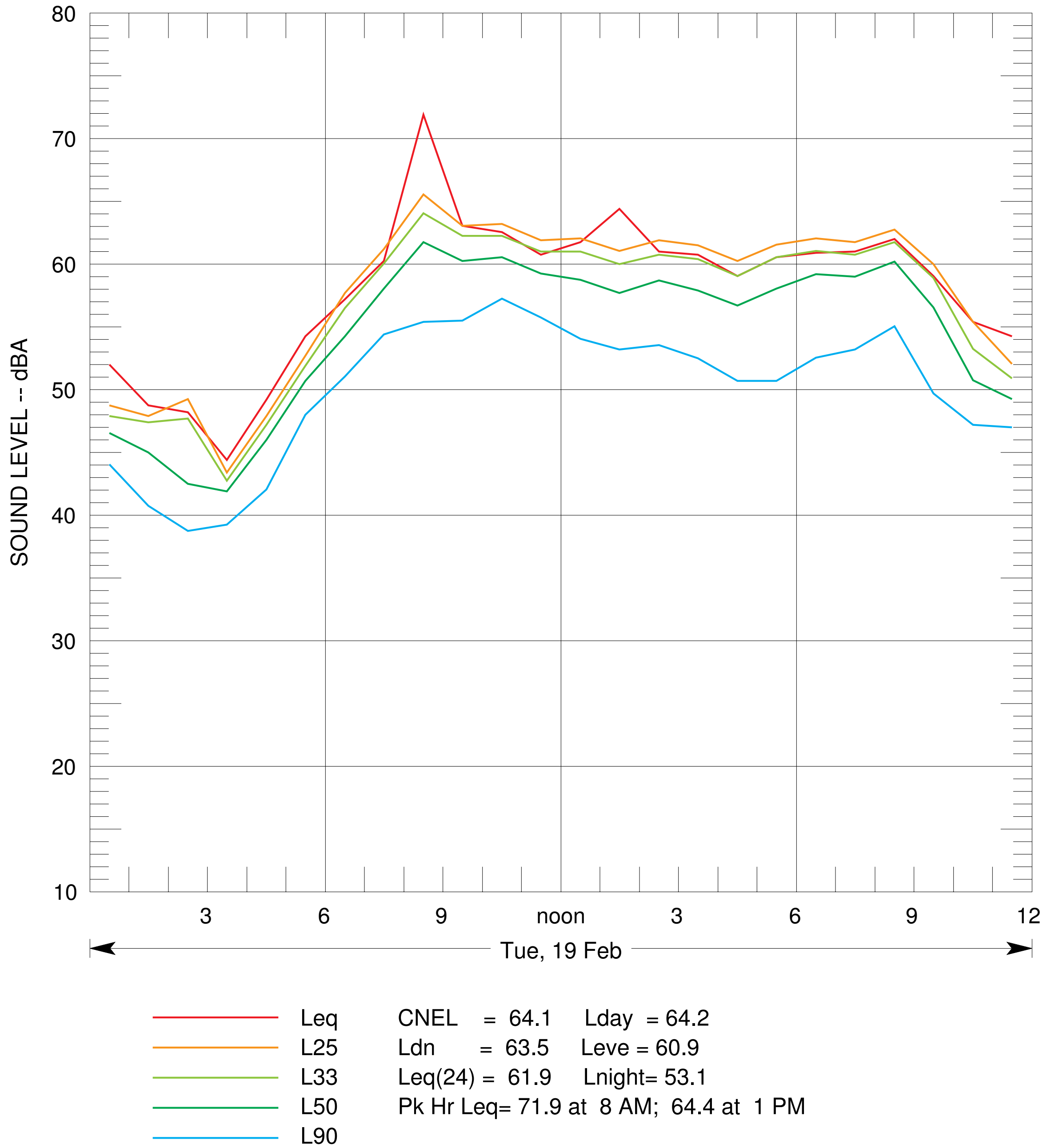


FIGURE B-21 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-3 (3306 CLAREMONT)

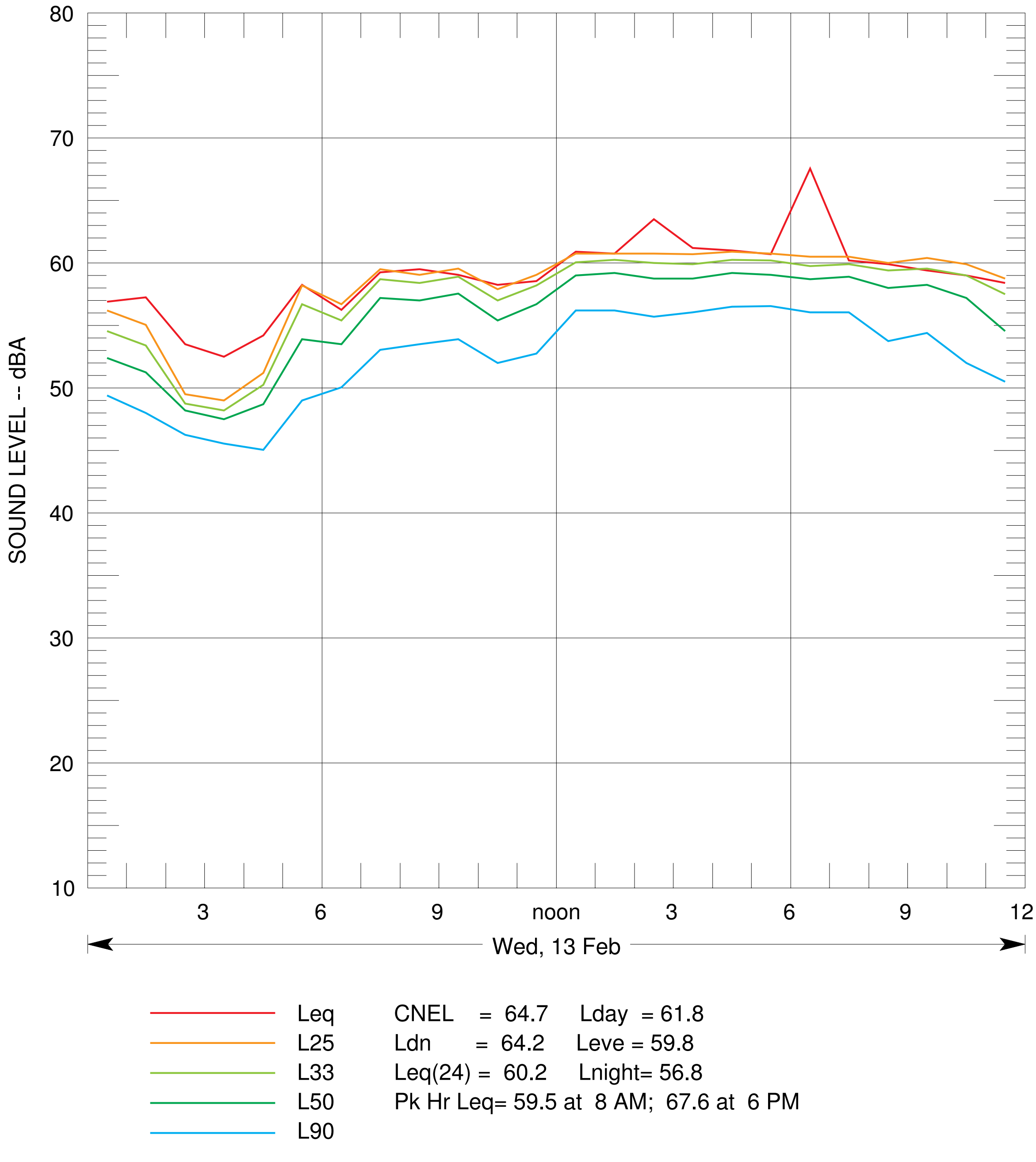


FIGURE B-22 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

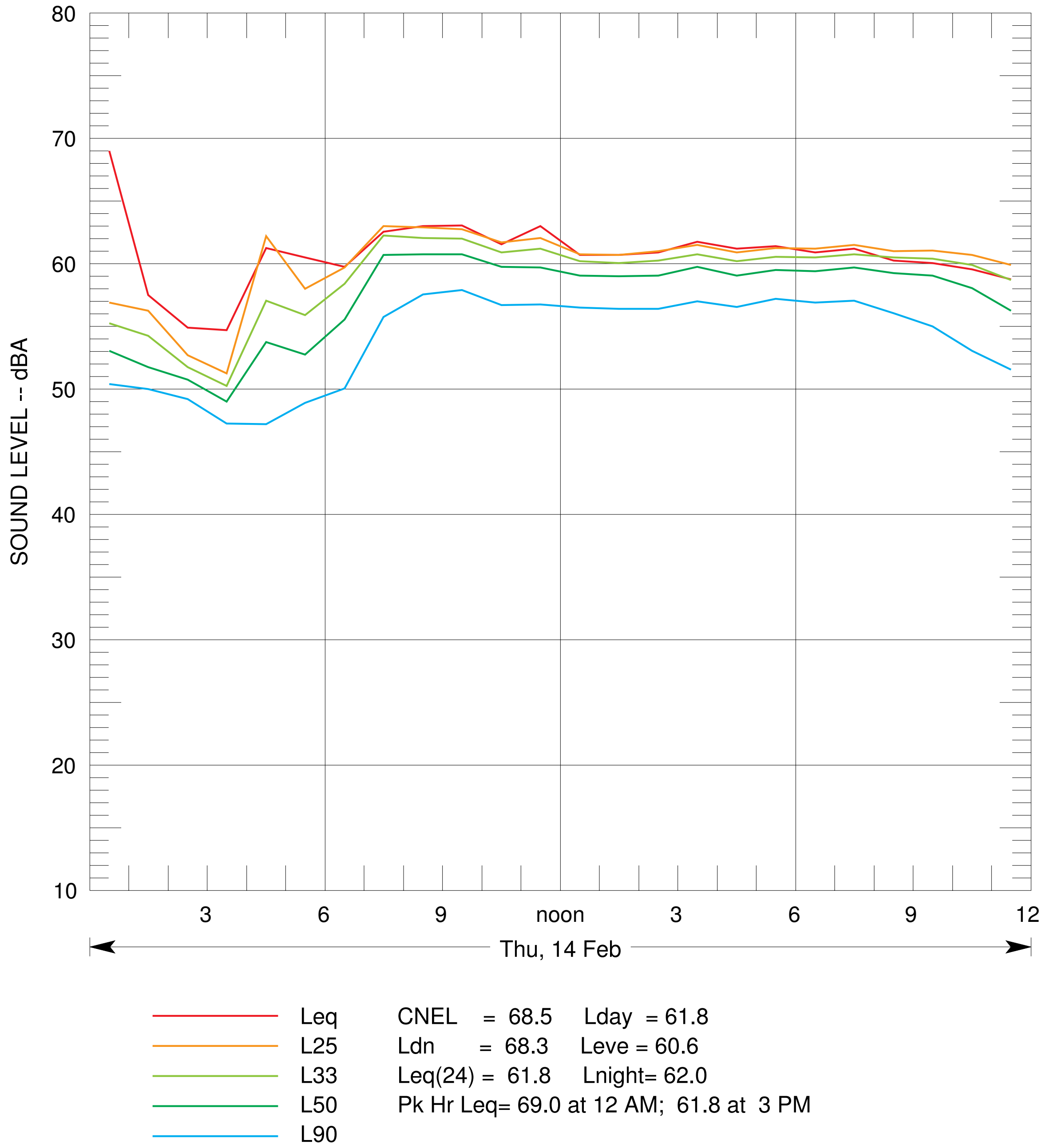


FIGURE B-23 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

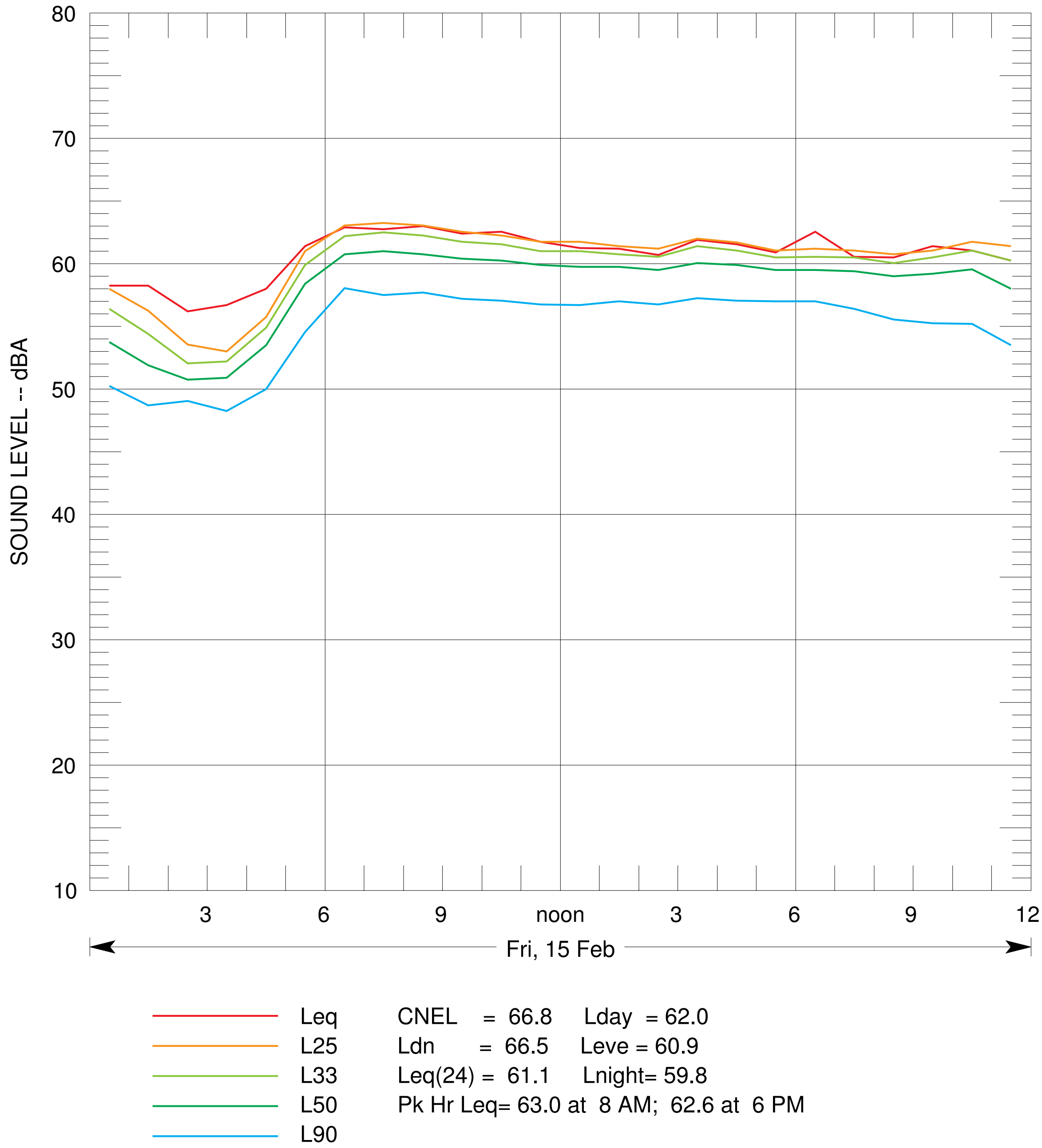


FIGURE B-24 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

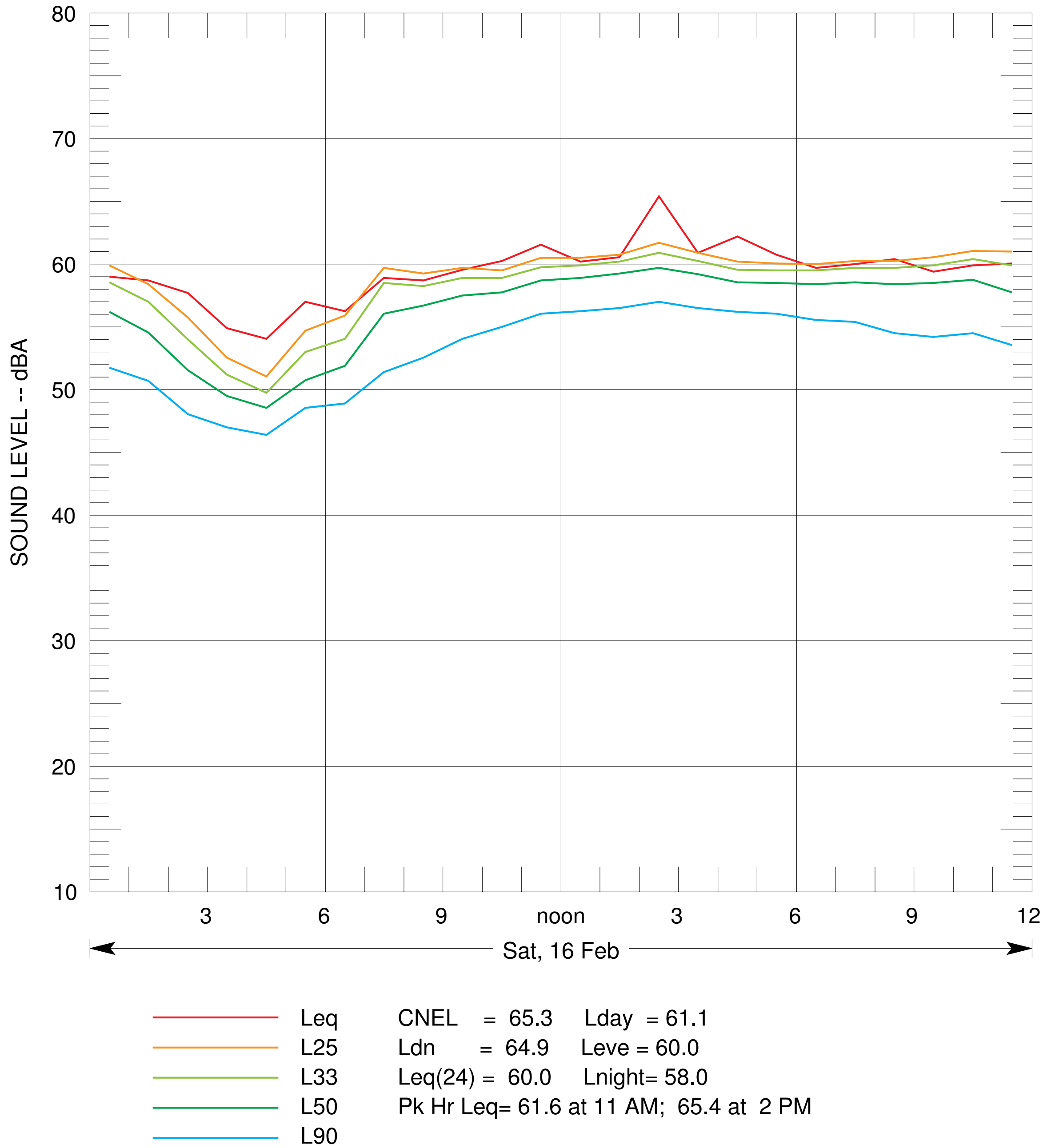


FIGURE B-25 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

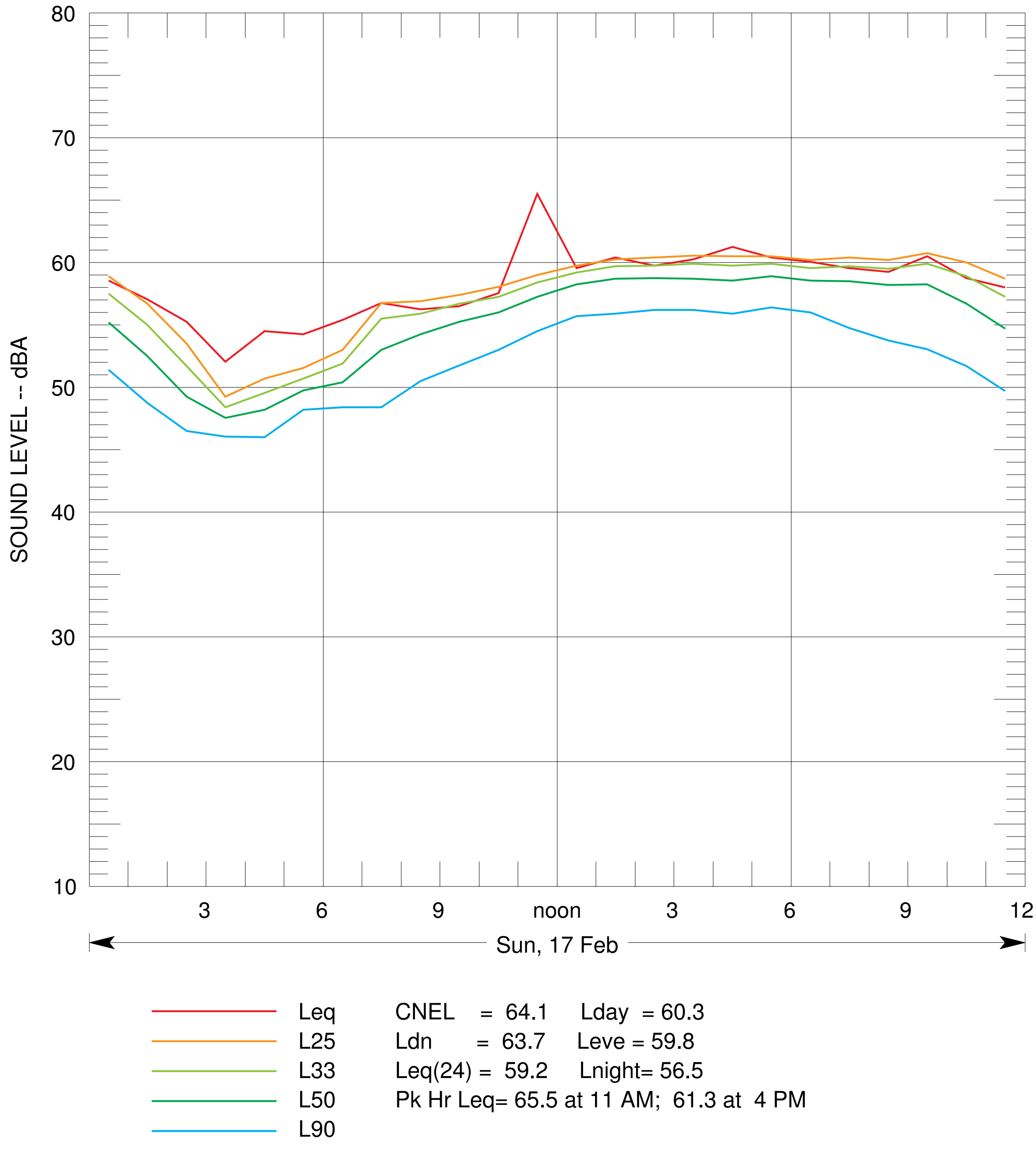


FIGURE B-26 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

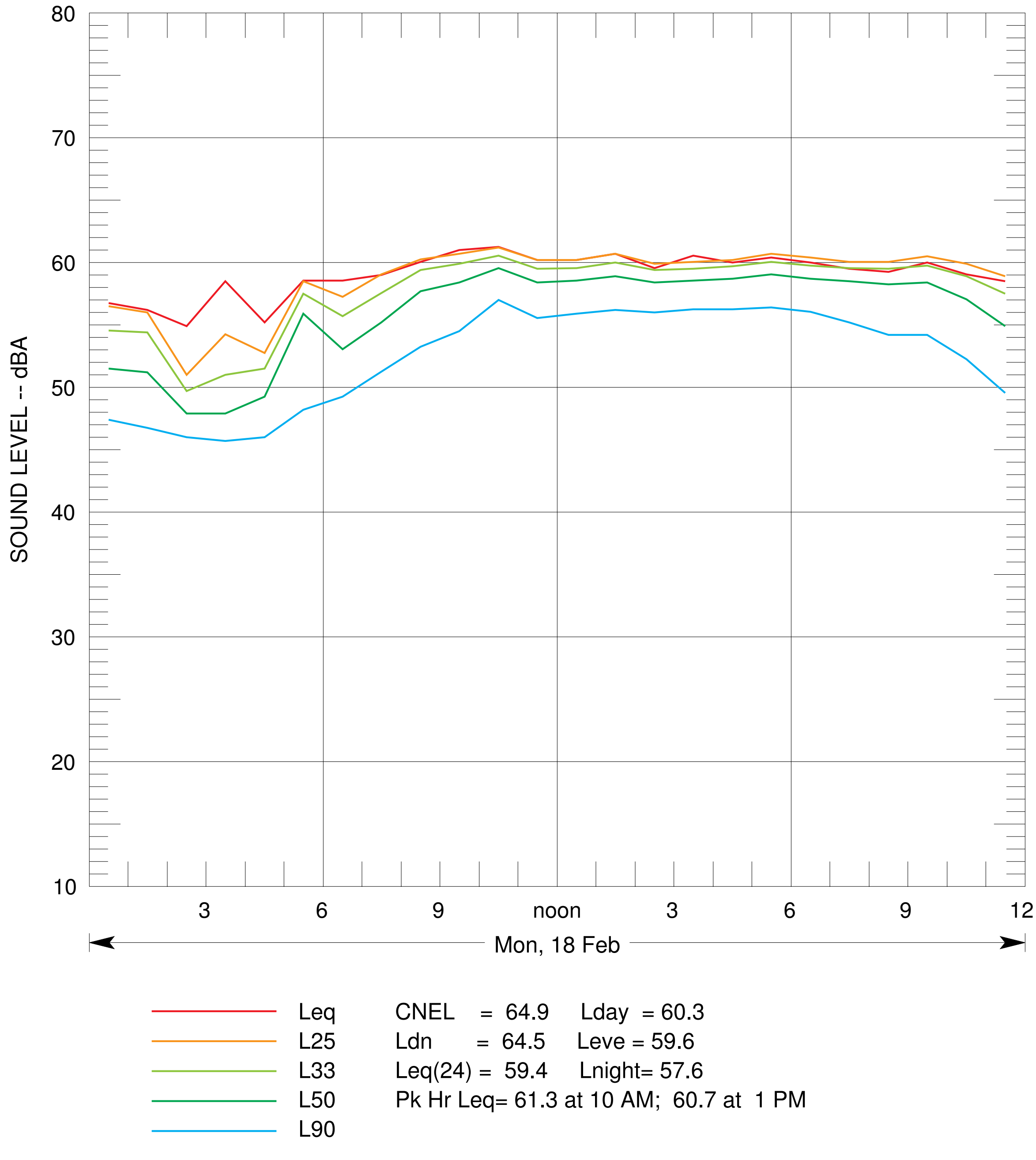


FIGURE B-27 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

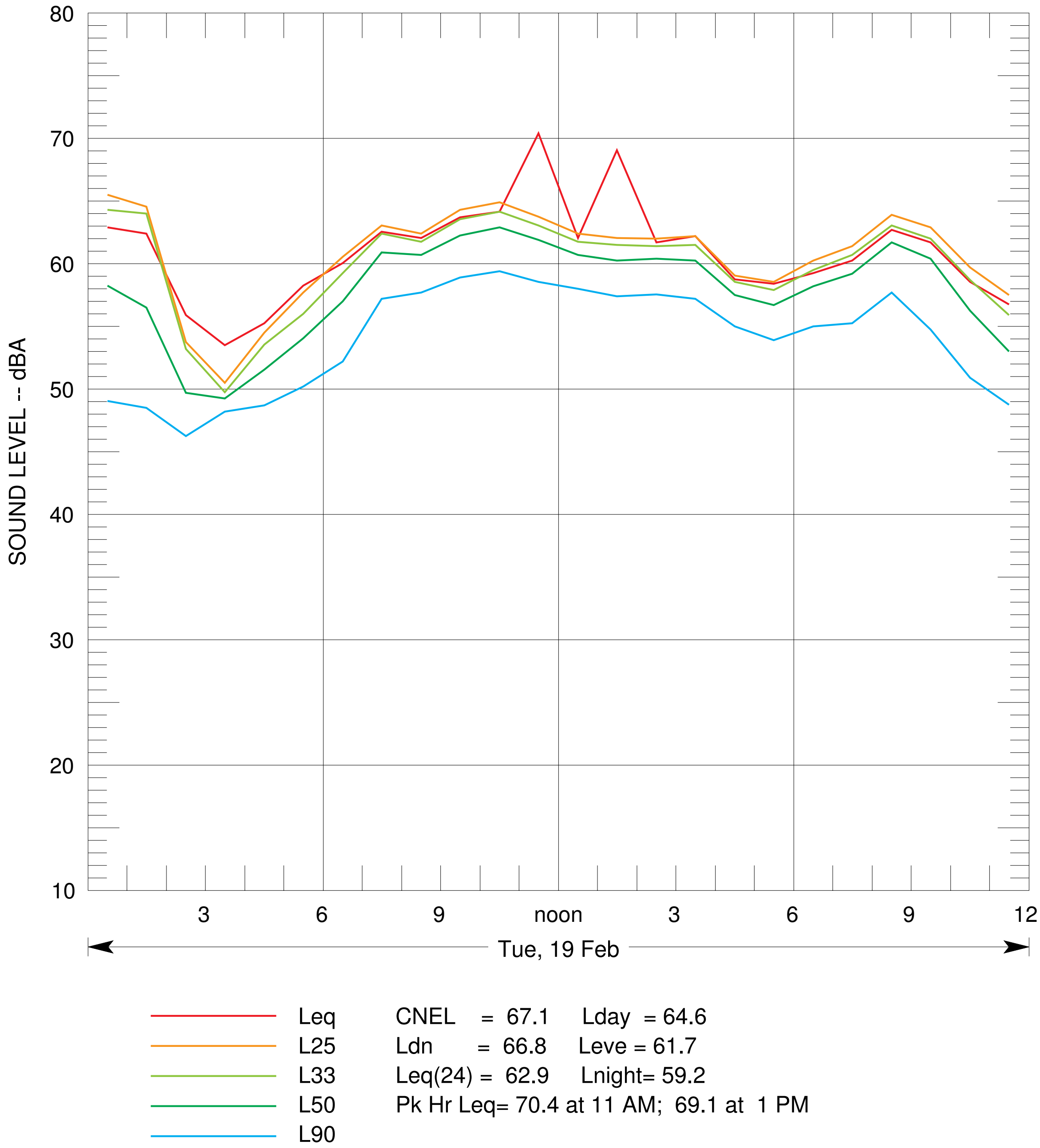


FIGURE B-28 STATISTICAL NOISE LEVELS MEASURED AT LONG-TERM MONITORING LOCATION L-4 (SAFEWAY ROOF)

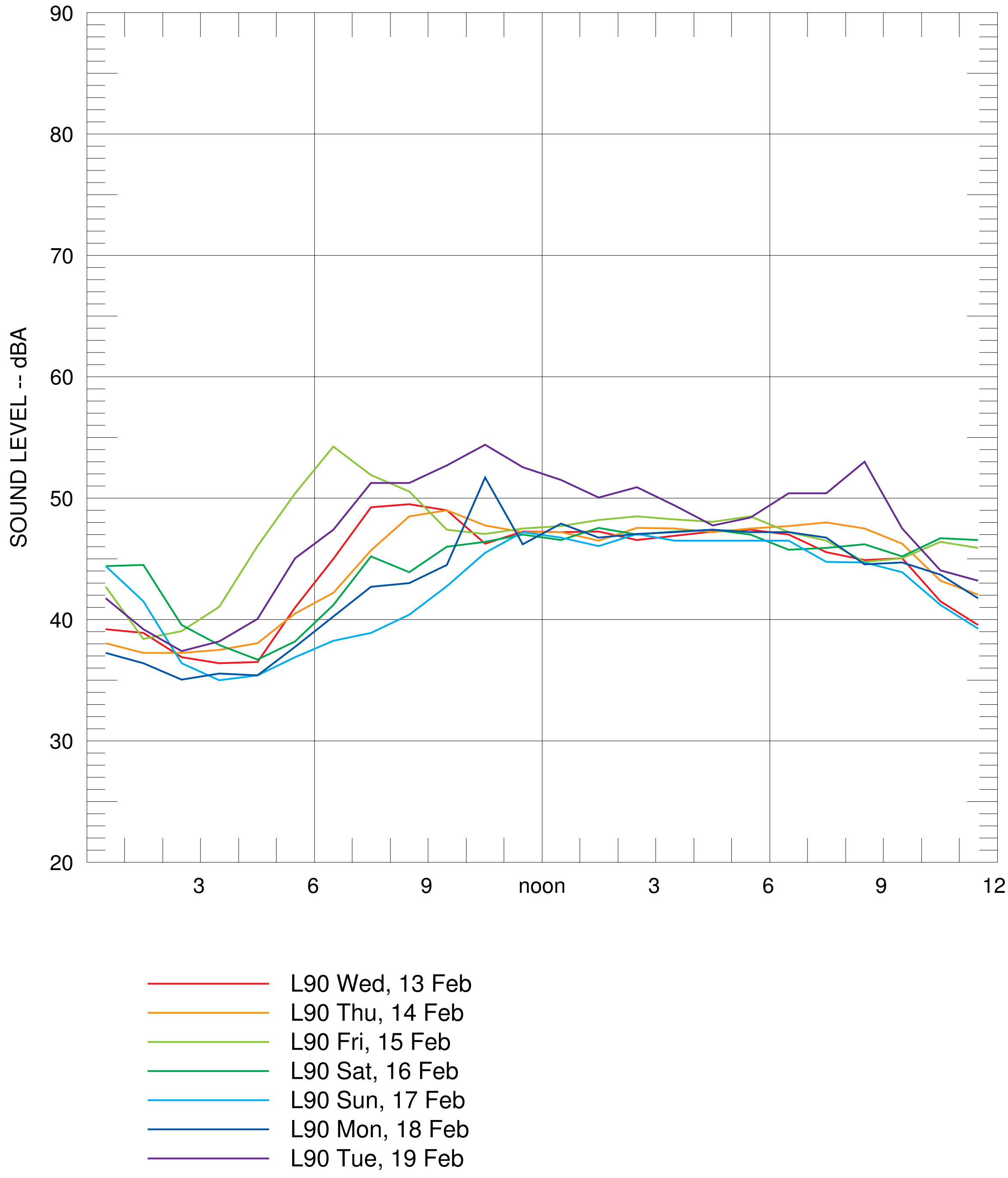


FIGURE B-28 BACKGROUND AMBIENT NOISE LEVELS RECORDED AT LOCATION L-1 (2712 ALCATRAZ) OVER THE FULL SURVEY

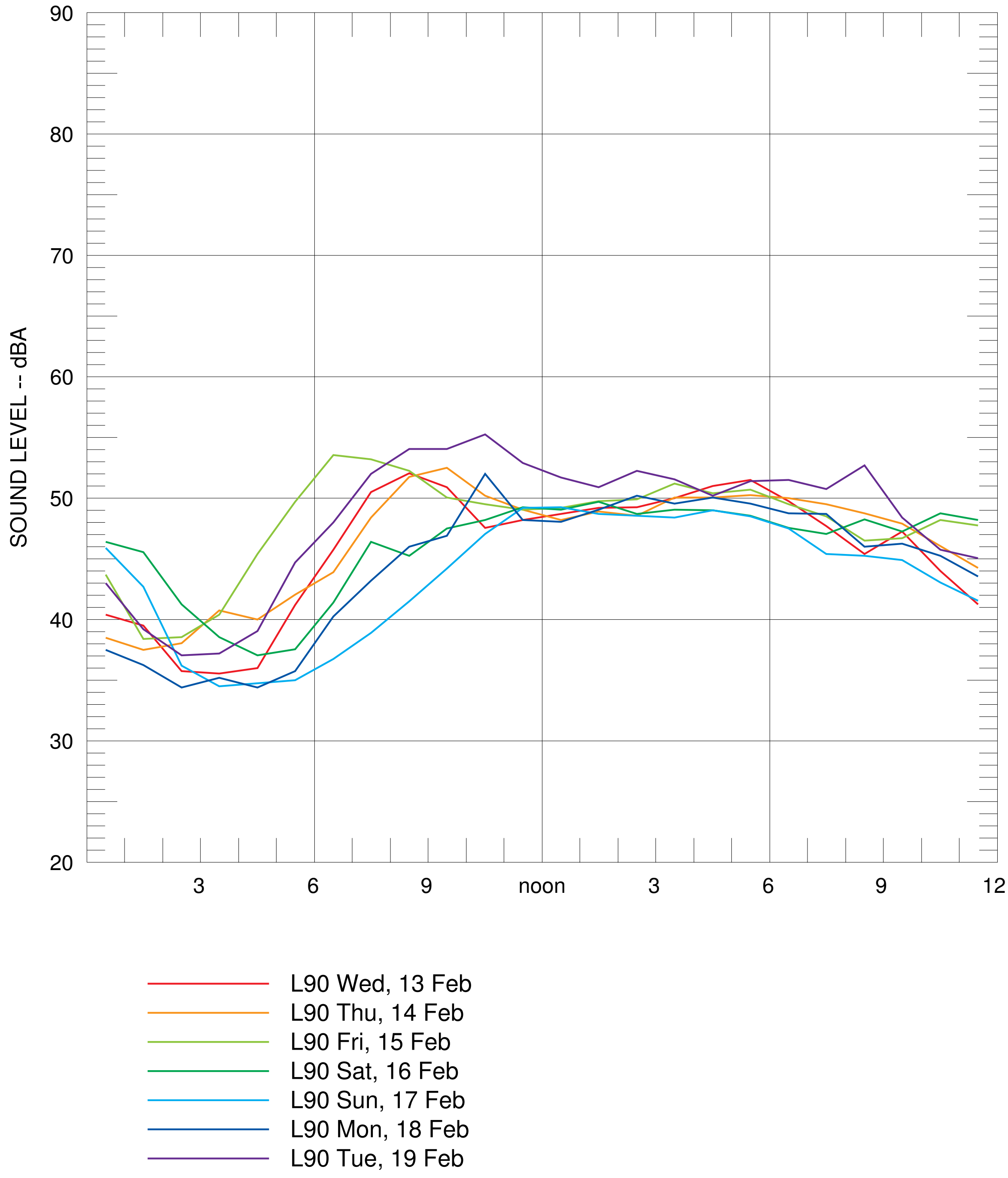


FIGURE B-29 BACKGROUND AMBIENT NOISE LEVELS RECORDED AT LOCATION L-2 (ALCATRAZ AND LEWISTON) OVER THE FULL SURVEY

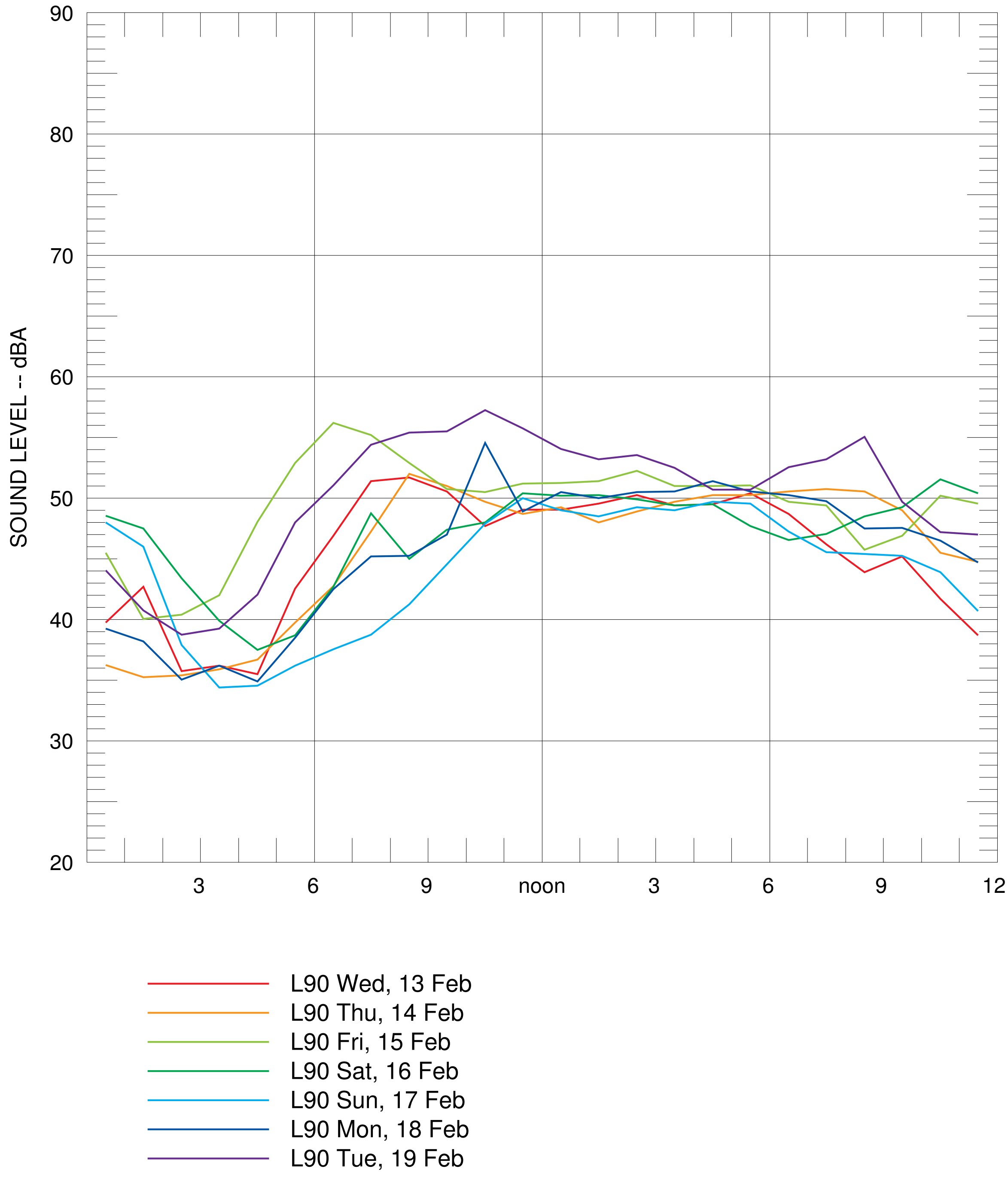


FIGURE B-30 BACKGROUND AMBIENT NOISE LEVELS RECORDED AT LOCATION L-3 (3306 CLAREMONT) OVER THE FULL SURVEY

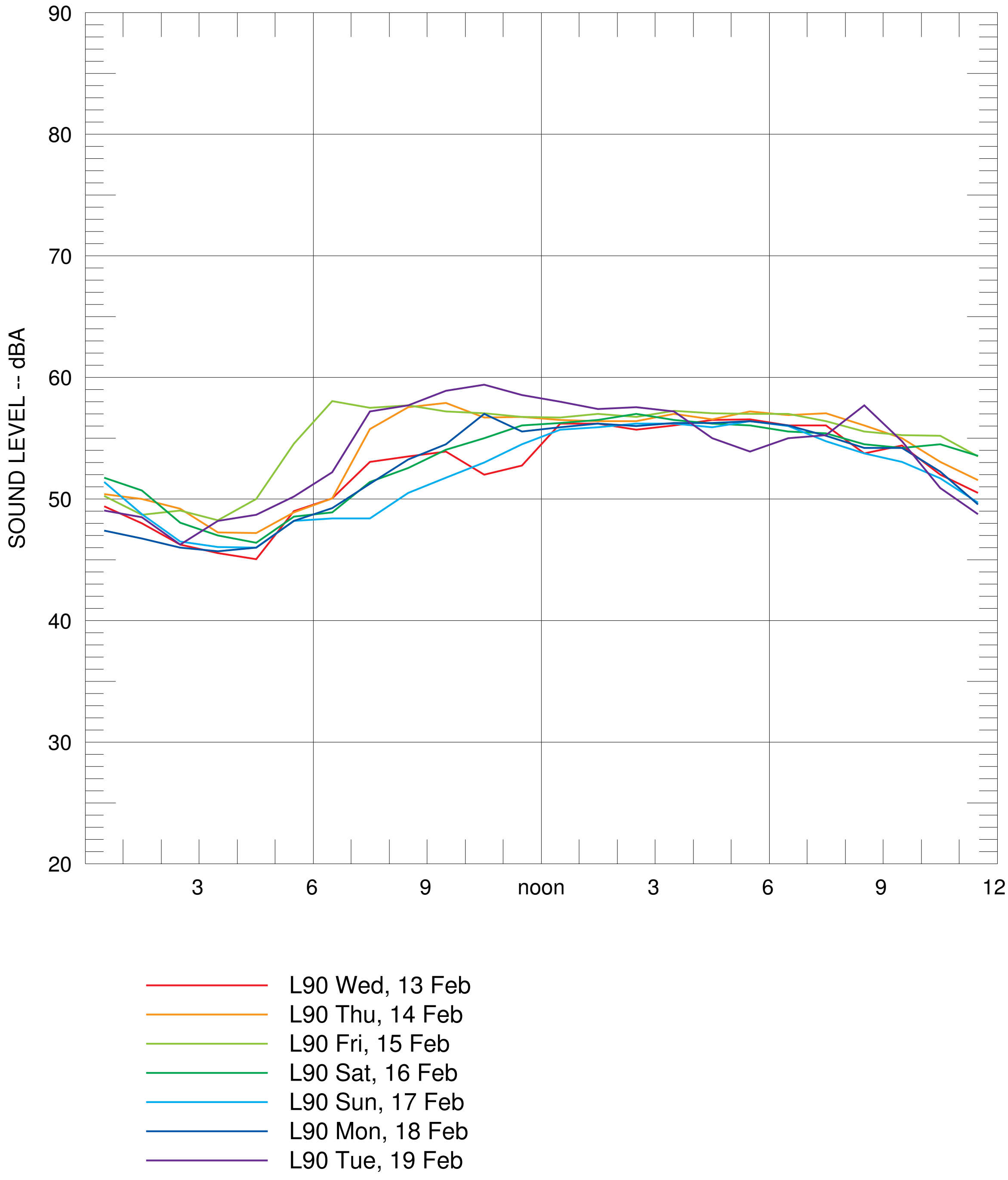


FIGURE B-31 BACKGROUND AMBIENT NOISE LEVELS RECORDED AT LOCATION L-4 (SAFEWAY STORE ROOF OVERLOOKING COLLEGE) OVER THE FULL SURVEY

Appendix N

NOP and Responses to NOP

INITIAL STUDY AND ENVIRONMENTAL REVIEW CHECKLIST

California Environmental Quality Act (CEQA)

1.	**Project Title:**	Safeway Shopping Center – College and Claremont Avenues
2.	**Lead Agency:**	City of Oakland Community and Economic Development Agency Planning Division 250 Frank H. Ogawa Plaza, Suite 3315 Oakland, CA 94612
3.	**Contact Person:**	Peterson Vollmann, Planner III 510/238-6167 pvollman@oaklandnet.com
4.	**Project Location:**	6310 College Avenue Oakland, CA 94618
5.	**Project Sponsor's Name and Address:**	Safeway, Inc. 5918 Stoneridge Mall Road Pleasanton, CA 94588-3229 Attn.: Todd Paradis 925/467-2078/FAX 925/467-2861 todd.paradis@safeway.com
6.	**General Plan Designation:**	Neighborhood Center Mixed Use
7.	**Zoning:**	C-31, Special Retail
8.	**Description of Project:**	

Project Location. The project site is located at 6320 College Avenue, at the intersection with Claremont Avenue in the Rockridge District of Oakland. See Figure 1, page 3.

Existing Uses. The 2.1-acre project site at the northeast corner of College and Claremont Avenues is presently occupied by an existing Safeway Store, with approximately 25,000 square feet of floor area, a 96-space surface parking lot, and a Union 76 gasoline station. The Safeway Store at 6310 College Avenue existed in its present configuration for over 40 years.

Project Description. The project would involve demolition of the existing 25,000-square-foot store, parking lot and service station and construction of a two-story, approximately 64,860-square-foot building that would contain a 50,400-square-foot Safeway supermarket, about 11, 500 square feet of ground-floor retail spaces (for approximately eight retail shops), and a partially below-grade parking garage with about 173 parking spaces.

In summary, the main features of the project would include:

- 8 new retail storefronts on College Avenue, totaling 11,572 square feet
- A public, retail-lined walk-street
- A 2,839 square-foot, publicly accessible roof top garden
- Access to roof top garden from Safeway bridge and walk-street stairs
- Access lobbies to second level Safeway
- Access lobbies also connect to on-grade public parking beyond
- Single entry to garage on College, at 63rd Street
- Two entries to garage off Claremont
- Dedicated employee parking and loading area off Claremont Avenue
- 10-foot landscaped setback from Alcatraz Avenue neighbors

A detailed project description is provided below as Item 12.

9. Surrounding Land Uses and Setting:

College and Claremont Avenues bound the project site on two sides. Both streets are major arterials, and the land uses opposite the site on both is predominately commercial. The land use adjacent to the site on the north is residential; the rear yards of approximately eight single family homes abut the parcel. Six of these homes front on Alcatraz Avenue, while one faces College Avenue and one is on Claremont Avenue. The surrounding land uses are documented more specifically on Figure 2, page 4, which shows the outlines and use of all the surrounding structures.

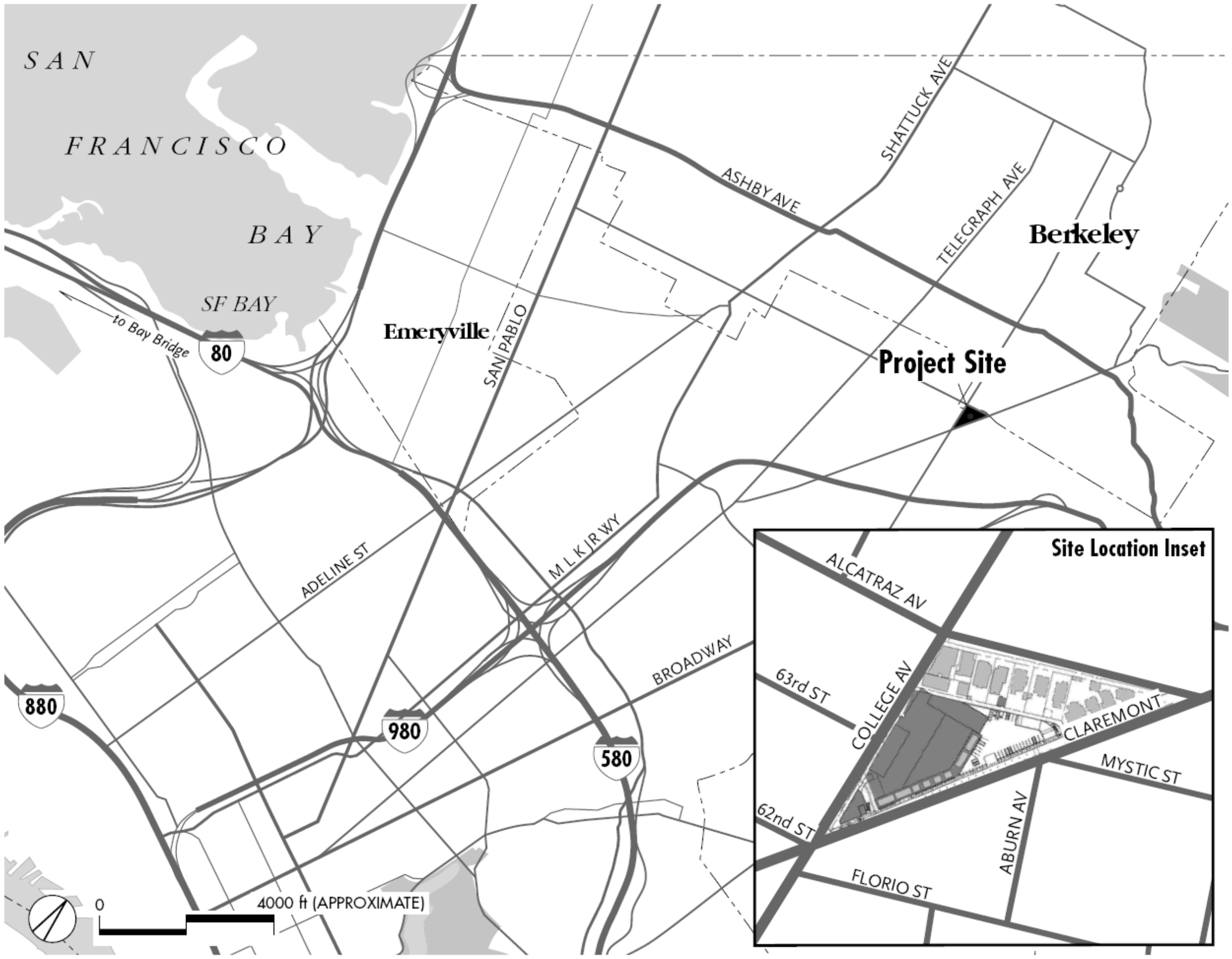
10. Actions/permits which may be required, and for which this document provides CEQA clearance, include without limitations: (e.g. permits, financing approval, or participation agreement, etc.)

Four Conditional Use Permits:

- General Food Sales (*Planning Code* 17.48.040)
- Alcohol Beverage Sales (*Planning Code* 17.48.040)
- Size in excess of 7,500 square feet (*Planning Code* 17.48.080)
- Driveways on College and Claremont Avenues (*Planning Code* 17.48.070)

Minor Variances for reduced parking and loading

Tentative Parcel Map for commercial condominiums



Source: During Associates

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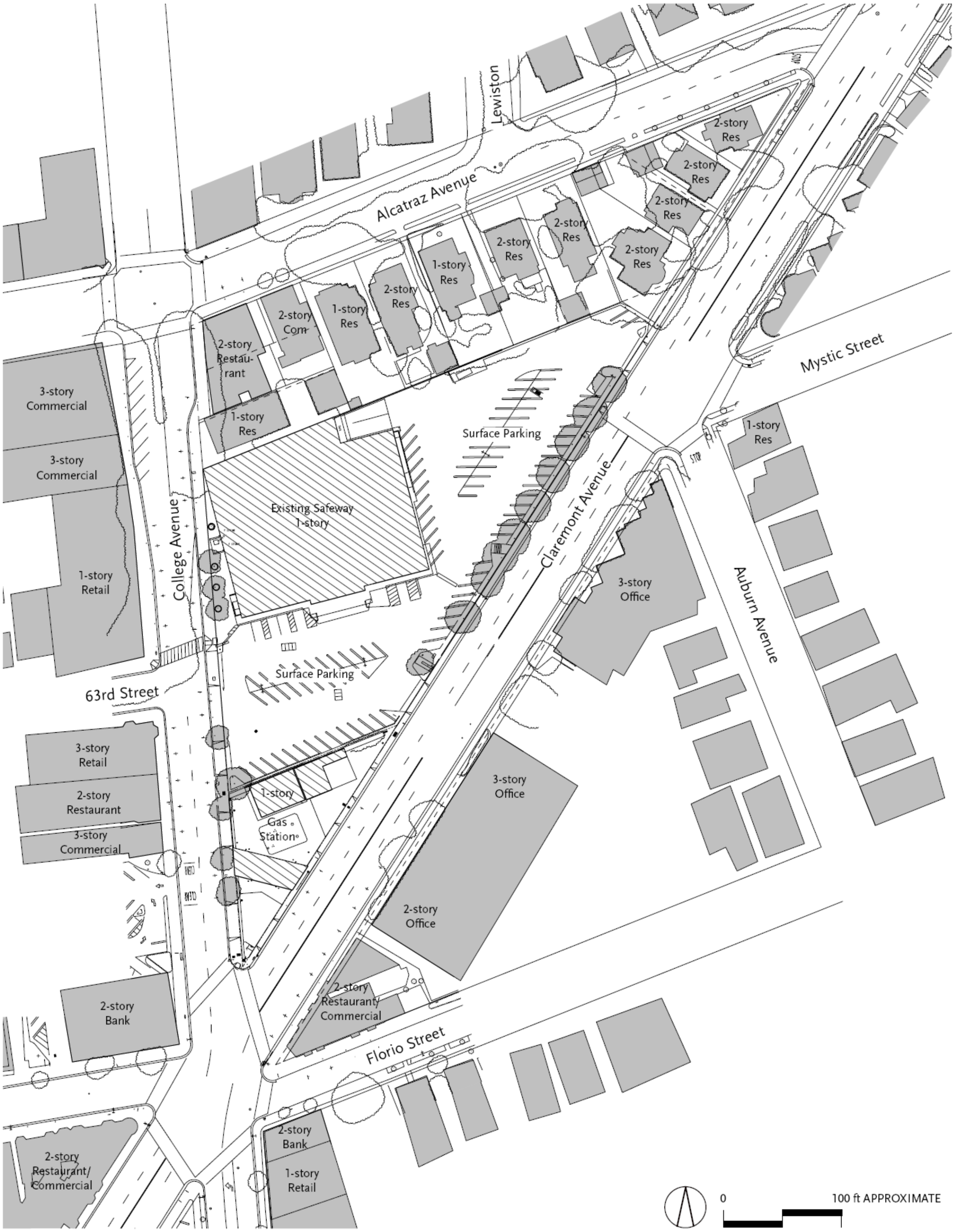
Proposed Project Location Figure 1



Source: Lowney Architecture

9-16-09

Existing Site Plan Figure 2

11. Other Public Agencies Interested in the Project:

San Francisco Bay Regional Water Quality Control Board (RWQCB)

12. Detailed Project Description:

Project Location and Site Characteristics

The proposed project site is a triangular shaped parcel at the north side of the triangle formed by the intersection of College and Claremont Avenues in north Oakland. The Assessor's Parcel Number is 048A-7070-001-01. The site contains 2.1 acres and slopes gently from the northeastern corner, where the elevation is about 221 feet to the southern corner, at 203 feet. The site currently contains a Safeway store with about 25,000 square feet. It is a one-story masonry building on a flat concrete pad, at elevation 207 feet. The Safeway store provides approximately 106 parking spaces on the east and south sides, and a loading dock at the north side. The parking lot can be accessed from two driveways on College Avenue and two on Claremont. The site has a retaining wall along the Claremont frontage, with a row of landscape trees planted between the wall and the sidewalk.

The southern corner of the parcel houses a Union 76 gasoline and service station featuring a small building of about 1,120 square feet, a covered service area, a canopy over the gasoline pumps, and multiple curb cuts on College and Claremont Avenues to facilitate access. The gas station site is paved with asphalt or concrete and contains several underground gasoline storage tanks.

The northern boundary of the site lies along the Oakland/Berkeley City Limit line, and is marked by a wooden fence and by the northern wall of the Safeway store, which is built on the property line. The parcel abuts eight Berkeley lots, six with frontages on Alcatraz Avenue, while one fronts on College Avenue and the other fronts on Claremont Avenue. All of these abutting parcels are developed with single-family homes, although one has been converted to a commercial use.

The College Avenue frontage is defined by a 10-foot-wide sidewalk, with several street trees as well as some landscaping trees planting adjacent to the sidewalk on the Safeway parcel. It is a narrow street (40 feet wide) with significant of pedestrian traffic, drawn to the small shops and stores found on the block. 63rd Avenue intersects College at a T-intersection opposite one of the driveways onto the Safeway site.

Claremont Avenue is 56 feet wide adjacent to the site. It is not a pedestrian-oriented retail street, like College, as the buildings along Claremont opposite the site are predominately multi-story office buildings.

Proposed Project

The proposed project would involve demolition and clearing of the entire site, followed by construction of a new two-story building with approximately 64,860 square feet of floor area, including a new Safeway store of 50,400 square feet and eight separate ground-floor retail shops, totaling 11,572 square feet, fronting on College Avenue and on the proposed pedestrian “walk street” to be located near the College/Claremont corner. The site plan, Figure 3, page 7, provides a plan view of the overall coverage, while the ground-floor plan, Figure 4, page 8, clearly depicts the retail shops and “walk street”. The sizes of the retail tenant spaces would range from 435 square feet to 2,729 square feet—the latter being the large shop at the College/Claremont corner. Figure 5, page 9, depicts the project's level plan, and Figures 6 and 7, pages 10 and11, depict project elevations. Figures 8 and 9, pages 12 and 13, show the project sections.

The 10-foot-wide landscaped setback from the northern property line can also be seen on Figures 5 and 6. Except for an intrusion from tenant space 1, on College Avenue, this setback would run the width of the parcel.

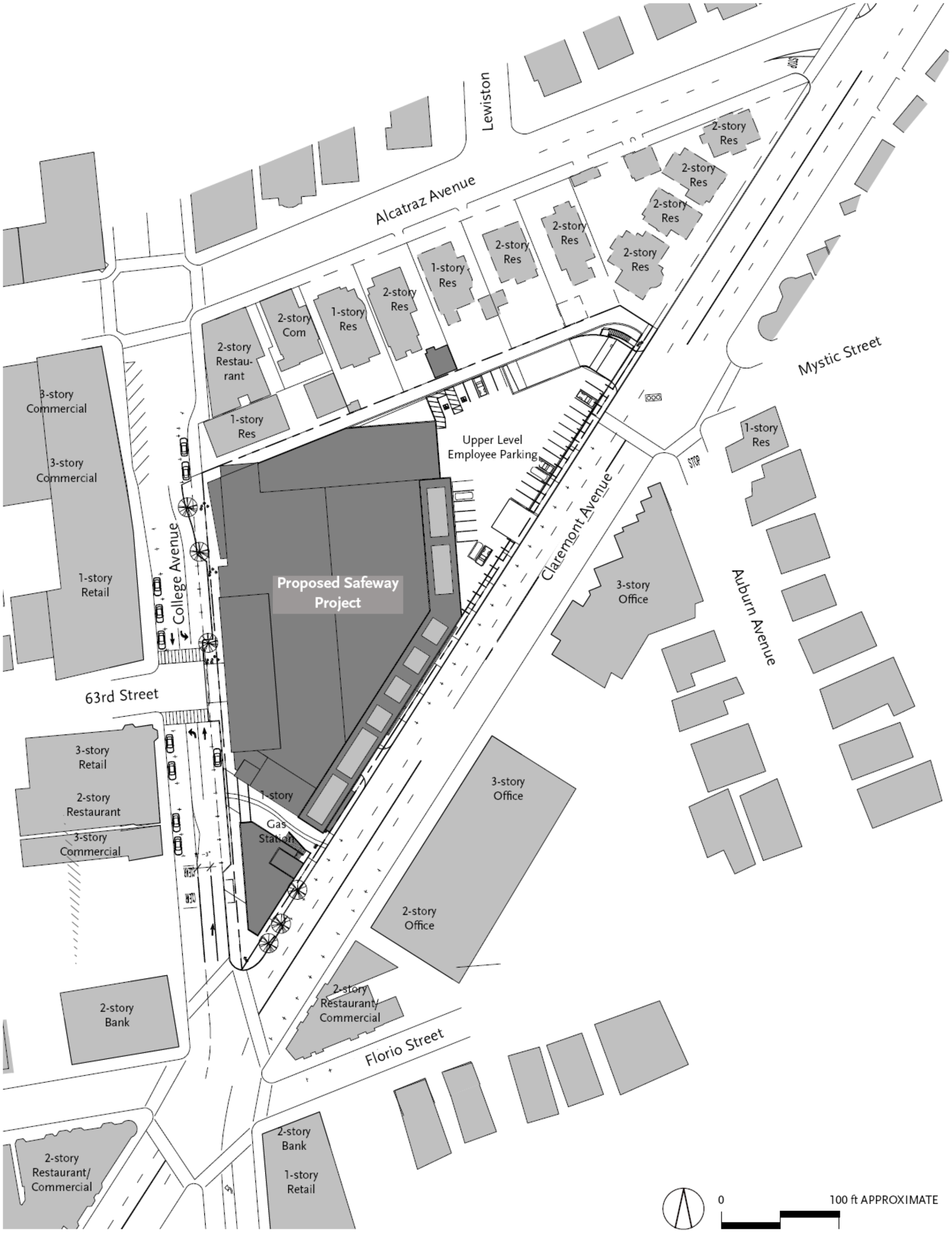
Figure 4 also shows the layout of the first floor of the integrated parking structure. As can be seen, there would be an entrance opposite 63rd Street on the College Avenue side, an entrance off Claremont Avenue relatively close to College Avenue, and a ramp providing access to Claremont Avenue at the northeastern corner of the site, opposite the intersection of Mystic Street, Auburn Avenue and Claremont. The applicant is proposing to signalize this intersection as part of the project. The ground floor would have two lobbies, with stairways and elevators to provide pedestrian access to the Safeway Store above and to the sidewalk on College Avenue and the on-site “walk street.” A total of 145 parking spaces would be provided on the ground floor.

Figure 5 shows the Safeway level. The polygon shaped store would be accessed via the stairways and elevators on the College Avenue side, with goods deliveries occurring at the store level, via a ramp that would bring the trucks in and out via Claremont Avenue to an enclosed loading dock. The truck maneuvering patterns are shown on Figure 7. There would be 28 parking spaces on the upper level. They would be assigned to employees and suppliers, and would not be available to customers.

Figure 5 also depicts the roof top terrace over the free-standing retail shop proposed at the College/Claremont corner. Access would be provided from the Safeway store via a pedestrian bridge over the “walk street,” or from an exterior stairway to the “walk street.”

Elevations and sections are shown in Figures 6 to 9. The exterior of the building would generally have painted plaster surfaces, drawing from a palette of four colors, with significant additions of stacked limestone, corrugated metal and glass in the storefronts.

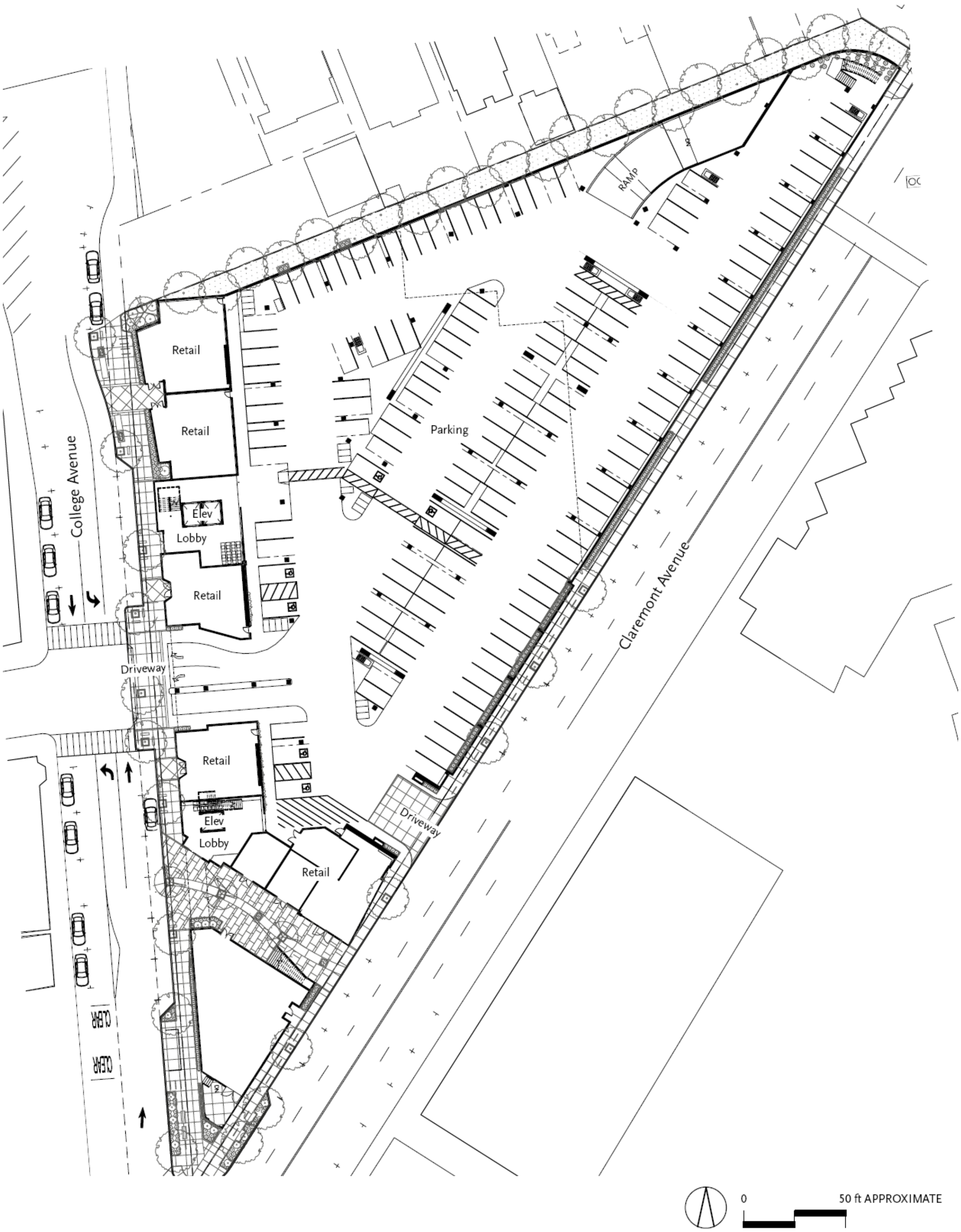
The roof of the Safeway store would be at elevation 236, approximately 33 feet above the low point of the site (at the College/Claremont corner), 30 feet above College Avenue at the northwestern corner of the site and 16.5 feet above Claremont Avenue at the high point of the site, in the northeast corner. The signature tower at the southwest corner of the Safeway store would be forty feet high above College Avenue, elevation 250.5 feet.



Source: Lowney Architecture

9-16-09

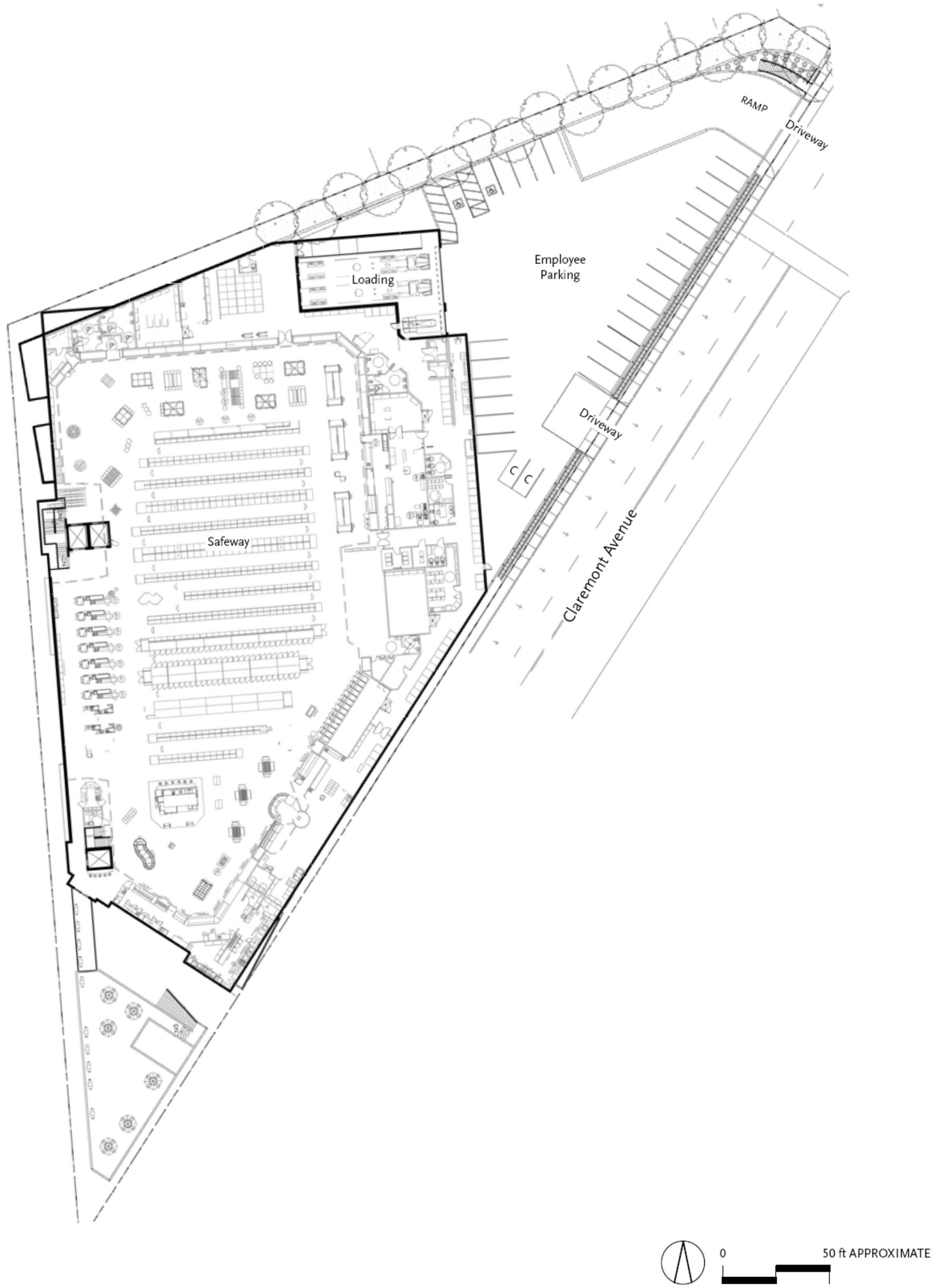
Project Site Plan Figure 3



Source: Lowney Architecture

9-16-09

Proposed Ground Floor Plan Figure 4



Source: Lowney Architecture

9-16-09

Proposed Safeway Level Plan Figure 5

Proposed Project Elevations Figure 6

Walkway Elevation—North

Walkway Elevation—South

Claremont Avenue—Northeast Elevation

0 50 ft APPROXIMATE

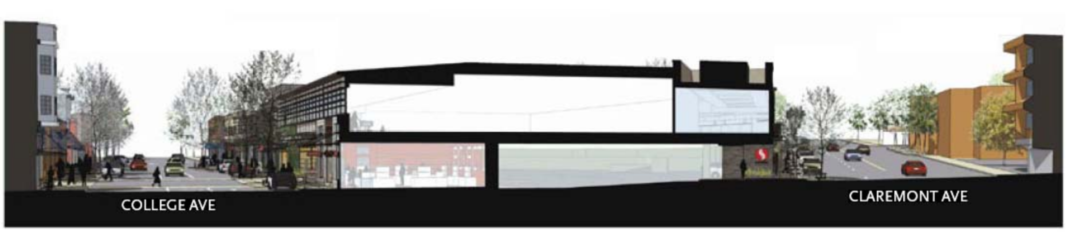
Source: Lowney Architecture

10-26-09

Proposed Project Elevations Figure 7

Section at Building Corner (not-to-scale)

Section at Walk Street (not-to-scale)



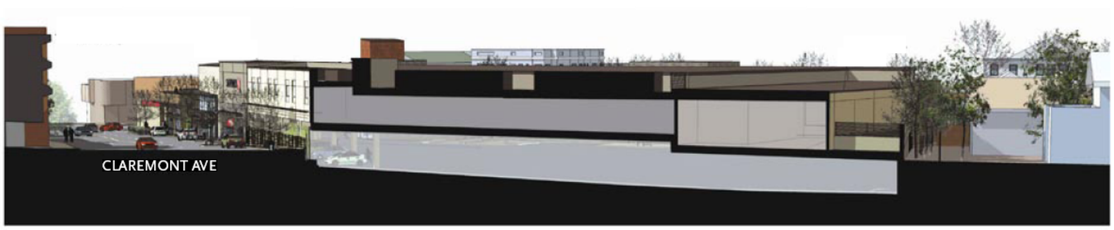
Section Near 63rd Street (not-to-scale)

Source: Lowney Architecture

10-26-09

Proposed Project Sections Figure 8

Section at Parking Entrance (not-to-scale)



Section at Northern Neighbors (not-to-scale)

Section at North End of Retail (not-to-scale)

Source: Lowney Architecture

10-26-09

Proposed Project Sections Figure 9

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages, which will be further studied in the EIR. No other environmental factors will be further studied in the EIR.

☐	Aesthetics	☐	Agriculture Resources	■	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☐	Hazards & Hazardous Materials	☐	Hydrology/Water Quality	☐	Land Use/Planning
☐	Mineral Resources	■	Noise	☐	Population/Housing
☐	Public Services	☐	Recreation	■	Transportation/Traffic
☐	Utilities/Service Systems	☐	Mandatory Findings of Significance		

DETERMINATION

On the basis of this initial study:

I find that the proposed project COULD NOT have a significant effect on the environment with Uniformly Applied Development Standards imposed as conditions of approval, and a NEGATIVE DECLARATION will be prepared.	☐
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because mitigation measures and Uniformly Applied Development Standards have been imposed on the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	☐
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required that will further study: **air quality, noise, and transportation and traffic.** No other environmental factors will be further studied.	■
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	☐

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required. ☐

10/29/09

Signature
Peterson Vollmann
Title: Planner III

Scott Miller 10-30-09

Date
For Scott Miller,
Zoning Manager, CEDA

EVALUATION OF ENVIRONMENTAL IMPACTS

CEQA requires that an explanation of all answers be provided along with this checklist, including a discussion of ways to mitigate any significant effects identified.

Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, less than significant with development standards, or less than significant. As defined here, a "Potentially Significant Impact" is appropriate if the significant effect is considered to have a substantial or potentially substantial adverse effect on the environment. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

A "Less than Significant with Mitigation" answer applies where incorporation of a mitigation measure has reduced an effect from a "Potentially Significant Impact to a "Less-than-Significant Impact" The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant-level.

A "Less than Significant with Development Standard" answer applies where incorporation of a development standard has reduced an effect from a "Potentially Significant Impact to a "Less-than-Significant Impact." The City's Uniformly Applied Development Standards are incorporated into projects as conditions of approval regardless of a project's environmental determination. As applicable, the Uniformly Applied Development Standards are adopted as requirements of an individual project when it is approved by the City and are designed to, and will, substantially mitigate environmental effects. In reviewing project applications, the City determines which of the standard conditions are applied, based upon the zoning district, community plan, and the type(s) of permit(s)/approvals(s) required for the project. Depending on the specific characteristics of the project type and/or project site, the city will determine which Development Standards apply to each project; for example, Development Standards related to creek protection permits will only be applied projects on creekside properties.

The Development Standards incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. Where there are peculiar circumstances associated with a project or project site that will result in significant environmental impacts despite implementation of the Development Standards, the City will determine whether there are feasible mitigation measures to reduce the impact to less-than-significant levels in the course of appropriate CEQA review (mitigated negative declarations or EIRs).

A "Less-than-Significant Impact" answer applies where the project creates no substantial or potentially substantial adverse effect on the environment.

A "No Impact" answer applies where a project does not create any impact in that category. A "No Impact" answer needs to be adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact answer is adequately supported if the referenced information sources show that the impact simply doesn't apply to projects like the one under involved. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

EVALUATION OF ENVIRONMENTAL EFFECTS

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Standard Condition of Approval	Less Than Significant Impact	No Impact
I. AESTHETICS—Would the project:					
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or locally designated scenic highway?	☐	☐	☐	☐	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	■	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	■	☐	☐
e) Introduce landscape that now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986)?	☐	☐	☐	■	☐
f) Cast shadows that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors?	☐	☐	☐	■	☐
g) Cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space?	☐	☐	☐	☐	■
h) Cast shadow on an historic resource, as defined by CEQA Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local Register of Historic Resources or a historical resource survey form (DPR Form 523) with a rating of 1–5?	☐	☐	☐	☐	■
i) Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the Provision of adequate light related to appropriate uses?	☐	☐	☐	■	☐
j) Create winds exceeding 36 mph for more than 1 hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or b) the project is located in Downtown?	☐	☐	☐	☐	■

Discussion:

a) and b): The project site is at a commercial corner with urban vistas in all directions featuring a variety of building styles, massing and heights. College Avenue, which is narrower and features denser street tree coverage, has a more intimate appearence than Claremont Avenue, and is pedestrian oriented with a variety of small shops and detailed displays in the windows. The view north on College Avenue, along the site's western side, is more attractive than along Claremont Avenue, but compromised somewhat by views of the gas station canopy and driveway, the drab, blank wall of the existing Safeway store, and the parking lot.

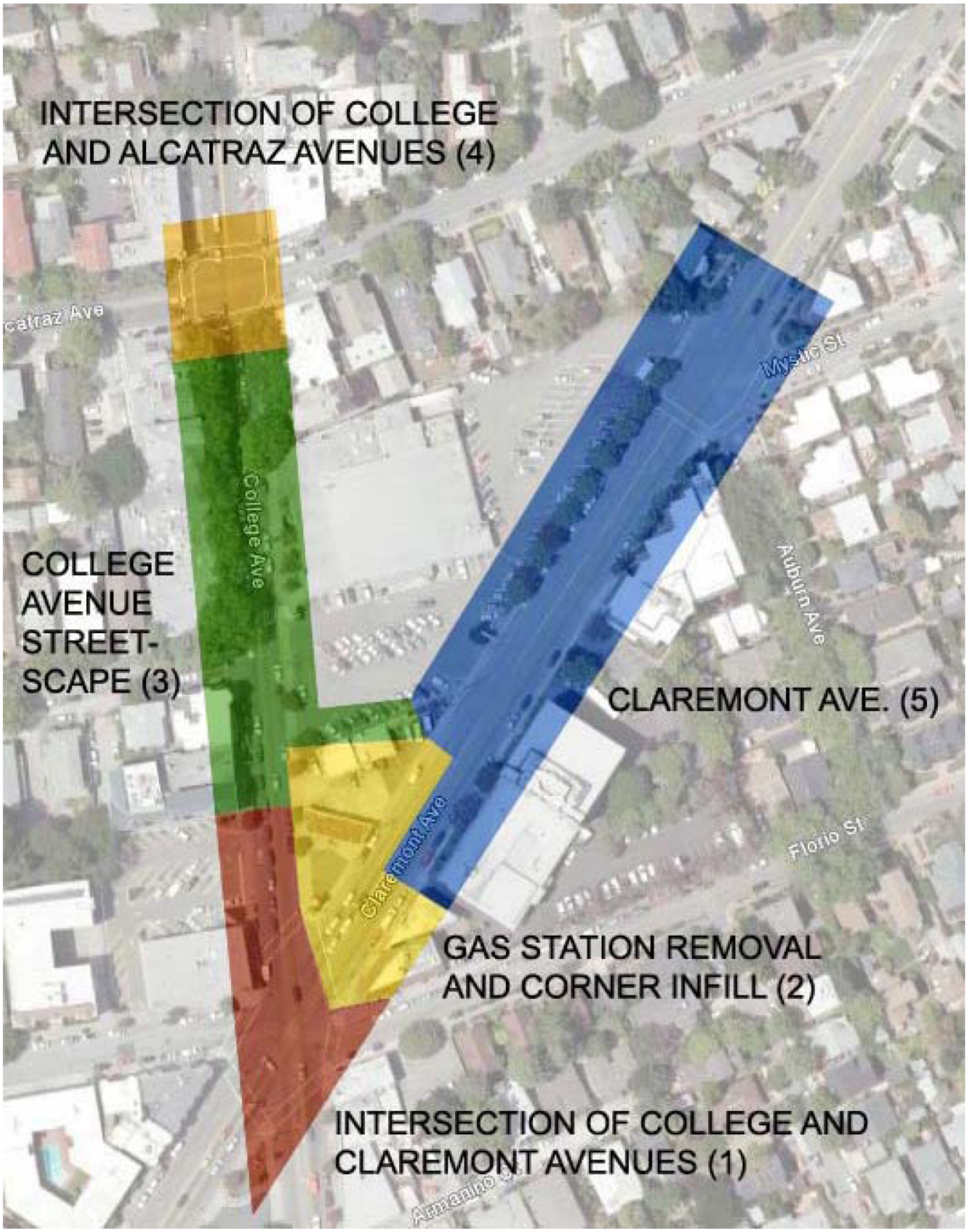
The existing Safeway site is auto-oriented, with a gas station at the corner, multiple parking lot entrances and larger signs, easily read from passing cars. Views of the existing Safeway store and gas station could not be classified as scenic vistas; as shown in the photographs of the existing site (Figures 10 to 17, pages 19 to 26). There are no rock outcroppings or historic resources near the project site. Street trees surround the project site. Demolition of the gas station and existing Safeway store would not have an adverse effect on a scenic vista. The project calls for additional street trees and landscaping.

Views of the Oakland Hills to the east from College Avenue would partially be affected by the proposed project, which would be approximately 35 feet in height, comparable to other three- to four-story buildings along Claremont and College Avenues. Public views of the hills looking down College and Claremont Avenues would not be affected. The scenic resources of the area would not be damaged by the proposed project.

The project site is not visible from a state or locally designated scenic highway, and would not affect scenic resources along a scenic highway.

c): The existing visual characteristics of the project site is a utilitarian, standardized, and familiarized commercial development sited within a large auto oriented surface parking lot, which is inconsistent with the characteristics of the College Avenue shopping district. The proposed project would result in a taller, more massive, and more intensively developed commercial center at this key retail corner in north Oakland than what presently exists at the site. As shown in the photo-simulations of the project in Figures 11 to 17, pages 20 to 26, the project would not degrade the visual character of the site and the surrounding area. The height of the buildings and pedestrian scale of the proposed commercial storefronts would be consistent with the prevailing neighborhood commercial character along College and Claremont Avenues. By hiding the parking areas, and offering a number of retail storefronts along the site's College Avenue frontage, the project design is intended to complement the visual character of the College Avenue retail district. Specific design issues will be addressed through the City of Oakland design review process.

d): The project abuts a single-family residential area on one side and may result in an incremental increase in the level of light generated from the site by establishing new sources of nighttime exterior lights that would be visible from and potentially cast light onto the surrounding neighborhood, particularly the windows and yard areas of adjacent residential dwellings.



Source: Lowney Architecture

10-24-09

Photo View Areas Figure 10

Existing site view from south

View of proposed project

Proposed Development

Source: Lowney Architecture

10-24-09

Existing and Project Views of Intersection at College and Claremont Avenues Figure 11

Existing Adjacent Flatiron Building

Existing gas station site

View of proposed project

Source: Lowney Architecture

10-26-09

Views of Existing Flatiron Building, Gas Station and Proposed Corner Infill   Figure 12

Source: Lowney Architecture

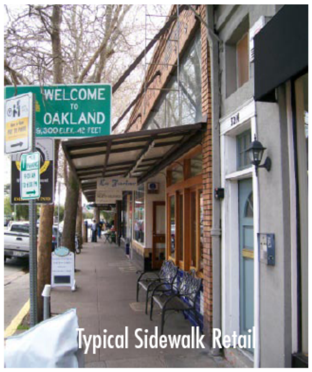
10-26-09

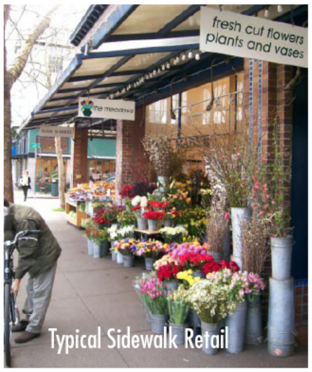
Views of College Avenue Streetscape Figure 13

Source: Lowney Architecture

10-26-09

Views of College Avenue Streetscape Figure 14





Source: Lowney Architecture

10-26-09

Views of College Avenue Streetscape Figure 15

Existing building on northwest corner

Existing view south

Proposed view south

Source: Lowney Architecture

10-26-09

Views at Intersection of College and Alcatraz Avenues Figure 16

Existing building on Claremont Avenue—parking below

Existing site

Proposed Project

Source: Lowney Architecture

10-26-09

Views at Intersection of College and Alcatraz Avenues Figure 17

Implementation of the following standard condition of approval that the City applies to all development projects would reduce lighting impacts of the project to a less-than-significant level:

> **STANDARD CONDITION AES-1:** Prior to issuance of an electrical or building permit. The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

<u>e), f), g), and h):</u> No solar collectors or buildings designed for passive solar heating or equipped with photovoltaic or solar hot water collectors were observed in the project vicinity to the north or east of the site, where the added height of the buildings or proposed landscape trees could shade solar collectors. Thus the impact pertaining to landscape- or building-induced shadow effects on existing solar collectors or buildings using passive solar heat would be less than significant.

Similarly, there are no public or quasi-public parks, lawns, gardens, or open spaces in the immediate project vicinity that would be adversely affected by new shadows generated by the proposed project. Nor are there any historical resources, as defined by CEQA in the project vicinity. Therefore, new shadow generated by the proposed project would not materially impair any resource's historic significance and would result in no impact.

<u>i):</u> The parking and loading variances requested by the proposed project do not conflict with the policies and regulations of the General Plan, Planning Code, or Building Code. The project plans call for an increased setback along the northern boundary, adjacent to residential development, compared to the existing conditions.

<u>j):</u> The wind hazard criterion is not applicable because the project would not exceed 100 feet in height and is not located downtown or near a water body.

References:

California Department of Transportation, *The California Scenic Highway System*,

City of Oakland, Oakland *General Plan, Land Use and Transportation Element (LUTE)*, June 1998, as amended.

City of Oakland, *Oakland General Plan, Open Space, Conservation and Recreation (OSCAR)* Element, June 1996.

City of Oakland, Planning and Zoning Division, *Standard Conditions of Approval and Uniformly Applied Development Standards* (Revised September 17, 2008)

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
II. AGRICULTURE RESOURCES—Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	□	□	□	□	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	□	■
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	□	□	□	□	■

Discussion:

a), b), and c): There is no agricultural or farmland in the vicinity of the project. The site is in commercial use and designated for commercial use in Oakland's General Plan and Zoning Ordinance. The project would have no impact on agricultural resources.

References:

City of Oakland, Oakland *General Plan, Land Use and Transportation Element (LUTE)*, June 1998, as amended.

City of Oakland, Municipal Code Chapter 17 (Zoning Ordinance), Chapter 17.48.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
III. AIR QUALITY—Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	■	□	□	□	□
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	■	□	□	□	□
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	■	□	□	□	□
d) Expose sensitive receptors to substantial pollutant concentrations?	■	□	□	□	□
e) Frequently create substantial objectionable odors affecting a substantial number of people?	□	□	□	■	□

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
f) Contribute to CO concentrations exceeding the State AAQS of 9 ppm averaged over 8 hours and 20 ppm for 1 hour. Pursuant to BAAQMD, localized carbon monoxide concentrations should be estimated for projects in which (1) vehicle emissions of CO would exceed 550 lb/day; (2) intersections or roadway links would decline to LOS E or F; (3) intersections operating at LOS E or F will have reduced LOS; or (4) traffic volume increase on nearby roadways by 10% or more unless the increase in traffic volume is less than 100 vehicles per hour?	■	☐	☐	☐	☐
g) Result in total emissions of ROG, NOx, or PM10 of 15 tons per year or greater, or 80 pounds (36 kilograms) per day or greater? The Port of Oakland maintains PM 10 and PM2.5 monitoring stations in West Oakland and data from these stations should be obtained and used.	■	☐	☐	☐	☐
h) Result in potential to expose persons to substantial levels of Toxic Air Contaminants (TAC), such that the probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million?	■	☐	☐	☐	☐
i) Result in ground level concentrations of non-carcinogenic TACs such that the Hazard Index would be greater than 1 for the MEI?	■	☐	☐	☐	☐
j) Result in a substantial increase in diesel emissions?	■	☐	☐	☐	☐
k) A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project results in any individually significant impact; or	■	☐	☐	☐	☐
1) Result in a fundamental conflict with the local general plan, when the general plan is consistent with the regional air quality plan? When the general plan fundamentally conflicts with the regional air quality plan, then if the contribution of the proposed project is cumulatively considerable when analyzed the impact to air quality should be considered significant.	■	☐	☐	☐	☐
m) Result in significant greenhouse gas emissions and Global Climate Change Impacts	■	☐	☐	☐	☐

Discussion:

a), b), c), and d): The entire San Francisco Bay Area is designated "non-attainment" for state one-hour ozone and federal 8-hour ozone standard and is also designated "non-attainment" for the state particulate matter (PM_{10} and $PM_{2.5}$) standards. The potential air quality impacts from the demolition of the existing buildings on the site and the construction of operation of the project will be evaluated in the EIR.

e): The proposed project would not result in the creation of an odor emitting source as identified in the BAAQMD CEQA Guidelines. No significant odors potentially affecting a significant number of people are projected.

f): Increased vehicle trips from the project would affect localized carbon monoxide (CO) concentrations at nearby intersections. Although CO levels have been declining for a number of years due to improved vehicle emission controls and are expected to do so in the future, the effect of increases in traffic generated by the project would need to be studied in the EIR.

g): The proposed project involves the development of a 50,400-square-foot grocery supermarket plus 11,572 square feet of additional retail space. Since the project would replace an existing supermarket and gas station, the net increase in retail space, and associated traffic generation, would be much lower. However, the BAAQMD CEQA Guidelines indicate that a supermarket of 24,000 square feet or larger may generate 80 lbs./day of NOX. Since the net increase in retail space would exceed this threshold, the project's potential air quality impacts will be addressed in the EIR.

h), i), and j): The project is not expected to result in the construction of any new stationary sources of emissions with potential toxic air contaminate components. However, diesel powered delivery trucks will continue to be used to make deliveries to the site, and diesel emissions will be released in conjunction with this activity. The potential impacts of these emissions and any other toxic air contaminants will be addressed in the EIR.

k), l), and m): The projects potential cumulative impacts and potentially significant emissions of greenhouse gas emission will be addressed in the air quality section of the EIR.

References:

Bay Area Air Quality Management District, *Bay Area 2005 Ozone Strategy*, January 2006.

Bay Area Air Quality Management District, *Assessing Air Quality Impacts of Projects and Plans*, December 1999.

California Air Resources Board, *2004 Revisions to the California State Implementation Plan for Carbon Monoxide*, July, 2004.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES—Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	■	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☐	■

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☐	■
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐	☐
e) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☐	■
f) Fundamentally conflict with the City of Oakland Tree Preservation and Removal Ordinance (Oakland Municipal Code (OMC) Chapter 12.36) by removal of protected trees under certain circumstances? Factors to be considered in determining significance include: the number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) the protected trees to remain, with special consideration given to native trees.	☐	☐	■	☐	☐
Protected trees include the following: Quercus agrifolia (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and pinus radiata (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be Protected trees.	☐	☐	■	☐	☐
g) Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and aquatic habitat through: (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat?	☐	☐	☐	☐	■

Discussion:

a): The proposed project would be constructed on a developed site with an existing Safeway, gas station and parking lots in the midst of a highly developed urban area. Suitable habitat to support candidate, sensitive or special status species no longer exists within the project locale or surrounding area. The trees on or near the project site do not contain nests, or nest structures, and there is no evidence of bird-incubating or rearing activity Urban development has caused sensitive species to be replaced with ornamental, non-native landscaping and disturbance-tolerant wildlife, making it unlikely that the proposed project would cause direct or indirect adverse impacts to any endangered, rare, threatened or other special-status species of plants or animals. The project would not result in impacts to bird nests or affect bird nesting, either through direct removal of a tree, or disturbance from site construction noise, or human activity.

b): Riparian habitats are supported by creeks, streams or other waterway systems. There is no riparian habitat on the site, nor are other sensitive natural communities present on the site. No impacts on such resources are projected.

c): The existing paved parking lots and building cover provides no opportunity for wetland hydrology, soils or plants, and any state or federally protected wetland occur within the project boundaries and none would be affected by the project. No impact is projected.

d): The proposed project would not substantially interfere with wildlife movements. The highly urbanized site and surrounding areas accompanied by high levels of human activity act as barriers to terrestrial wildlife movement and the project area lacks natural habitat that could be used as wildlife corridors. Project implementation likely would not interfere with the movement of any resident or migratory bird in or through the area, or contribute to further fragmentation of bird foraging, reproduction, rearing, or perching habitat. In addition, the project will be required to implement the following standard condition of approval.

STANDARD CONDITION BIO-1: Tree Removal During Breeding Season

Prior to the issuance of a tree removal permit

To the extent feasible, removal of any tree and /or vegetation suitable for nesting of raptors shall not occur during the breeding season of March 15 to August 15. If tree removal must occur during the breeding season, all sites shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to the start of work from March 15 through May 31, and within 30 days prior to the start of work from June 1 through August 15. The pre-removal surveys shall be submitted to the Planning and Zoning Division and the Tree Services Division of the Public Works Agency. It the survey indicates the potential presence of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the CDFG, and will be base to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent the disturbance to birds nesting in the urban environment, but these may be increased or decreased, as appropriate, depending on the bird species and level of disturbance anticipated near the nest.

Positive survey results will require protection measures defined in consultation with the California Department of Fish and Game (CDFG). Because tree removal would preface other construction activities, compliance with Standard Condition BIO-1 is sufficient to protect nesting birds. The project impacts would be less than significance with the incorporation of Standard Condition BIO-1.

e): No Habitat Conservation Plans or Natural Community Conservation Plans apply to the project area, and the project would not impact them.

f): The proposed project would not fundamentally conflict with the Oakland Tree Protection Ordinance (Oakland Municipal Code, Chapter 12.36). The site is paved or covered with buildings and is in a highly urbanized area. There are a total of 21 landscape trees on the site, all of which are located around the site perimeter, adjacent to the sidewalks on College and Claremont Avenues. The project plans call for the planting of 43 replacement trees, of which 16 would be planted along the College and Claremont frontages, 24 would be planted in the 10-foot-wide landscape buffer adjacent to the residential development on the north side of the site and three would be planted in the pedestrian “walk street” near the intersection of College and Claremont Avenues.

The Tree Protection Ordinance requires a tree removal permit for any tree with a diameter (measured at breast height – DBH) of 9 inches or larger. Six of the existing trees are large enough to fall under the Tree Ordinance. The largest has a DBH of 13 inches. The trees that would require a tree removal permit, as set out in Standard Condition BIO-2, below, include three Bottlebrush (c*allistemon rigidis*), two Maytens (m*aytenus boaria*), and one Magnolia (m*agnolia grandiflora*).[1]

STANDARD CONDITION BIO-2: Tree Removal Permit

Prior to issuance of a demolition, grading or building permit

Prior to removal of any protected trees, per the Protected Tree Ordinance, located on the project site or in the public right of way adjacent to the project, the project applicant must secure a tree removal permit from the Tree Division of the Public Works Agency, and abide by the conditions of that permit.

STANDARD CONDITION BIO-3: Tree Protection During Construction

Prior to issuance of a demolition, grading, or building permit

Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

a) Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

[1] There is also one Monterey Pine (Pinus Radiata) on the site that is larger than 9 inches. It does not fall under the Tree Protection Ordinance.

b) Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the City Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.

c) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

d) Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

e) If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Agency of such damage. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.

f) All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

The project impact related to tree removal and protected trees would be less than significant with the incorporation of Standard Conditions BIO-1, BIO-2, and BIO-3, which are incorporated into the project, and the implementation of the project's landscaping plan, which includes the planting of 43 replacement trees.

g): The project would not conflict with the City of Oakland Creek Protection Ordinance (Oakland Municipal Code Chapter 13.16) as there are no creeks or drainage swales on the site.

References:

Booker Holton, Ph.D, TOVA Applied Sciences, *Nesting Bird Survey, Safeway Shopping Center –at College and Claremont Avenues, Oakland, CA.* October 27, 2009

City of Oakland, Planning and Zoning Division, *Standard Conditions of Approval and Uniformly Applied Development Standards* (Revised September 17, 2008)

City of Oakland, Oakland Municipal Code, Title 12, Chapter 12.36, *Protected Trees*

City of Oakland, Oakland Municipal Code, Title 13, Chapter 13.16, *Creek Protection Ordinance*

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES—Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines 615064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of an historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5)?	☐	☐	☐	☐	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	■	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	■	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐	☐

Discussion:

a): The existing Safeway Store and gas station that would be demolished are not listed on, or believed to be eligible for listing on, the applicable local, State or National registers of historic resources. No historic district will be affected by the project. No impact on historic resources is projected.

b): Although the site has been excavated, graded and paved in the past, there is a potential that unidentified, buried archaeological resources could be encountered, during construction of the proposed project, which would involve more extensive excavation than previous development on the site. The disturbance of any such resources that may be unearthed could cause a substantial adverse change to the significance of such resources, resulting in a significant impact. Implementation of the following standard condition, which is incorporated into the project, would reduce the impact from potential discovery of subsurface cultural resources to a less-than-significant level.

STANDARD CONDITION CUL-1

Ongoing throughout demolition, grading and construction

Pursuant to CEQA Guidelines section 15064.5(f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant. Representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Oakland. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.

In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. Work may proceed on other parts of the project site while measures for mitigation for historic resources or unique archaeological resources are carried out.

Should an archaeological artifact or feature be discovered on-site during project construction, all activities within a 50-foot radius of the find would be halted until the findings can be fully investigated by a qualified archaeologist to evaluate the find and asses the significance of the find according to the CEQA definition of a historical or unique archaeological resource. If the deposit is determined to be significant, the project applicant and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate measure, subject to approval by the City of Oakland, which shall assure implementation of appropriate mitigation measures recommended by the archaeologist. Should archaeologically significant materials be recovered, the qualified archaeologist would recommend appropriate analysis and treatment and would prepare a report on the findings for submittal to the Northwest Information Center.

c): Paleontological resources are fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived throughout time, preservation of plant or animal remains is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, the scientific information they can provide, fossils are highly significant records of ancient life.

Significant fossil records can be made even in areas of supposed low sensitivity, and could result from the excavation activities related to the proposed project, resulting in a significant effect, and implementation of the following standard condition, which is incorporated into the project, would reduce the impact form potential discovery of paleontological resource to less than significant.

STANDARD CONDITION CUL-2

Ongoing throughout demolition, grading and/or construction

In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards. The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The Plan shall be submitted to the City for review and approval.

d): No evidence exists to indicate that burials or any large prehistoric or historic occupation existed within the project area. While it is unlikely that human remains would be encountered during project construction, the potential exists. In the event of the accidental discovery of any human remains, including those interred outside of formal cemeteries, during project construction, the project would be required to implement and comply with the following standard condition of approval. Implementation of the following standard condition, which is incorporated into the project, would reduce the impact from accidental discovery of human remains to a less-than-significant level.

STANDARD CONDITION CUL-3

Ongoing throughout demolition, grading and/or construction

In the event that human skeletal remains are uncovered at the project site during construction of ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

References:

City of Oakland, *Oakland General Plan, Historic Preservation, An Element of the Oakland General Plan*, updated 2005.

CEQA Guidelines, Section 15064.5.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS—Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☐	■	☐
ii) Strong seismic ground shaking?	☐	☐	☐	■	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	■	☐
iv) Landslides?	☐	☐	☐	■	☐
b) Result in substantial soil erosion or the loss of topsoil, creating substantial risks to life, property, or creek/waterways?	☐	☐	■	☐	☐
c) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as it may be revised), creating substantial risks to life or property?	☐	☐	☐	■	☐
d) Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property?	☐	☐	☐	☐	■
e) Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property?	☐	☐	☐	☐	■
f) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	■

Discussion:

a)(i): The project site is not located within a Fault-Rupture Hazard Zone as designated by the Alquist-Priolo Earthquake Fault Zoning Act of 1972, and no known active faults have been mapped on or in the immediate vicinity. The closest active fault is the Hayward fault, located approximately 0.8 miles east.

Other notable active faults include the San Andreas fault (15 miles southwest), the Calaveras fault (14 miles east), and the Rodgers Creek fault (19 miles north). As the site is not located on an active or potentially active fault, potential for surface fault rupture is low and the impact is considered less than significant.

a)(ii): The San Francisco Bay Area is considered a seismically-active region. The project site is located in an area subject to "violent" groundshaking (Modified Mercalli Intensity IX) from a major earthquake along the Hayward Fault, according to the Association of Bay Area Governments (ABAG). Groundshaking can result in significant structural damage or structural failure in the absence of appropriate seismic design.

Although ground shaking at the subject site would be substantial during a large earthquake on the Hayward Fault and could be considerable during an earthquake on other Bay Area faults, compliance with the California Building Code, and building code requirements set forth by the City of Oakland, would reduce the seismic hazard so that people would not be exposed to substantial injury and death or property would not undergo significant loss. While building codes assume that some damage will occur during an earthquake, they are designed to prevent loss of life and limb and reduce the potential of structural collapse. The 1997 Uniform Building Code (UBC) locates the entire Bay Area within Seismic Risk Zone 4. Of the four seismic risk zones, Zone 4 is expected to experience the greatest effects from earthquake ground shaking and, therefore, has the most stringent requirements for seismic design. The proposed project would be required to comply with the geotechnical and seismic design criteria required for construction in Zone 4 of the UBC and California Building Code (Title 24). Furthermore, the project sponsor would be required to submit an engineering analysis accompanied by detailed engineering drawings to the City of Oakland Building Service Division prior to excavation, grading or construction activities on the site. This is consistent with standard City of Oakland practices to ensure that all buildings are designed and built in conformance with the seismic requirements of the City of Oakland Building Code. The required engineering analysis includes drawings and details of relevant grading and /or construction activities on the project site to address constraints and ensure the recommendations identified in the geotechnical investigation are implemented. These required submittals ensure that buildings are designed and constructed in conformance with the requirements of all applicable building code regulations, pursuant to standard City procedures. The project will be required to comply with building code provisions for structural design and construction in high earthquake hazard areas, which would ensure that ground shaking effects at the project site remains less than significant

a)(iii): Seismic shaking can also trigger secondary ground-failures caused by liquefaction. Liquefaction is a process by which saturated granular soils, such as sands, behave like a dense fluid when subjected to prolonged shaking during an earthquake. Seismic hazard mapping prepared by the United States Geological Service, indicates that the project site is located in an area with a low risk of liquefaction, and this is confirmed by a site-specific geotechnical investigation that found sufficient clays below the groundwater level to replace the potential for liquefaction. Accordingly, the potential is low for liquefaction and therefore, the impact would be less than significant.

a)(iv): The project site is relatively level and is not located on or adjacent to a hillside. In addition, the project site is not located within an area designated by the California Division of Mines and Geology

(CDMG) Seismic Hazards Mapping Act as a "Seismic Hazard Zone" for earthquake-induced landslides. Thus, no potential landslide related impacts are projected for this project.

b): Virtually the entire project site is currently paved or covered with structures, and the proposed project will develop the entire project site. Earthwork activities associated with construction activities would excavate and disturb subsurface soils throughout the site. To minimize wind or water erosion on the site during construction activities that involve earthwork, the applicant shall be required, in accordance with standard City practices, to submit a construction-period erosion control plan to the Building Services Division for approval prior to the issuance of grading and building permits, consistent with standard City practices. The plan shall be in effect for a period of time sufficient to stabilize the construction site throughout all phases of the project. Long-term erosion potential shall be addressed through the installation of project landscaping and storm drainage facilities, both of which shall be designed to meet applicable regulations. These requirements are embedded in the following uniformly-applied standard condition of approval, which is incorporated into the project, implementation of which will ensure the project impact is less than significant.

STANDARD CONDITION GEO-1: (Grading Permit)

Prior to any grading activities

The project applicant shall obtain a grading permit, if required by the Oakland Grading Regulations, pursuant to Section 15.04.780 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials onto lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities

The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

c): The soils beneath the site consist of clay, clayey sands or clayey gravels with high shrink-swell potential, and that will be highly expansive when moistened. The design level engineering analysis, noted above under criteria a)(i.) through a)(iv), would include a detailed geotechnical investigation to support the engineering of the foundations, parking garages, and other excavated, subsurface, features of the project. This analysis, as required by the City, will determine the appropriate foundation system to mitigate the unstable soils. In accordance with standard City practices, and in conformance with current codes and regulations, the project sponsor shall be required to submit detailed engineering drawings and materials to the Building Services Division prior to excavation, grading or construction on the site. This measure will ensure that the building is designed and built in conformance with the requirements of the City of Oakland Building Code and the applicable provisions of the CBC. Therefore, the proposed project would not result in substantial risks to life or property due to unstable or expansive soil and the potential impacts associated with these conditions are less than significant.

d) and e): The project site is not located on a site subject to the conditions identified under criteria d) or e), nor is it located on a current or former landfill. Therefore, the potential impact is less than significant.

f): The proposed project will connect to the existing central sewer system, which provides wastewater collection service for the City of Oakland. Therefore, the project will not require septic tanks or alternative wastewater disposal systems and the project will have no impact from such conditions.

References:

Association of Bay Area Governments (ABAG), *Earthquake Intensity Map for East Oakland from the North and South Hayward Fault Segments*, 2005.

Kleinfelder, *Geotechnical Investigation Safeway Replacement Store #2870*, July 23, 2007

State of California, Division of Mines and Geology, *Alquist-Priolo Fault Rupture Hazard Zone Map (Oakland East Quadrangle),* 1982.

State of California, Division of Mines and Geology, *Seismic Hazard Maps, Oakland East Quadrangle*, 2003.

United States Geological Service, *Liquefaction Hazard Map of Alameda, Berkeley, Emeryville, Oakland and Piedmont, California*, Open File Report 02-296, 2002.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS— Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	■	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	■	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	■	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	■
f) Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■	☐
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■	☐

Discussion:

a), b), c), and d): The proposed project would involve the removal of a gasoline station, the operation of which routinely involves the transport, use storage and disposal of hazardous materials, and its replacement with an enlarged grocery store and eight retail commercial spaces, the occupants of which are unknown at this time. Currently, the Safeway Store maintains a registration for transporting up to 0.4 tons of organic wastes to a local transfer station. There are also permitted aluminum, glass and plastic recycling facilities on the site. It is likely that these permits and facilities would be retained and the permits would be continued or renewed with the new store. With the closing of the gasoline station, however, the transport, storage and use of highly flammable petroleum products on the site would be substantially eliminated, and the project's potential impact to the public would be reduced, relative to existing conditions.

A Phase I and Screening Level Phase II Environmental Assessment Report on the Safeway store parcel found no evidence of environmentally hazardous conditions on that parcel.

The 76 Station site has two gasoline underground storagetanks (USTs) -a15,000-gallon regular unleaded gasoline UST and a 12,000 gallon super unleaded gasoline UST. The USTs were installed in 1997 as replacements for pre-existing gasoline USTs. The property also has two hydraulic hoists located in the service bays . There were two 12,000-gallon unleaded gasoline USTs that were removed in March 1997.

Approximately 516 tons of soil was excavated as part of the UST removal. Three groundwater monitoring wells were installed at the site and were sampled quarterly from August 2000 to March 2007.

A Phase I and Screening Level Phase II Environmental Assessment Report on the 76 Station parcel completed five soil borings. Evidence of the presence of *Recognized Enviromental Conditions* was found and the project would need to implement the conditions of approval listed below. An asbestos report was conducted for the Safeway Store. Based on the visual inspection, sampling and laboratory analysis, asbestos containing materials (ACMs) were found in floor tiles, drywall and joint tape compounds, exterior stucco, roof cements, transite wall panels, and thermal system insulation. The ACMs will be removed using regulatory abatement practices for asbestos as part of the standard conditions of approval.

During the demolition of existing facilities and the construction of the project, it is likely that there would be a need to store and use limited quantities of hazardous materials such as fuels, oils, hydraulic fluids, paints, etc. If not handled properly, these materials could be released through upset and accidental conditions, potentially affecting the health and safety of workers, the public or the environment by contaminating subsurface soils and groundwater. However, with implementation of the standard condition of approval, below, which is incorporated into the project, the project impact would be less than significant.

The grocery store and typical small retail tenants would be expected to routinely use small quantities of common cleaning products, sanitizers, paints and other miscellaneous products for the cleaning and maintenance of their buildings, and potentially, small quantities of pesticides and fertilizers for the care of on-site landscaping. The potential impacts from the transport, storage and use of such materials in small quantities would be less than significant.

The project site is approximately ¼ mile from the parochial school on Alcatraz Avenue near Colby Street. Similar to the potential impacts from the transport, storage and use of hazardous materials related to the demolition of existing buildings, construction and operation of the project would not pose a significant hazard to the public found adjacent to the site, the potential impacts on the children at the nearby school would be less than significant due to the safety measures required by the federal, state, and local jurisdictions and incorporated into the operation of the project.

The Union 76 Station is found on the Government Code list of hazardous materials sites (Cortese List), and environmental database records indicate that one or more leaking underground storage tanks (LUST) have been identified on the site in the past, and remediation efforts have been initiated. Groundwater monitoring wells were installed on the site and MTBE was detected in one of the wells. In addition, public records note that there are two other LUST sites near the project (The Shell gas station at 6039 College and the Blood Bank of America site at 6230 Claremont).

Given the history of one or more leaking underground storage tanks and MTBE detection in a monitoring well, the project will be required to implement and comply with the following uniformly-applied standard condition of approval and implementing recommendations that make the potential adverse impacts of exposing workers, the public or the environment to significant hazards, less than significant:

STANDARD CONDITION HAZ-1: Hazards Best Management Practices

Prior to commencement of demolition, grading or construction

The project applicant and construction contractor shall ensure that construction best management practices are implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

a) Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction;

b) Avoid overtopping construction equipment fuel gas tanks;

c) During routine maintenance of construction equipment, properly contain and remove grease and oils;

d) Properly dispose of discarded containers of fuels and other chemicals.

e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.

f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in Standard Conditions of Approval 50 and 52, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

STANDARD CONDITION HAZ-2: Site Review by the Fire Services Division

Prior to the issuance of demolition, grading or building permit

The project applicant shall submit plans for site review and approval to the Fire Prevention Bureau Hazardous Materials Unit. Property owner may be required to obtain or perform a Phase II hazard assessment.

STANDARD CONDITION HAZ-3: Phase I and/or Phase II Reports

Prior to issuance of a demolition, grading, or building permit

Prior to issuance of demolition, grading, or building permits the project applicant shall submit to the Fire Prevention Bureau, Hazardous Materials Unit, a Phase I environmental site assessment report, and a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer.

STANDARD CONDITION HAZ-4: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment

Prior to issuance of any demolition, grading or building permit

The project applicant shall submit a comprehensive assessment report to the Fire Prevention Bureau, Hazardous Materials Unit, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACM), lead-based paint, and any other building materials or stored materials classified as hazardous waste by State or federal law.

STANDARD CONDITION HAZ-5: Lead-based Paint Remediation

Prior to issuance of any demolition, grading or building permit

If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

STANDARD CONDITION HAZ-6: Other Materials Classified as Hazardous Waste

Prior to issuance of any demolition, grading or building permit

If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

STANDARD CONDITION HAZ-7: Health and Safety Plan per Assessment

Prior to issuance of any demolition, grading or building permit

If the required lead-based paint/coatings, asbestos, or PCB assessment finds presence of such materials, the project applicant shall create and implement a health and safety plan to protect workers from risks associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal.

STANDARD CONDITION HAZ-8: Best Management Practices for Soil and Groundwater Hazards

Ongoing throughout demolition, grading, and construction activities

The project applicant shall implement all of the following Best Management Practices (BMPs) regarding potential soil and groundwater hazards.

a) Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agencies laws, in particular, the Regional Water Quality Control Board (RWQCB) and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City of Oakland.

b) Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies of the City of Oakland, the RWQCB and/or the ACDEH. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the Standard Condition of Approval regarding Radon or Vapor Intrusion from Soil and Groundwater Sources

c) Prior to issuance of any demolition, grading, or building permit, the applicant shall submit for review and approval by the City of Oakland, written verification that the appropriate federal, state or county oversight authorities, including but not limited to the RWQCB and/or the ACDEH, have granted all required clearances and confirmed that the all applicable standards, regulations and conditions for all previous contamination at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the Standard Condition of Approval requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the Standard Condition of Approval requiring a Phase I and/or Phase II Reports.

STANDARD CONDITION HAZ-9: Radon or Vapor Intrusion from Soil or Groundwater Sources

Ongoing

The project applicant shall submit documentation to determine whether radon or vapor intrusion from the groundwater and soil is located on-site as part of the Phase I documents. The Phase I analysis shall be submitted to the Fire Prevention Bureau, Hazardous Materials Unit, for review and approval, along with a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer. Applicant shall implement the approved recommendations.

STANDARD CONDITION HAZ–10: Environmental Site Assessment Reports Remediation

Prior to issuance of a demolition, grading, or building permit

If the environmental site assessment reports recommend remedial action, the project applicant shall:

1) Consult with the appropriate local, State, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps.
2) Obtain and submit written evidence of approval for any remedial action if required by a local, State, or federal environmental regulatory agency.
3) Submit a copy of all applicable documentation required by local, State, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II environmental site assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.

e) and f): The project is not located within two miles of a public airport, and there are no private airstrips in the vicinity. The closest public airport is the Oakland International Airport located about nine miles south of the project site. Therefore, the project would not result in any significant airport related safety hazards for people working at or visiting the project.

g): The proposed project would not significantly interfere with emergency response plans or evacuation plans, based on the City of Oakland's 1993 Multi-Hazard functional Plan ("City Emergency Plan"). The City of Oakland Fire Services Agency (Fire Department) is responsible for first response in an emergency. During construction, standard notification procedures required by the City are designed to ensure that the Fire Department is notified if construction traffic will block any city streets. Specifically, the job site supervisor is required to call the Fire Department's dispatch center any day construction vehicles will partially or completely block a city street during the construction process. Additionally, any proposed changes to existing vehicular accesses to city streets, such as the proposed changes in driveway configurations, will involve review and approval by the Fire Department to ensure adequate emergency access. Therefore, given the required compliance with the City's notification requirements, the project would not interfere with the implementation of emergency response plans or evacuation plans, nor adversely affect the City's response and operational procedures in the event of a large scale disaster or emergency. The project impact will be less than significant.

h): The project site is located in a developed urban area and not located adjacent to open areas where wildland fires will occur. Any new structures built on the site would be required to comply with all applicable Fire Code and fire suppression systems, as routinely required by the City. Therefore, the proposed project would have a less-than-significant impact related to exposing people or structures to wildland fires.

References:

City of Oakland, *Draft Multi-Hazard Functional Plan*, 1993

EDR, *EDR Radius Map with Geocheck, 76 Station, 6201 Claremo*nt Ave. Oakland, CA, November 13, 2007

GeoTrans, *Phase I and Screening Level Phase II Environmental Assessment Report, Safeway Store #2870*, June 29, 2007.

GeoTrans, *Phase I and Screening Level Phase II Environmental Assessment Report, 76 Service Station #0018*, January 3, 2008

Kleinfelder, *Geotechnical Investigation Safeway Replacement Store #2870*, July 23, 2007

Monte Deignan & Associates Certified Asbestos Consultant, Environmental Survey for Renovation, Safeway Store 687/2870 and 6310 College Avenue, Oakland, July 24, 2007.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY— Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	■	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☐	■
c) Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters?	☐	☐	■	☐	☐
d) Result in substantial flooding on- or off-site?	☐	☐	■	☐	☐
e) Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems?	☐	☐	■	☐	☐
f) Create or contribute substantial runoff which would be an additional source of polluted runoff?	☐	☐	■	☐	☐
g) Otherwise substantially degrade water quality?	☐	☐	■	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
h) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map, that would impede or redirect flood flows?	☐	☐	☐	☐	■
i) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☐	■
j) Expose people or structures to a significant risk of loss, injury or death involving flooding?	☐	☐	☐	☐	■
k) Result in inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☐	■
1) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a Creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on-or off-site?	☐	☐	☐	■	☐
m) Fundamentally conflict with elements of the City of Oakland Creek Protection (OMC Chapter 13.16) ordinance intended to protect hydrologic resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety?	☐	☐	☐	☐	■

Discussion:

a): Hazardous materials associated with construction activities are likely to involve minor quantities of paint, solvents, oil and grease, and petroleum hydrocarbons. Best Management Practices (BMPs) would be implemented during storage and use of hazardous materials at the project site as required under City of Oakland and Alameda County stormwater quality regulations. Implementation of BMPs would ensure potential impacts to groundwater quality and stormwater runoff associated with spills or leaks of hazardous materials used routinely during construction activities are less than significant.

The depth to groundwater at the site is approximately 20 feet (Kleinfelder), generally equivalent to elevation 185 while the maximum depth of excavation for the foundation footings and sub-drains is not planned to go lower than elevation 195. Accordingly, it is not expected that major dewatering systems will be required during construction or that intermittent pumping during high groundwater periods would be necessary. Temporary dewatering could be required if perched water is encountered or unseasonable rain occurs when excavation is underway.

Following completion of construction, the application of pesticides and herbicides related to landscape maintenance would be potential sources of polluted stormwater runoff. However, on-site landscaping would be minimal, and the proposed project would not require a significant use of pesticides or herbicides. The proposed project would also be required to comply with the City of Oakland and Alameda County stormwater quality protection requirements. Potential water quality impacts associated with the proposed project during operation are therefore considered less than significant.

In accordance with standard City practices, the project sponsor shall be required to comply with all applicable regulatory standards and regulations pertaining to potential contaminants and to project-related grading and excavation prior to issuance of grading and building permits. These requirements are embedded in the following uniformly-applied standard condition of approval that will apply to the project. Therefore, with the incorporation of Standard Conditions HYD-1 to HYD-7, the potential for impacts from potential violations of water quality standards would be less than significant.

STANDARD CONDITION HYD-1: Post-Construction Stormwater Pollution Management Plan (http://www.cleanwaterprogram.com)

Prior to issuance of building permit (or other construction-related permit)

The applicant shall comply with the requirements of Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Alameda Countywide Clean Water Program. The applicant shall submit with the application for a building permit (or other construction-related permit) a completed Stormwater Supplemental Form for the Building Services Division. The project drawings submitted for the building permit (or other construction-related permit) shall contain a stormwater pollution management plan, for review and approval by the City, to limit the discharge of pollutants in stormwater after construction of the project to the maximum extent practicable.

The post-construction stormwater pollution management plan shall include and identify the following:

- All proposed impervious surface on the site;
- Anticipated directional flows of on-site stormwater runoff; and
- Site design measures to reduce the amount of impervious surface area and directly connected impervious surfaces; and
- Source control measures to limit the potential for stormwater pollution; and
- Stormwater treatment measures to remove pollutants from stormwater runoff.

The following additional information shall be submitted with the post-construction stormwater pollution management plan:

- Detailed hydraulic sizing calculations for each stormwater treatment measure proposed; and
- Pollutant removal information demonstrating that any proposed manufactured/mechanical (i.e., non-landscape-based) stormwater treatment measure, when not used in combination

with a landscape-based treatment measure, is capable or removing the range of pollutants typically removed by landscape-based treatment measures.

All proposed stormwater treatment measures shall incorporate appropriate planting materials for stormwater treatment (for landscape-based treatment measures) and shall be designed with considerations for vector/mosquito control. Proposed planting materials for all proposed landscape-based stormwater treatment measures shall be included on the landscape and irrigation plan for the project. The applicant is not required to include on-site stormwater treatment measures in the post-construction stormwater pollution management plan if he or she secures approval from Planning and Zoning of a proposal that demonstrates compliance with the *requirements of the City's Alternative Compliance Program.*

Prior to final permit inspection

The applicant shall implement the approved stormwater pollution management plan.

STANDARD CONDITION HYD-2: Stormwater Pollution Prevention Plan (SWPPP)

Prior to and ongoing throughout demolition, grading, and/or construction activities

The project applicant must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB). The project applicant must file a notice of intent (NOI) with the SWRCB. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Building Services Division. At a minimum, the SWPPP shall include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; Best Management Practices (BMPs), and an inspection and monitoring program. Prior to the issuance of any construction-related permits, the project applicant shall submit to the Building Services Division a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP shall start with the commencement of construction and continue though the completion of the project. After construction is completed, the project applicant shall submit a notice of termination to the SWRCB.

STANDARD CONDITION HYD-3: Maintenance Agreement for Stormwater Treatment Measures

Prior to final zoning inspection

For projects incorporating stormwater treatment measures, the applicant shall enter into the "Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement," in accordance with Provision C.3.e of the NPDES permit, which provides, in part, for the following:

- The applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

- Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The agreement shall be recorded at the County Recorder's Office at the applicant's expense.

b): The project would be connected to the East Bay Municipal Utilities District water system, and would not be drawing from local groundwater. Today, the project site is almost entirely covered with impermeable surfaces, primarily paved parking and commercial structures. With the project, the area of impermeable surfaces covering the ground would be somewhat decreased, primarily due to the creation of a 10-foot-wide landscaped setback along the site's northern boundary. This would result in modest increases in groundwater recharge, relative to the existing conditions. No adverse groundwater impacts are projected.

c): Project construction would involve demolition, clearing, grading, excavation and the construction of new structures, and virtually all of the site's surface area and near-surface soils would be disturbed during construction. Exposed soils and any stockpiling of loose soils could lead to water-induced erosion in the event of rainfall and sedimentation in runoff, if not properly protected. Since the earthwork and grading activities would result in the disturbance of more than one acre of land, the project would be subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Activities Stormwater Permit requirements. According to the NPDES permit, the project applicant will be required to develop and submit a site-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will include a description of appropriate Best Management Practices (BMPs) that minimize the discharge of pollutants for the site. Construction contractor(s) are responsible for implementation of the SWPPP, which includes maintenance, inspection, and repair of erosion and sediment control measures and water quality BMPs throughout the construction period; and they are also responsible for the maintenance of all protective devices in good and effective condition. In addition, the project will be required to implement and comply with the following uniformly applied standard conditions of approval. Therefore, the potential impacts related to erosion and sedimentation would be considered less than significant.

The project shall comply with the following standard condition, which is incorporated into the project:

STANDARD CONDITION HYD-4: Erosion and Sedimentation Control Plan

Prior to any grading activities

1) The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.780 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan

shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities

2) The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

The project would need to implement measures for stormwater management to limit pollution due to stormwater runoff.

STANDARD CONDITION HYD-5: Site Design Measures for Post-Construction Stormwater Management

Prior to issuance of building permit (or other construction-related permit)

The project drawings submitted for a building permit (or other construction-related permit) shall contain a final site plan to be reviewed and approved by Planning and Zoning. The final site plan shall incorporate appropriate site design measures to manage stormwater runoff and minimize impacts to water quality after the construction of the project. These measures may include, but are not limited to, the following:

1) Minimize impervious surfaces, especially directly connected impervious surfaces;
2) Utilize permeable paving in place of impervious paving where appropriate;
3) Cluster buildings;
4) Preserve quality open space; and
5) Establish vegetated buffer areas.

Ongoing

The approved plan shall be implemented and the site design measures shown on the plan shall be permanently maintained.

STANDARD CONDITION HYD-6: Source Control Measures to Limit Stormwater Pollution

Prior to issuance of building permit (or other construction-related permit)

The applicant shall implement and maintain all structural source control measures imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

Ongoing

The applicant, or his or her successor, shall implement all operational Best Management Practices (BMPs) imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

d), e), f), and g): The proposed project would result in a small decrease in the area of impervious surfaces covering the site, primarily due to the addition of a 10-foot-wide landscaped setback along the site's northern boundary. The net decrease in impermeable surfaces would cause a slight reduction in stormwater runoff relative to existing conditions, which would result in a less-than-significant impact. **[**.

As part of the City's uniformly-applied standard conditions, the applicant will be required to design a stormwater system by a registered civil engineer to accommodate the proposed project. The project would be connected to the City of Oakland's storm drain system, and would not be expected to substantially alter the existing drainage pattern on the site, nor would it be expected to result in substantial flooding on- or off-site. The following condition of approval has been incorporated into the project, and will ensure the project impact is less than significant.

STANDARD CONDITION HYD-7: Stormwater and Sewer

Prior to completing the final design for the project's sewer service

Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the City. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

The project would not violate any water quality standards or waster discharage requirements, would not depelete groundwater supplies, result in substantial erosion or flooding, and would not create or contirubte substantial runoff that would exceed the capacity of the sotrmwater drainage or be an additional source of polluted runoff. The project would not substantially degrade water quality.

h), i), and j): The project site is outside the 100- and 500-year flood zones, as shown on the Federal Emergency Management Agency Flood Insurance Rate Maps. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, nor would it involve the erection of structures with the potential to impede or redirect flood flows. Finally, the project does not involve housing and would not construct housing in a flood plain. Accordingly, the project would have no impacts related to flooding.

k): The project site is over 200 feet above sea level and located well inland from San Francisco Bay. It is not at risk of inundation from tsunami, nor is it as risk from seiche waves, as it is not located on the shores of an inland lake. The potential for mudslides is low due to the gently sloping topography of the area and lack up exposed slopes upland from the site. No impacts from seismic-related flood hazards or unstable slopes are projected.

l): The proposed project would not significantly alter the existing drainage pattern of the site as described above. The impervious surface area would slightly decrease so there would not be an increase in off-site stormwater flow. As described above the project would not result in substantial erosion, siltation, or flooding either on- or off-site. No potential impacts related to the change in drainage patterns of the site are projected.

References:

EDR, *EDR Radius Map with Geocheck, 76 Station, 6201 Claremo*nt Ave. Oakland, CA, November 13, 2007

Federal Emergency Management Administration (FEMA), Flood Insurance Rate Map, Community Panel 0650480015B

Kleinfelder, *Geotechnical Investigation Safeway Replacement Store #2870*, July 23, 2007

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
IX. LAND USE AND PLANNING—Would the project:					
a) Physically divide an established community?	☐	☐	☐	☐	■
b) Result in a fundamental conflict between adjacent or nearby land uses?	☐	☐	☐	☐	■
c) Fundamentally conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment?	☐	☐	☐	■	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
d) Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☐	■

Discussion:

a): The project site is located in an established neighborhood commercial area in urban Oakland. The existing land uses on the site include a Safeway supermarket and a gas station. Land uses in the vicinity of the site include a mix of retail stores, restaurants, banks, gas stations, private homes, apartments and office buildings. The proposed project includes a (larger) Safeway supermarket and eight retail shop spaces, thereby replicating and complimenting the existing mix of commercial uses in the area. It would not divide an established community; rather the proposed uses would provide historical continuity to the existing land use pattern. No impact is projected.

b): As noted the proposed project would continue the dominate land use on the site, and add more commercial storefronts on College Avenue, which is predominately a small-retail commercial street in this area. The greatest potential for land use conflicts occurs along the site's northern boundary, which abuts the back of a street of single-family residential homes. However, the project design is intended to reduce that conflict potential by adding a 10-foot-wide landscape buffer between the Safeway store and parking area, where there is currently no buffer other than property line fencing. Accordingly, no adverse impacts relative to land use conflicts are projected.

c): The project site is located within the C-31 Special Retail Commercial Zone. This zoning district is "intended to create, preserve, and enhance areas with a wide range of retail establishments serving both short- and long-term needs in attractive settings oriented to pedestrian comparison shopping, and is typically appropriate along important shopping streets having a special or particularly pleasant character." The proposed project calls for land uses that are permitted or conditionally permitted in this zoning district (general food sales, alcoholic beverage sales, and enclosed retail spaces), and the design is intended conform with the minimum yard and buffering requirements, and to be sensitive to the use permit criteria established for this zoning district. A variance for the design of the parking and loading facilities has been requested in order to accommodate to the unique triangular shape of the parcel. The project would be required to conform to all of the City's applicable standard conditions of approval and related regulations, and it would not conflict with any applicable land use plan, policy, or regulation of Oakland or other agencies adopted for the purpose of avoiding or mitigating an environmental effect. Accordingly, the project's land use impact would be less than significant.

References:

City of Oakland, Oakland *General Plan, Land Use and Transportation Element (LUTE)*, June 1998, as amended.

City of Oakland, Planning and Zoning Division, *Standard Conditions of Approval and Uniformly Applied Development Standards* (Revised September 17, 2008)

City of Oakland, Oakland Municipal Code, *Title 17, Zoning Regulations; Chapter 17.48 C-31 Special Retail Commercial Zone Regulations,* 2006.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
X. MINERAL RESOURCES—Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐	■
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☐	■

Discussion:

a): The project site has a Mineral Land Classification of MRZ-1, "areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence." The proposed project would not result in the loss of availability of a known mineral resource that will be of value to the region or the resident of the state. The project would have no impact on mineral resources.

b): There are no locally important mineral resource recovery sites in or around the project site. The proposed project will not result in the loss of availability of a locally important mineral resource recovery site. No impacts are projected.

References:

Stinson, Melvin C., Michael W. Manson, and John J. Plappert. California Department of Conservation, Division of Mines and Geology Special Report 146, *Part II: Mineral Land Classification: Aggregate Materials in the San Francisco- Monterey Bay Area* (1987)

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XI. NOISE—Would the project:					
a) Result in exposure of persons to or generate noise levels in excess of standards established in the Oakland general plan or applicable standards of other agencies (e.g. OSHA)?	■	☐	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
b) Violate the City of Oakland Noise Ordinance (Oakland Planning Code Section 17.120.050) regarding operational noise?	■	□	□	□	
c) Violate the City of Oakland Noise Ordinance (Oakland Planning Section 17.120.050) regarding construction noise, except if an acoustical analysis is performed and all noise-related Standard Conditions of Approval imposed: During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, will noise levels received by any land use from construction or demolition exceed the applicable nighttime operational noise level standard?	■	□		□	□
d) Violate the City of Oakland Noise Ordinance (Oakland Municipal Code Section 8.18.020) regarding nuisance of persistent construction-related noise?	■	□		□	□
e) Create a vibration which is perceptible without instruments by the average person at or beyond any lot line containing vibration- causing activities not associated with motor vehicles, trains, and temporary construction or demolition work, except activities located within the (a) M-40 zone or (b) M-30 zone more than 400 feet from any legally occupied residential property (Oakland Planning Code Section 17.120.060)?	■	□	□	□	□
f) Generate interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24)?	■	□		□	□
g) Result in a 5dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	■	□	□	□	□
h) Conflict with state land use compatibility guidelines for all specified land uses for determination of acceptability of noise (Source: State of California, Governor's Office of Planning and Research, General Plan Guidelines, 2003)?	■	□	□	□	□
i) Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels?	□	□	□	□	■
j) Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels?	□	□	□	□	■

Discussion:

a), b), c), d), e), f), g), and h): The existing noise environment within the project vicinity will be described in the EIR for this project, based upon 24-hour and short-term noise measurements. Relative noise ordinances and policies will be discussed, as will likely noise levels to be generated by construction and operation of the project (including deliveries and customer traffic). The potential of noises from these sources to affect sensitive land uses or conflict with the ordinances and policies will be evaluated in the EIR.

i) and j): The project is not located within two miles of a public airport, nor is it in the vicinity of a private airstrip. The nearest public airport is the Oakland International Airport, approximately nine miles south of the project site. People visiting or working at the site would not be adversely affected by airport noise.

References:

City of Oakland, General Plan, *Land Use and Transportation Element*, December 2006.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XII. POPULATION AND HOUSING—Would the project:					
a) Induce substantial population growth in a manner not contemplated in the General Plan either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed?	☐	☐	☐	☐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?	☐	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element?	☐	☐	☐	☐	■

a), b), and c): The project involves the redevelopment of an existing commercial site with new commercial buildings. The existing Safeway grocery store would be replaced with a new Safeway store and eight small commercial storefronts, while the existing gas station would be closed. The larger Safeway store is expected to employ approximately 77 more people than the existing store, while the small retail stores are likely to employ more people than does the existing gas station. It is estimated that the net gain in employment would approach 100 – 120 jobs. Considering that the City of Oakland has a population of approximately 425,000 people, expected to grow to 450,000 by 2025, the modest job growth stimulated by the project would be easily absorbed by planned population growth.

Furthermore, considering recent job losses and the region's high unemployment and underemployment rates, which reflect a high demand for new, local jobs, the jobs generated by the project are likely to be taken by workers living in the area. No growth inducing impacts are likely as a result of the project.

There is no housing on the site and none is proposed, so there would be no displacement of homes or of people.

References:

Association of Bay Area Governments (ABAG), *Projections 2007*, December 2006

California Department of Finance, *E-4 Population and Housing Estimates for Cities, Counties and the State, 2001-2009 (with 2000 Benchmark)*, accessed September 2009

City of Oakland, General Plan, *Land Use and Transportation Element*, December 2006.

Safeway, Inc., *Applicant's Statement, Safeway 6310 College Avenue,* August 2009

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES—Would the project**:**					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:					
i) Fire protection?	☐	☐	☐	■	☐
ii) Police protection?	☐	☐	☐	■	☐
iii) Schools?	☐	☐	☐	☐	■
iv) Other public facilities?	☐	☐	☐	■	☐

Discussion:

a)(i): The project site is located in a developed area of Oakland that is already served by public services. Fire and emergency medical response services would be provided by the Oakland Fire Department., which responds to approximately 60,000 calls for service annually, of which about 80% are medical. The nearest fire station is Station 19 located at 5766 Miles Ave. near College Ave., approximately 0.75 miles from the site. In accordance with standard City practices, the proposed project would be designed in compliance with Oakland's Building Code. The Fire Department would review and comment on the project plans prior to the issuance of Building Permit, and would undertake appropriate inspections of the project during construction, in order to ensure that adequate fire and life safety measures are designed into the project, and that it is build in compliance with applicable state and local fire safety requirements.

The existing and proposed uses of the site are all commercial, and implementation of the project would not add a land use that would be inherently more likely to increase the number of calls for service, relative to the existing uses. The project's impact of the Fire Department is projected to be less than significant.

a)(ii): Police protection services would be provided by the Oakland Police Department, headquartered at 455 Seventh Street in downtown Oakland. Because the existing and proposed uses of the site are commercial, it is not expected that the project would result in a marked change in the number of calls for police services, nor would it generate the need for any new or physically-altered police facilities to ensure the provision of adequate police services. No significant adverse impacts on the Police Department are projected.

a)(iii): The Oakland Unified School District (OUSD) operates public schools in the City of Oakland. Because the existing and proposed uses of the site commercial, the site does not, and would not generate any school children, should be project be approved and built, the project would have no impact on Oakland's schools.

a)(iv): See above. As noted the project is located in a developed area of Oakland, and would not substantially change the type of land uses that currently occupy the site. A full range of public services are available on the site and in the neighborhood, and will continue to be available if the project is built. No impacts on other public facilities are projected.

References:

City of Oakland, *General Plan, Land Use and Transportation Element*, December 2006.

City of Oakland, General Plan, *Safety Element,* November 2004.

City of Oakland, Fire Department, website. Accessed September 12, 2009.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XIV. RECREATION—Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☐	■
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☐	■

Discussion:

a) and b): The project is a commercial project, that will renovate and expand the largest existing commercial use on the site (Safeway) and replace the other major commercial use (gas station) with new commercial uses. The existing and proposed uses generate little or no demand for recreational facilities, and the project would not be expected to have any adverse impact on the City's recreational programs or facilities.

References:

City of Oakland, *General Plan, Open Space, Conservation and Recreation Element*, June 2006.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC—Would the project:					
a) Cause an increase in traffic which is substantial in relation to the traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load capacity of the street system? Specifically:					
i) At a study, signalized intersection which is located outside the Downtown area, the project would cause the level of service (LOS) to degrade to worse than LOS D (i.e., E)?	■	☐	☐	☐	☐
ii) At a study, signalized intersection which is located within the Downtown area, the project would cause the LOS to degrade to worse than LOS E (i.e., F)?	☐	☐	☐	☐	■
iii) At a study, signalized intersection outside the Downtown area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., F)?	■	☐	☐	☐	☐
iv) At a study, signalized intersection for all areas where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., F)?	■	☐	☐	☐	☐
v) At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity ("V/C") ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately)?	■	☐	☐	☐	☐
vi) At a study, unsignalized intersection, the project would add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume warrant?	■	☐	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
b) A project's contribution to cumulative impacts is considered “considerable” (i.e., significant) when the project contributes five (5) percent or more of the cumulative traffic increase as measured by the difference between “Existing” conditions and the year 2010/2015 (or Year 2025/2030) with “Project” conditions and results in a substantial increase in traffic. More specifically, the project must contribute five (5) percent or more of the incremental growth and exceed at least one of the intersection-related thresholds listed above in threshold #i through #vii above.[1]	■	☐	☐	☐	☐
c) Cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without the project?	■	☐	☐	☐	☐
d) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☐	■
e) Substantially increase hazards due to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) that does not comply with Caltrans design standards or incompatible uses (e.g., farm equipment)?	■	☐	☐	☐	☐
f) Result in less than two emergency access routes for streets exceeding 600 feet in length?	☐	☐	☐	☐	■
g) Fundamentally conflict with adopted policies, plans, programs supporting alternative transportation (e.g. bus turnouts, bicycle routes)?	■	☐	☐	☐	☐
h) Generate added transit ridership that would:					
i) Increase the average ridership on AC Transit lines by three (3) percent at bus stops where the average load factor with the project in place would exceed 125% over a peak thirty minute period?	■	☐	☐	☐	☐
ii) Increase the peak hour average ridership on BART by three (3) percent where the passenger volume would exceed the standing capacity of BART trains?	☐	☐	☐	■	☐
iii) Increase the peak hour average ridership at a BART station by three (3) percent where average waiting time at fare gates would exceed one minute?	☐	☐	☐	■	☐

[1] Consult with the City of Oakland's Planning and Zoning Division regarding the appropriate Congestion Management Agency model and the short-term and long-term cumulative years.

Discussion:

a)(i), (iii), (iv), (v), and (vi); b); c) and e): The proposed project would involve the construction of a much larger Safeway Store plus additional retail space, and the removal of an existing gas station. In addition, the site would be reconfigured so that the number and location of vehicular entrances as well as the size and location of on-site parking would be modified. These changes could potentially decrease the level of service (LOS) of nearby intersections, and may increase average delay or critical movement delay at signalized or unsignalized intersections, or cause unsignalized intersections to satisfy CalTrans peak hour warrant. Any of these could result in significant traffic impacts, requiring site specific mitigation. Therefore, the EIR will address the project's potential traffic impacts.

The project's potential to create cumulative traffic impacts, as defined in b) above, will also be addressed in the EIR.

a)(ii): The project would not affect any signalized intersections in the Downtown. It would have no impact in this area.

d): The project would have no effect on air traffic patterns. There would be no impact in this area.

f): The project would not create any new streets, or affect the existing street grid in the project area. Both of the existing streets bounding the project site have multiple emergency access options. There would be no impact in this area.

g): Even though the project plans call for more bicycle parking than is required and would provide improved bus stops, alternative transportation issues will be addressed in the EIR, so that the site design features can be reviewed for safety and potential inter-modal conflicts. (Note e), above).

h)(i): The project would generate riders for AC Transit, which provides bus service with convenient stops immediately adjacent to the site. The potential impacts on AC Transit service will be evaluated in the EIR.

h)(ii) and (iii): The project is on the northern edge of the Rockridge Transit District area, although it is approximately 1,950 feet away from the Rockridge BART station. Considering the distance from the BART station and the small number of peak hour riders this type of land use would typically generate, relative to the capacity of the Rockridge Station and the Pittsburg/Bay Point BART line, the project does not have the potential to reach these thresholds for an impact on BART. The BART impacts would be less than significant.

References:

City of Oakland, *General Plan, Land Use and Transportation Element*, December 2006.

The Thomas Guide, *Alameda and Contra Costa Counties, Street Guide*, 2001.

Project Plans, 2009.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS—Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐	☐
b) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	■	☐	☐
c) Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	■	☐
d) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☐	■
e) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	■	☐	☐
f) Violate applicable federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐	☐
g) Violate applicable federal, state and local statutes and regulations relating to energy standards?	☐	☐	☐	☐	■
h) Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects?	☐	☐	☐	☐	■

Discussion:

a) and b): The City of Oakland maintains and operated the subsurface sanitary sewer system that collects wastewater along College and Claremont Avenues and transmits it to the East Bay Municipal Utility District's (EBMUD) wastewater treatment facilities. The wastewater treatment plant, near the Bay Bridge anchorage, has an average dry weather capacity of 168 million gallons per day (mgd), and an average dry weather flow of 80 mgd. During wet weather, the treatment plant has a sustainable primary treatment capacity of 320 mgd and a maximum secondary treatment capacity of 168 mgd. Storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd. The City's sewer system consists of pipes ranging from 6 to 72 inches in diameter.

The existing development on the site, including the Safeway Store, is connected to the Oakland sewer and contributes to the EBMUD Wastewater Treatment Plant. The proposed project would incrementally increase the existing flows by an incremental amount, although the project does not propose, and is not expected to require, any major replacement or improvement of the existing sanitary sewer lines serving the neighborhood. Nor is it anticipated that the project's incremental increase in sewage generation would exceed the wastewater treatment requirements of the EBMUD treatment plant as established by the RWQCB. The project sponsor will be required to implement Standard Condition UTIL-1, which will require the construction of any necessary sewer infrastructure improvements to accommodate the project. Implementation of Standard Condition UTIL-1, which has been incorporated into the project, would ensure that the project would result in a less-than-significant impact to the wastewater collection system.

Today, the project site is almost entirely paved or covered with buildings. The proposed project would increase the area of pervious surfaces, primarily as a result of the 10-foot-wide landscaped setback along the northern boundary. This would slightly decrease the stormwater discharges from the site into the City's existing storm drain facilities. As required in Standard Condition UTIL-1 and as discussed in Section VIII, Hydrology and Water Quality, the applicant will be required to design a stormwater system by a registered civil engineer to accommodate the proposed project. (See, also, Standard Condition HYD-4). With implementation of these standard conditions, the project impacts to storm drainage facilities will be less than significant.

STANDARD CONDITION UTIL-1 (Stormwater and Sewer)

Prior to completing the final design for the project's sewer service

Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the City. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

c): EBMUD supplies water to nearly 1.3 million people within its estimated 325-square mile service area, including the City of Oakland. EBMUD's network of reservoirs, aqueducts, treatment plants and distribution facilities extends from its principal water sources in the Sierra Nevada. According to EBMUD, between 1987 and 2005 water consumption by EBMUD customers has fluctuated between 220 mgd and 170 mgd. With the implementation of water conservation and recycling programs that are in place and under development, EBMUD estimates that he projected 2025 demand will be 230 mgd.

Since the project involves the redevelopment of a commercial site that is currently served by EBMUD, it would generate only a small incremental addition to EBMUD's water demand—estimated at less than 2,000 gallons per day. This type of urban redevelopment has been considered in EBMUD's future water supply projections, and the nominal increase in demand generated by the project would not adversely affect EBMUD's water supply capacity. No new facilities would need to be constructed as a result of this project, and the project's impact on water supply would be less than significant.

e) and f): Solid waste is collected in the City of Oakland by Waste Management of Alameda County (WMAC), the City's franchise hauler. WMAC collects solid waste from residential commercial and industrial customers and delivers it to the Davis Street Transfer Station in San Leandro. From there it is transferred to larger trucks and hauled to the Altamont Sanitary Landfill in Livermore, which is owned by Waste Management.

The Altamont Landfill is a licensed Class III landfill with a remaining capacity of over 45 million cubic yards. It is currently permitted to operate until 2032. The project would generate tons of solid waste from the demolition and construction work, while operation of the new Safeway store and commercial storefronts would marginally increase the on-going solid waste generation from the operation of the businesses on the site. Standard Condition UTIL-2 would require the implementation of waste reduction and recycling programs during both the construction and operation of the project, reducing the potential solid waste impacts to a less-than-significant level. The implementation of Standard Condition UTIL-2, which has been incorporated into the project, would also bring the project into conformance with State and local regulations that promote effective waste reduction and recycling efforts.

STANDARD CONDITION UTIL - 2: Waste Reduction and Recycling

The project applicant will submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

Prior to issuance of demolition, grading, or building permit

Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction, renovations/alterations/modifications with construction values of $50,000 or more (except R-3), and all demolition (including soft demo). The WRRP must specify the methods by which the development will divert C&D debris waste generated by the proposed project from landfill disposal in accordance with current City requirements. Current standards, FAQs, and forms are available at www.oaklandpw.com/Page39.aspx or in the Green Building Resource Center. After approval of the plan, the project applicant shall implement the plan.

Ongoing

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current diversion of solid waste generated by operation of the proposed project from landfill disposal in accordance with current City requirements. The proposed program shall be in implemented and maintained for the duration of the proposed activity or facility. Changes to the plan may be re-submitted to the Environmental Services Division of the Public Works Agency for review and approval. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

g) and h): The project would increase energy consumption at the project site, but not to a degree that would require project construction or expansion of new facilities. The project demand would be typical for a project of this scope and nature, and would be partially offset by the elimination of energy demand from the existing Safeway store and gas station, and their replacement with more energy efficient structures. The new buildings would be required to meet or exceed current state and local codes and standards concerning energy consumption, including Title 24 of the California Code of Regulations enforced by the City through its building permit review process. The project would have a less-than-significant impact regarding energy.

References:

East Bay Municipal Utility District, website, *www.ebmud.com*, accessed September 14, 2009

California Integrated Waste Management website, *www.ciwmb.ca.gov/SWIS/01-AA-0009*

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant with Development Standards	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	■	☐	☐
b) Does the project have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	■	☐	☐	☐	☐
c) Does the project have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	■	☐	☐	☐	☐

a): As noted in Section IV, Biological Resources, the proposed project would be constructed on a developed site with an existing Safeway, gas station and parking lots in the midst of a dense urban area. Suitable habitat to support important plant or animal populations no longer exists within the project locale or surrounding area. The project would have no significant adverse effects on fish or wildlife populations, nor would it affect any rare or endangered plant or animal species. The site does not house any important historic places, and no prehistoric resources are believed to be present. Standard Conditions CULT- 1 through 3 would act to mitigate the cultural resource impacts to as less-than-significant level, should any unexpected archaeological resources be unearthed during construction. Although an EIR will be prepared to address environmental issues requiring further analysis, it is not believed that the project would degrade the quality the environment, after implementation of the listed standard conditions of approval and mitigation measures that would be developed and presented in the EIR.

b): Given the scale of the proposed development and the demand resulting from the expected increase in commercial activity on the site, combined with what may reasonably be anticipated from other, foreseeable, development or redevelopment in the vicinity of the project, the project's incremental effects are not expected to be cumulatively considerable. However, potential cumulative impacts may be identified in the EIR.

c): Many of the potential adverse environmental effects on humans would be reduced to a less-than-significant level through the application of the standard conditions set forth above. This would include potential effects related to seismic stability and hazards and hazardous materials. Potential direct or indirect adverse effects on humans related to air quality, noise and transportation will be addressed in the EIR.

Vollman, Peterson

From: David Abel [dabel35@gmail.com]
Sent: Monday, November 30, 2009 2:42 PM
To: Vollman, Peterson
Subject: case er090006

Regarding the above project, while it would be good to have a better safeway store, the project as it stands is a monster and must be opposed. Potentially significant impacts can be expected from the following: to wit;

1. Traffic on surrounding streets would be increased beyond reason (it is already bad). 62nd is often overrun with safeway trucks and/or other companies trucks that deliver to safeway. Sometimes it can take them 15-20 minutes to get turned around, (16 wheelers) blocking traffic even up to college and claremont. Car traffic is constant and would increase even more from further cut through use. Who gets sued if an emergency service cannot get through because of these additions? The city for not considering an obvious hazard? As to the college and claremont corner, any brief observation will show that it is already loaded beyond capacity through much of the day. Rush hour backs up to Ashby and beyond, and to the Bart station and beyond and frequently at other times. Come and look for yourself any rush hour for the full impact now, not a potentially significant one in the future.

2. As to noise, what about the construction period, the further car traffic, honking horns from road rage drivers; take a look at what goes on at the safeway at the end of Broadway, where there are two 4 lane roads, and it is usually a mess. To put a store of that size in this area would indicate a lack of consideration that borders on being moronic. You can use your imagination as to the air quality impact of putting a few thousand more care trips a day into the area. Potentially significant impact now and in the future is an understatement.

3. As to aesthetics, what can one say about putting a store of that scale into this location? It belongs in a large mall somewhere east of the hills. Further it bears no relation to any buildings in the area already, except the bloodbank, which also should never have been built there. What about the c31 that we fought so hard for?

Does that mean nothing? Also the outlook that we now have of the hills and sky will be blocked for good, and we will be left with a carcentric design that will become ever more of a dodo; remember 5$ gas? Coming again soon to a gas station near you. And then 20$ per gal. and then no gas.

4. As to attitude, it is clear from the public meetings which I attended, both safeways and the planning commission, that safeway intends to have its way, and will do whatever it takes to get it. Greedy people chasing money and not caring at all what they do to the area and the people who live here. I am not opposed to a reasonable project and/or renovation of the present store, but the present proposal is so out of scale and and fraught with damage into the future (potentially significant impact) that one can only wonder at the character of those who are behind it. I ask the commission to give these points and the ones raised by others serious consideration, and provide major mitigation, or if that is not possible, refusal of the current planned project. Back to the drawing boards. Also condsider how they would feel if this was being done one block from the house where they live, and that they would be stuck with it, as we will be if things are allowed to go forward as they stand.

Respectfully David Abel 510 547 4191 336 62nd St. Oakland Calif. 94618

Vollman, Peterson

From: Denny Abrams [edgeguy@aol.com]
Sent: Sunday, November 29, 2009 11:04 PM
To: Vollman, Peterson
Cc: Brunner, Jane; Wald, Zachary
Subject: proposed shopping center

RE: Project #ER09-0006 College Ave "Shopping Center"

Dear Mr Wollman,

I have lived two blocks from the proposed Safeway expansion for almost 30 years. I also have many professional years experience in matters of retail development. My conclusion is that this project will have many negative impacts on the neighborhood life of Rockridge and in the control of future changes in all of Oakland's small neighborhoods.

1. Our neighborhood plan calls for no projects over 7,500 square feet. Safeway's current store of 25K square feet is grandfathered in under this zoning law. The 7,500 foot limit was agreed upon by the Oakland City Council, the Planning Commision and our neighborhood councils. The final law is expressed in the C-31 zoning law currently in force. Projects exceeding that limit would normally require major significant findings of either hardship or an inability to provide services under any lesser size.

2. The proposed 65,000 + square foot "shopping center" clearly requires a change in zoning of our neighborhood or at least major variance findings. Letting this project pass under the guise and camouflage of a conditional use permit is outrageous by any reasonable standard of zoning and land use law. Using a conditional use permit to spot zone sets a bad precedent for controlling change in all neighborhoods.

3. Oakland's General Plan is quite clear that a significant project of this size or any new "shopping center" must "maintain and enhance" our neighborhood life and its surroundings. This project does neither in terms of the flow of traffic/congestion, noise/pollution and displacement of parking. Nor is this project necessary in maintaining the economic well being of the neighborhood or city. in fact a shopping center of this size is more likely to create economic blight than enhance the existing delicate economic fabric our neighborhood and economic well being of the region. It is time to seriously study the economic multiplier impacts of the large distant corporate structure vs. locally owned and locally/regionally supplied business it will displace.

4. The City of Oakland is committed to sustainability and sound environmental practices. Thus, this project needs to be measured and studied against the concept of remodeling and adding to existing structures as opposed to a complete teardown. Which of these is the truly "green solution"?

Finally, I urge you to be study all the impacts of this project. Certainly part of your job is to defend our neighborhood. Safeway will out gun us at every turn and spend over a million dollars to get their approvals. We only have the current laws, as interpreted by you and your staff, to protect us. Kindly ask yourself this: *Would any other developer other than a 9 billion dollar corporation be given a conditional use permit for a "shopping center" at this site?* As a developer for over 35 years I know the answer is clearly No. Any other developer would be discouraged and asked to seek a change in zoning because of the major significant impacts of this project. In all fairness you should ask Safeway to seek a change in zoning and encourage denial of a conditional use permit for this size project.

Thank you for your consideration on these matters,

Denny Abrams
381 63rd Street
Oakland, Ca. 94618

cell: 510 435 4650
office: 510 644 3002
email: Edgeguy@aol.com

Vollman, Peterson

From: Denny Abrams [edgeguy@aol.com]
Sent: Monday, November 30, 2009 11:57 PM
To: Vollman, Peterson
Cc: Brunner, Jane; Wald, Zachary
Subject: RE: Project #ER09-0006 College Ave

Dear Mr. Vollman,

. By doubling the size of the facility we know that Safeway's intention is to double their gross receipts. At present my estimate is that the College location generates over two thousand per foot. That places the current gross receipts at 50 to 60 million per year. Doubling the size of the facility will drive gross receipts to over 110 million per year. Naturally, our concern is from where will the additional 50 to 60 million in sales be generated. We believe these sales can only be generated by expanding the catch basin and greatly increasing

In past Safeway presentations it has been their contention that the catch basin will remain the same size because their studies indicate a great amount of sales "leakage" (sales that currently leave the neighborhood to shop elsewhere) . As customers and consumers in the neighborhood, we know this "leakage" concept is not correct and the only way to increase sales to increase the size of the "catch basin". The environmental costs of traffic/congestion and noise/pollution will clearly increase.

In order to properly model the impact of traffic/congestion and noise/pollution brought about by the proposed Safeway the EIR team will need numbers of trips per day, their times, average sale per customer which in turn will define the catch basin. Having good honest market sales data is clearly most important to determining impacts.
Therefore, I suggest you include a major marketing/food sales study of our College Avenue in the EIR. Please do not rely on Safeway's study or data. These facts need to be studied by an objective third party selected by the planning department.

Denny Abrams
1834 Fourth Street
Berkeley, Ca 94710

cell: 510 435 4650
office: 510 644 3002
email: Edgeguy@aol.com

By email; by surface mail to Mr. Vollmann;
also intended by hand to the 11/18/09
Oakland City Planning Commission Meeting

November 12, 2009

2715 Alcatraz Ave.
Berkeley, CA 94705

Peterson Vollmann, Planner III
Planning and Zoning Division
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Vince Gibbs
VinceGibbs.opc@gmail.com

Re: Safeway Project at 6310 College Ave., Oakland, File Number ER09-0006; Alameda County Assessor's Parcel Nos. 048A-7070-007-01 and 048A-7070-001-01

Comments on CEQA Notice of Preparation, File No. ER09-0006
(Safeway at Claremont and College)

Dear Commissioners and Mr. Vollmann:

I have lived a few dozen yards from the existing Safeway at College Ave. and Claremont Ave. in Oakland for over 20 years. I am writing to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (EIR) for the Safeway Project, ER09-0006. My comments also pertain to the Initial Study (I.S.) prepared to comply with the California Environmental Quality Act (CEQA) and Environmental Review Checklist for the project; the Determination states that the proposed project may have a significant effect on the environment, and that an EIR is required.

According to the Determination, the EIR will study air quality, noise, and transportation and traffic, but not any other environmental factors.

While I concur that the project may have a significant effect on the environment within the meaning of CEQA and that an EIR is required for the project, the proposed scope of the EIR is much too narrow. In order to adequately evaluate potentially significant environmental effects of the project, reasonable alternatives to the project, and appropriate mitigation, the EIR must thoroughly discuss air quality, noise, and transportation and traffic, but, as discussed below, also study and discuss: land use (including inconsistency with the zoning); energy; aesthetics; water, water quality, sewerage, and storm runoff; geology, soils, and seismicity; demand on public services; hazards and hazardous materials; blight and litter, and waste generation and removal; biology; and cumulative effects. In discussing these matters, the EIR needs to consider offsetting their environmental effects through alternatives, including a smaller project, remodeling of the existing facility, and the no-project alternative. Under CEQA, in all of these matters, not just the conclusions, but the analytical path by which the conclusions are reached, must be included in the EIR for the public to see.

Background

The Safeway store at 6310 College Ave. in Oakland, as it has existed for over 40 years, is a single story building of approximately 25,000 square feet. Immediately to the west on College Ave. is a longstanding pedestrian area of small retail uses; adjacent to the immediate north is an old residential area. The Safeway corporation proposes to demolish its building, as well as the adjacent Union 76 service station (recently fenced off, apparently following acquisition by Safeway) at College and Claremont, and to construct in their place a two-story, 64,860 square-foot building. The replacement building would double the size of the existing Safeway store, and would cover virtually all of the triangular property now occupied by the store, the service station, and an existing, intervening parking lot. A new, enclosed parking lot would accommodate 173 cars, about 75 more than the current lot, and additional roof parking would be provided for Safeway employees. Additionally, the new building would accommodate eight new

retail shops. The project would reconfigure the entry driveways from College Ave. and Claremont Ave., as well as the truck-delivery ramps.
The Determination in the I.S., as noted in the NOP, proposes that the EIR for the project study only noise, air quality, and transportation and traffic.

Content of an EIR

Under the CEQA Guidelines, 14 Cal. Code of Regulations §§ 15000 et seq., an EIR must consider and discuss the significant environmental effects of a proposed project. 14 Cal. Code of Regulations § 15126.2(a). In relevant part, this subsection provides:

> Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected. For example, an EIR on a subdivision astride an active fault line should identify as a significant effect the seismic hazard to future occupants of the subdivision. The subdivision would have the effect of attracting people to the location and exposing them to the hazards found there.

Under Public Resources Code § 21083(b), in relevant part,

> a project may have a "significant effect on the environment" if one or more of the following conditions exist:
>
> (1) A proposed project has the potential to degrade the quality of the environment, curtail the range of the environment, or to achieve short-term, to the disadvantage of long-term, environmental goals.
> (2) The possible effects of a project are individually limited but cumulatively considerable. As used in this paragraph, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
>
> (3) The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.

The EIR must also address significant environmental effects which cannot be avoided if the proposed project is implemented, 14 Cal. Code of Regs. § 15126.2(b), significant irreversible environmental changes which would be caused by the proposed project should it be implemented, 14 Cal. Code of Regs. § 15126.2(c), and growth-inducing impact of the proposed project, 14 Cal. Code of Regs. § 15126.2(d).[1] The EIR must include consideration and discussion of mitigation measures proposed to minimize significant effects, 14 Cal. Code of Regs. § 15126.4; and consideration and discussion of alternatives to the proposed project, including a "no project" alternative, 14 Cal. Code of Regs. § 15126.6.

<u>Scope of the proposed EIR</u>

1. The project could have significant effects on the environment, and an EIR is required.

The size, location, and nature of this proposed project, and the intended increase in customer visits and use indicate the likelihood of significant direct and indirect effects on the environment. These potential effects, including cumulative effects and inconsistency with the land-use regulation, need to be studied and discussed, and where found to be significant, eliminated or adequately mitigated through changes or alternatives to the project.

a. Air quality and global warming

The proposed project will more than double the retail space and significantly increase customer vehicle trips. The project would also dramatically increase truck deliveries. Operation of the facilities will require increased heating, cooling, and refrigeration. These factors, together with construction-related emissions, suggest possible significant

[1] 14 Cal. Code of Regs. §§ 15126.2(b), (c), and (d) provide: (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described. ¶(c) Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. ¶(d) Growth-Inducing Impact of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

effects on air quality, including the release of increased amounts of carbon dioxide and other greenhouse gases, with the potential for cumulatively significant effects on air quality and climate change. The NOP recognizes effects on air quality as potentially significant. The EIR analysis should encompass these effects, including cumulative effects. The analysis should address and attempt to eliminate, reduce, or offset not only the direct emissions caused by customers, employees, and suppliers, but also, to the extent feasible, indirect emissions relating to the production and delivery of goods provided at the project site. The EIR should also evaluate construction emissions, including greenhouse gases and construction dust, and seek to eliminate or minimize these.

b. Noise

The NOP recognizes that noise from the project constitutes a potentially significant environmental effect. The EIR should examine both construction noise and vibration, and noise from subsequent operation of the project. Heavy machinery and loud tools will be needed for demolition and construction, which will be lengthy. Following construction, operations of the Safeway store and the other retail facilities will require, among other things, truck deliveries, cart washing, recycling, trash compaction and collection. Some customers will arrive with loud cars, motorcycles, car stereos, and alarm systems. The EIR must study how to avoid or minimize these adverse effects; among the mitigation measures considered should be construction of a tall sound wall adjacent to the residential area prior to demolition of the existing buildings, and attention to hours of construction, delivery, and operation. The EIR should consider the size of the project and alternatives to it. The EIR should examine and consider limits on the routes and timing of truck deliveries and pickups.

c. Transportation and traffic circulation

The NOP and the I.S. recognize that the project may have adverse effects on transportation, traffic, and circulation. The project site immediately adjoins a neighborhood of otherwise quiet residential streets. It also directly adjoins a congested intersection at Claremont and College Avenues which operates at an already inadequate level of service and presents hazards for pedestrians and bicyclists. College Ave., with one travel lane in each direction, serves as a major route to and from the University of California and the local freeways, and is frequently already congested during week and weekend alike. AC Transit line 51 travels frequently on that street, and the buses are often full. There are currently no bicycle lanes or pockets on this narrow, congested street, and bicyclists must compete, unsafely, with buses and moving and parked cars. Pedestrian sidewalks are too narrow already. Increased customer visits to the project site by car and otherwise will exacerbate all of these problems.

Because of the size and potential effects of this project, the transportation and circulation analysis in the EIR should have a broad scope. Looking north, it should consider the entire residential area between Claremont Ave. and Telegraph Ave. to the University of

California. Looking south, it should consider possible effects along College Ave. and adjoining residential areas until College feeds into Broadway. The EIR should address not only congestion on College and Claremont, but possible “cut-through” traffic on connecting residential streets; noise and pedestrian/bicyclist safety effects from cut-through traffic; and related mitigation measures.

The EIR should consider traffic related to project customers and employees, but also deliveries to and shipments (including increased garbage and recycling) from the project site. The EIR needs to evaluate the routes used by trucks going to and from the project site, both presently and under the proposed project. That analysis should include not only traffic effects, but also noise, vibration, and pedestrian and bicycle safety effects. Where effects are caused by the use of residential streets, the EIR should consider as mitigation designating specified truck routes and posting alternative residential streets to prohibit their use by large trucks. The EIR should also consider public transit improvements to reduce effects of traffic generated by the project.

While the NOP recognizes the need for analysis of transportation and traffic, the EIR must consider project alternatives, including a smaller project and remodeling of the existing Safeway store. Regardless of any “thresholds of significance” that the city may have adopted, the issue under CEQA is possible significant effect on the environment, direct or indirect. If there are possible effects, then the project proponent must eliminate or mitigate them. The EIR must certainly consider the extent to which the neighborhood, including the surrounding residential areas, can bear increased vehicle traffic and truck deliveries not only for Safeway but for the eight other proposed new uses. The EIR must consider the project footprint and require setbacks adequate for bike lanes and sidewalks wide enough for the numerous pedestrians who use the area. The EIR must consider secure and convenient bicycle parking for customers and employees and the need for additional bus service along College Ave. Finally, the EIR needs to consider the effects on traffic (cars, delivery trucks, buses, bicycles and pedestrians) of lengthy demolition and construction.

d. Land use

The EIR must discuss the consistency of the proposed project with the letter and intent of the current zoning and general plan land-use designation for the site. As the C-31 zoning indicates, the Rockridge/Elmwood neighborhood in which the proposed project would occur is one of the most desirable in the East Bay due to its existing residential and pedestrian character and its small and unique neighborhood-serving businesses.[2] The sheer size of the proposed project and the increased vehicle traffic that it will inevitably bring raise serious questions about whether the project complies with the intent, if not the

[2] Under § 17.48.010 of the Oakland Municipal Code, “[t]he C-31 zone is intended to create, preserve, and enhance areas with a wide range of retail establishments serving both short and long term needs in attractive settings oriented to pedestrian comparison shopping, and is typically appropriate along important shopping streets having a special or particularly pleasant character.”

express criteria, of the zoning. As the I.S. points out, the project would result in a "taller, more massive, and more intensively developed commercial center."

Under Oakland Municipal Code § 17.48.080, in the C-31 zone, the "total floor area devoted to Commercial or Manufacturing Activities by any single establishment shall not exceed seven thousand five hundred (7,500) square feet, except that a greater floor area may be permitted upon the granting of a conditional use permit pursuant to the conditional use permit procedure in Chapter 17.134."[3] Under § 17.48.100, a conditional use permit may be granted only if "the proposal will not detract from the character desired for the area. . ." and will not interfere with the movement of people along an important pedestrian street. No driveway may connect directly with the area's principal commercial street unless various conditions are met. Further, "the amount of off-street parking, if any, provided in excess of the requirements of this code [may] not contribute significantly to an increased orientation of the area to automobile movement[ ]." § 17.48.100(F).

A high-volume "mini-mall" that doubles the size of the Safeway store to 50,000 square feet and adds 14,000 square feet for other uses would challenge the viability of existing neighborhood businesses, bring more cars into the congested neighborhood, and would not be consistent with the zoning. The conditional use permits and variances seemingly needed for the project raise questions about "spot zoning." The need for parking and loading variances, noted in the I.S., raises additional questions about the consistency with the zoning. The scope of the EIR must be broadened to evaluate the potential degradation of the neighborhood and consistency with land-use regulation. Once again, smaller projects, remodeling on site, and the no-project alternative must be weighed.

e. Energy

The proposed project will likely cause a significant increase in energy use for construction, deliveries, services, heat, cooling, refrigeration, and lighting; with the possibility of cumulative contribution to climate change. The revised CEQA Guidelines, shortly to be adopted by the Natural Resources Agency, specifically require consideration of energy use. The scope of the EIR must be broadened to encompass an analysis of this effect and means to eliminate or mitigate it. These means should include consideration of energy efficient building materials and construction techniques, use of local and recycled materials in construction, and use of renewable energy generation such as solar cells and solar hot water for operation of the project following construction. Passive solar techniques such as the planting of large species of deciduous trees all around the site should also be seriously considered, and the footprint of the development should be adjusted to allow for this. The size of the project and alternatives to it should also be considered in the EIR from the standpoint of energy use.

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[3] Oakland is in the process of updating its zoning. The C-31 zone applicable to the Claremont/College Safeway is proposed to become a CN-1 zone. Where C-31 requires a conditional use permit for general food sales occupying more than 7,500 square feet, proposed CN-1, as of October 2009, would require a conditional use permit for general food sales occupying more than 5,000 square feet.

f. Aesthetics

The Rockridge/Elmwood neighborhood is widely acknowledged to have a special character, reflected in the zoning. The neighbors in this residential/pedestrian neighborhood have raised with Safeway repeatedly (to no effect) their view that the scale, size, height, and appearance of the proposed project conflicts with and could degrade the character of the neighborhood. The I.S. also states that the larger and more massive project would block some views of the Oakland hills. Also, as the I.S. indicates, lighting and reflectivity from the proposed two-story structure and cars parked on top may adversely affect the adjoining residential neighborhood, as well as cause light pollution of the night skies, and must be studied. Any project that is approved must harmonize with, not clash with, the existing neighborhood character, and consider adequate visual barriers between the two-story project and the surrounding residential area. The EIR must also examine shadowing of the residential neighborhood immediately to the north. The scope of the EIR must be broadened to analyze these potential effects and to consider project alternatives.

g. Water, water quality, sewerage; storm runoff

Storm drains along College Ave adjacent to the project site and at College and Claremont have proven ineffective during the past 20 years. Frequent flooding adds to the challenges posed at the difficult intersection for cars, pedestrians, and bicyclists. Construction mud and gravel, erosion, and truck traffic will add to the problem. Following construction, the large increase in size of the grocery store would require increased water use for produce and cleaning of the facility and carts. Other retail uses, depending on what they are (restaurants, for example) would also use additional water and require additional sewerage. Some of the runoff issues could be addressed through use of permeable concrete. All of these effects are potentially significant and need to be analyzed in the EIR, together with smaller alternatives.

h. Geology, soils, seismicity

The I.S. indicates that the project structures would be required to meet building standards. But the standard under CEQA is whether there is a reasonable argument that the project may have a significant effect. The site is roughly half a mile from what is generally considered to be the most dangerous earthquake fault in the San Francisco Bay area. The project could increase risks to the public by inviting increased numbers of people into crowded conditions in the new facilities, increasing the height to two stories, and further clogging traffic arteries, making escape and provision of emergency services more difficult. The project proposes a large parking area under the building, which can lead to severe earthquake damage. The soil types, hydrology, and engineering requirements need to be discussed in the EIR.

i. Demand on public services

As noted in the previous section, the proposed project would create more crowded conditions both on site and on the already challenged adjacent streets and intersections. In an emergency (crime, fire, earthquake, even power failure) emergency services could have trouble reaching and assisting people on site. The larger the project and the more people on site, the larger the potential problem. The EIR must examine this potential effect.

j. Hazards and hazardous materials

Quantities of hazardous substances will be used in construction. In addition, as the I.S. indicates, the soil under the service station at Claremont and College apparently contains some hazardous substances that will need to be treated and removed appropriately and carefully. The proposed retail establishments will receive, sell, use, and send away some quantities of hazardous materials. As yet, many potential site conditions, such as release of radon and quantity of asbestos, are unknown. The EIR needs to discuss these matters.

k. Blight and litter; waste generation

The increased size of the proposed grocery store, plus the addition of eight retail stores means that the proposed project could draw customers and consumer spending from the surrounding small businesses. If some of these businesses then failed, the resulting vacant storefronts could worsen existing transient and graffiti/vandalism problems and generally contribute to blight, with accompanying physical degradation and impacts on public and neighborhood health and safety. (See also the section on demand for public services, above.) The large proposed project also presents an increased potential for litter, with more people, more crowding, and more retail businesses. Finally, with an enlarged grocery store and eight new retail stores, there will be significantly increased solid waste generation and garbage removal by truck. The EIR needs to consider these potential effects.

l. Biology and human health

The proposed project is located in an urban area, and probably would not have many biological effects. However, throughout the country, improper night lighting causes a large number of bird strikes and deaths. Poor project design can also attract pest species such as pigeons and their dropping, and insects—a potential and avoidable problem for those species as well as for human health. Tree species of significant size should be planted to replace any trees removed. The EIR should address these factors.

m. Cumulative effects

The proposed project may have effects that are individually limited, but cumulatively considerable (considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects). As discussed above, the project may, in conjunction with past, present, and future projects, cause cumulatively considerable traffic, air quality, and climate change effects. Additionally, the project may contribute to cumulative effects in the areas of water, water quality, and storm runoff, demand for public services, energy, blight, litter, and noise. The EIR must address these potential cumulatively significant effects.

2. Project alternatives

The EIR must consider a reasonable range of feasible alternatives. In light of the comments above, the most obvious alternatives would entail smaller projects of varying size and components that do not conflict with the existing and proposed land-use regulation or raise issues of "spot zoning." Another feasible alternative would provide for remodeling of the existing facility on its existing footprint. Finally, a "no project" alternative must also be considered. The EIR must include serious analysis and discussion of these and perhaps other alternatives.

Thank you for consideration of these comments about the scope of the EIR necessary for lawful treatment of the proposed Safeway project at Claremont and College in Oakland.

Yours truly,

/s/

Glenn C. Alex
Attorney at Law

cc: District 1 Council Member Jane Brunner jbrunner@oaklandnet.com
Zac Wald zwald@oaklandnet.com

From: Glenn Alex [galex@att.net]
Sent: Friday, November 20, 2009 2:28 PM
To: Vollman, Peterson
Subject: ER09-0006 Safeway at College and Claremont

Dear Mr. Vollman:

On the evening of Nov. 18, I was unable to wait the two hours or so before the Planning Commission heard the referenced Safeway EIR Notice of Preparation item (# 2), which was moved to the bottom of the agenda. (As you know, however, I submitted extensive written comments in advance of the meeting.)

So far, I have been unable to determine whether the Commission took any formal or informal action on the matter, and if so, what? I would appreciate a copy of any actual resolution or action taken; if this is not available, I would appreciate a brief summary of anything decided or directed.

Thank you.

Glenn C. Alex

Ken Alex
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Pete Vollmann, Planner III
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250 Frank H. Ogawa Plaza, Suite 2114
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RE: NOP for Draft EIR, College Avenue Safeway
ER09-0006

Dear Mr. Vollmann:

This letter contains comments regarding the Initial Study and Notice of Preparation (NOP) for a Draft EIR for the proposed large-scale build-out of the Safeway and gas station properties at College and Claremont Avenues in Oakland. This letter focuses on major concepts and concerns and is not an exhaustive discussion of all issues. I appreciate the opportunity to comment on the Initial Study and the NOP.

Unfortunately, the Initial Study mischaracterizes the proposed project as consistent with the C-31 zoning, and thereby fails to identify multiple environmental impacts. The NOP states that the EIR will not consider impacts from "air quality, land use, and noise."[1] If the Draft EIR follows the outline of environmental impacts set forth in the NOP and Initial Study, the EIR will be legally deficient. I encourage the City to address the overriding environmental issue posed by the proposed project: the significant change of character to the neighborhood and community that will result from a large-scale shopping complex in what is currently one of the best examples of a local, pedestrian community in the Bay Area. The proposed project simply does not fit the neighborhood as codified by the zoning designation. A key element, therefore, for the Draft EIR will be consideration of a sufficient range of alternatives consistent with the C-31 zone, including a renovation or re-build of the existing Safeway store based on a footprint and size similar to the existing structure.

COMMENTS

The Legislature enacted the California Environmental Quality Act ("CEQA"), Pub. Resources Code secs 21000 et seq., to "[e]nsure that the long-term protection of the environment shall be the guiding criterion in public decisions," (Pub. Resources Code sec. 21001(d)), and intended CEQA "to be interpreted in such a manner as to afford the fullest possible protection to the environment . . . ." (*No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 83, quoting *Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal.3d 247, 259.) The EIR is the "heart

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[1] The NOP is confusing. It lists both noise and air pollution as factors that it will not consider and that it will consider.

of CEQA . . . ." (Guidelines sec. 15003(a); City *of Carmel-by-the Sea v. Board of Supervisors* (1976) 183 Cal.App.3d 229, 241.) Most importantly, the purpose of the EIR is to "demonstrate to an apprehensive citizenry that the agency has in fact analyzed and considered the ecological implications of its actions." (*No Oil*, supra, 13 Cal.3d at 86; see also *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376.)

Under CEQA, the agency must determine through the Initial Study whether the project "may cause a significant effect on the environment." (Guidelines sec. 15063(b)(1)(A), (B) (emphasis added).) Because of the importance of the EIR for public education and input, the need to gather and present information relevant to a project's possible environmental effects, the proper consideration of those effects, and where feasible, the mitigation of adverse impacts, the threshold for required preparation of an EIR is low. (*Friends of "B" Street v. City of Hayward* (1980) 1066 Cal.App.3d 988; see Pub. Resources Code secs. 21002, 21002.1(b), 21081(a).)

The determination of non-significance set forth in the Initial Study for many of the potential impacts of the proposed project is not supported by the facts, particularly at the initial stage of review. Without meaningful consideration of environmental effects of the potential impacts, CEQA review is incomplete. Most importantly, CEQA mandates that an EIR identify and analyze all significant adverse effects of a project. (Pub. Resources Code, § 21100; Cal. Code Regs., tit. 14, § 15126.) Some of the potentially significant impacts are briefly discussed below.

In addition, I have included some suggestions for alternatives to be considered in the Draft EIR. CEQA requires public agencies to refrain from approving projects with significant environmental impacts when there are feasible alternatives that can substantially lessen or avoid those impacts. (*Mountain Lion Foundation v. Fish & Game Commission* (1997) 16 Cal.4th 105, p. 4-7). The "cursory rejection" of a proposed alternative "does not constitute an adequate assessment of alternatives as required under CEQA" and it "fails to provide solid evidence of a meaningful review of the project alternative that would avoid the significant environmental effects identified . . . ." (*Mountain Lion Foundation*, 16 Cal.4th at 136.)

<u>C-31 Zoning and Land Use</u>

The Safeway project area is designated as C-31, described as a "special retail commercial zone." (Oak. Ordinance, Ch. 17.40.010.) "The C-31 zone is intended to create, preserve, and enhance areas with a wide range of retail establishments serving both short and long term needs in attractive settings oriented to pedestrian comparison shopping, and is typically appropriate along important shopping streets having a special or particularly pleasant character." (*Id.*) This is an excellent description of the current character of the College Avenue area bordered, in part, by the Safeway property. In fact, the 2008 "Citywide Retail Enhancement Study," (also known as the Conley Report, available at http://business2oakland.com/main/retailmarketupdate.com), describes the area as the example of a "well-functioning comparison goods neighborhood." ("Implementation Plan" at 17.)

Development in C-31 zones is meant to maintain and enhance the area, not, as in some other zones, grow and change. This concept – maintain and enhance – must be incorporated into the description of the project's objectives, and must be considered in evaluating the environmental impacts of the project. If the proposed project will change the nature of the area, it is in violation of the C-31 zone. The City of Oakland's Conley Report identifies the area as one not needing additional grocery store services, Implementation Plan at 18, and lists Rockridge as "high performing." (*Id.* at Ex. A.) As of 2008, according to the Conley Report, Rockridge was the second highest grossing retail node in Oakland, has the highest comparison goods sales in Oakland, and "has continuous retail frontage and a pleasant pedestrian shopping experience along College Avenue . . . ." ("Citywide Retail Enhancement Study" at 73.)

The C-31 zone requires a "Major Conditional use permit" if the development exceeds 25,000 square feet. (Oak. Ord., Ch. 17.134.) As a result, the proposed project (65,000 square feet) requires such a permit. That permit requirement means that the burden is on the project proponent, not the community, to show that the proposed project *does not* have a significant environmental impact on land use.

Oakland may grant Safeway the C-31 Major Conditional Use permit *only* if the project meets all of the requirements of Chapter 17134.050. Those requirements include:

> That the location, size, design, and operation characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of the abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; . . . to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development.

The proposed project replaces a one-story, 25,000 square foot grocery store with a two-story, 65,000 square foot shopping center, and doubles the current the number of parking spaces. The new structure covers the entire triangular area along Claremont and College with a two-story building. Amazingly, the Initial Study concludes that the proposed project "would not divide an established community; rather the proposed uses would provide historical continuity to the existing land use pattern. No impact is projected."

This conclusion is unequivocally at odds with the facts and common sense. Land use impacts are the central issue for consideration in the EIR for this proposed project. The neighborhood has multiple, unique, small shops and substantial foot traffic. As the City's Conley Report states, it is "high-performing" with its current mix of shops and groceries. A large-scale grocery store – more than double the size of the current store – along with franchised retail and food stores will almost certainly alter the character of the neighborhood and create new pressure on existing establishments. As an example, neighborhood shops currently include a bakery, a butcher, a floral ship, and a produce market. The expanded Safeway intends on competing more extensively with each of these shops. National franchised stores, in eight "condominium" sites will also compete with existing shops. As another example, the architectural style of the area is eclectic; the corporate, franchise façade of the proposed project is at odds with the nature and feel of the neighborhood. As a third example, Safeway proposes doubling the parking available and increasing the number of shops substantially. This will impact the pedestrian nature of the area, and will add to an already significantly overburdened traffic situation. It may require an additional traffic light at 63rd Street, which would mean that there will be three sets of traffic lights in two city blocks, across two jurisdictions (Berkeley and Oakland).

In light of the C-31 requirements, the need for a Major Conditional use permit, and the strong argument that the two-story, 65,000 square foot proposed project will alter the nature of the land use and the neighborhood, CEQA requires that the EIR include consideration of those impacts, including, but not limited to the economic impact on the community and businesses, the undermining of the pedestrian-friendly nature of the area, the impact on the architectural style of the area, and the multiple issues resulting from increased traffic and the potential need for another traffic light. Undoubtedly, the large-scale proposed project meets the low CEQA threshold requiring full consideration in the EIR of this environmental effect: Substantial evidence supports the argument that there may be an environmental effect. Failure to consider this impact in the EIR is a violation of CEQA.

Other Impacts

Aesthetics. The initial study concludes that the proposed project will not have a significant impact on "aesthetics." This issue is related to the C-31 zoning, and the conclusion of the initial study is clearly wrong. The large-scale proposed project changes the existing area from a one-story structure to two stories, and builds out the property to the edge in all directions. Its architectural style can be described as corporate and franchised. The project will dominate the neighborhood and change community aesthetics. CEQA requires consideration of the impact on sight-lines, architecture and ambiance.

Blight/urban decay. "CEQA requires analysis of the shopping centers' individual and cumulative potential to indirectly cause urban decay." (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1204.) Safeway proposes a large-scale increase of the size of its store, increased parking, an addition of eight "condominium" stores (likely to be filled by franchises), and a change in the architecture of the area. The proposed project will almost certainly increase competition for the local shops, including a butcher, produce market, wine shop, and bakery, thereby increasing the chances of the loss of multiple businesses in the area. In addition, the likelihood of increased traffic will create new pressures on local businesses. As a result, the potential for urban decay or blight is very real and must be evaluated in the EIR.

In addition, the project proposes to provide a "rooftop garden" open area at the corner of Claremont and College. It is not clear how this area will be maintained and secured. It has the potential to become an "attractive nuisance." As such, the impact of that space must be evaluated in the EIR.

Greenhouse gases. California recognizes that disruptive climate change is an urgent problem requiring strong and immediate action. To this end, the state enacted AB 32, requiring the state to reduce its greenhouse gas emissions to 1990 levels by 2020. CEQA requires consideration of project level greenhouse gas emissions and appropriate mitigation. The proposed Safeway project will result in such emissions at the demolition, construction, and operation stages. Emissions must be inventories and mitigation identified and required wherever possible.

Hazardous wastes. The initial study concludes that standard conditions will preclude significant impacts from excavation of the gas station and from demolition and construction activities. In light of heavy pedestrian traffic, the immediate vicinity of residences, and the evidence of underground tank leakage, there is sufficient evidence of the potential for environmental impact from these sources that consideration of the issue in the EIR is required.

Cumulative Impacts. CEQA requires that projects not be assessed in a vacuum; they must be considered cumulatively with the existing projects of the same general type, and with proposed projects whose construction is reasonably anticipated, since the small effects of many similar projects may add up to a major cumulative effect on the environment. "One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant, assuming threatening dimensions only when considered in light of the other sources with which they interact. . . . CEQA has responded to this problem of incremental environmental degradation by requiring analysis of cumulative impacts." (Cal. Code of Regs., tit. 14, § 15064(i)(1), quoted with approval, *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.)

The City must consider other projects in the area, most importantly the even larger proposed Safeway project at 51st Street. If there are other projects proposed for the local area, those must be evaluated cumulatively as well.

Project Objectives and Alternatives

CEQA provides that the EIR must discuss a "range of reasonable alternatives to the project or to the location of the project which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (Guidelines, § 15126.6, subd. (a).) The process of selecting the alternatives to be included in the EIR begins with the establishment of project objectives by the lead agency. "A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings.... The statement of objectives should include the underlying purpose of the project." (Guidelines § 15124, subd. (b).) While the project proponent's objectives are relevant, it is the *City's* objectives which control. This is an important point in this case. Safeway seeks to expand its enterprise substantially. But the project is squarely in a C-31 zone. The C-31 zone exists to ensure that area and its character is maintained and enhanced, which differs significantly from other zoning designations that are meant for growth and change. Therefore, and importantly from a legal standpoint, the City's objectives for this project must be consistent with the zoning designation. The Safeway project must maintain and enhance the area, not simply provide for commercial growth and change.

To this end, the EIR must include sufficient information about each alternative to provide meaningful analysis and comparison, Guidelines §, 15126.6, subd. (d), and must consider alternatives that could eliminate significant effects or reduce them to a less than significant level, even if the alternatives could impede the attainment of the project's objectives to some degree. (Guidelines, § 15126.6, subd. (b); see also *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal.App.4th 1437, 1456-57 (cannot exclude alternative simply because it impedes project objectives or is more costly).)

In light of the potential land use impacts, set forth in the C-31 zoning provisions and the Major Conditional use permit criteria, the EIR must include consideration of appropriate alternatives. It is essential that a re-build on a similar footprint and a renovation of the store currently at the site be fully evaluated as part of the environmental review. In addition, the City should evaluate a 30,000 square foot build-out, and 30,000 square foot build-out with additional shops, and a mixed use development with an appropriately-sized grocery store. Without including evaluation of those alternatives in the EIR, the analysis will lack a meaningful consideration of the environmental impacts and trade-offs.

CONCLUSION

Thank you for the opportunity to comment. The proposed large-scale build out at Claremont and College poses potentially significant changes for the neighborhood. These impacts must be fully considered so that the City and the public can make the best decisions for the community. Of greatest importance is the consideration of the impact of the build-out on land use and the nature of the community from the project as proposed, and the consideration of the impact of meaningful alternatives, such as a new or remodeled store consistent with the existing footprint. I look forward to reviewing the Draft EIR.

Sincerely,

Ken Alex

KEN ALEX

cc Councilmember Jane Brunner

Vollman, Peterson

From: Ethan Andelman [eandelman@gmail.com]
Sent: Tuesday, December 01, 2009 10:18 AM
To: Vollman, Peterson
Subject: Comment on scope of Safeway on College EIR

Mr. Vollman--

I am writing to express my concern that the EIR for Safeway will be improperly scoped without incorporation of neighborhood streets. The traffic portion of the study must include not only the arterials (College, Claremont, and Alcatraz), but also several neighborhood streets which will undoubtedly be affected by the proposed new store.

Colby and Hillegass are the only two streets parallel to College which connect College and Claremont. They already have a significant amount of traffic which cut through the neighborhood to avoid the very blocks of College on which the new store is to be located. Any substantial change in the traffic pattern on College will cause further diversion of traffic onto these two residential streets. The neighborhood should know how it will be affected by the proposed store, so these streets must be included in the scope of the EIR.

Similarly, 63rd Street will abut and may even be set out to be an entry to the store if the current plans are adopted. The traffic effect on this residential street must also be studied.

Finally, the intersection at Claremont, Colby, and Forest will handle more traffic now going on College. This is already a dangerous intersection, and more traffic will result in more accidents. This intersection must also be included in the EIR.

With proper study, the traffic impact of the store will be known ahead of time. Ignoring the impact of the proposed store on the neighborhood would leave any EIR mis-scoped.

--Ethan Andelman
6111 Colby St.
(510) 594-2279

Vollman, Peterson

From: Lorenzo Avila [zoavila@yahoo.com]

Sent: Wednesday, November 18, 2009 1:49 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com

Cc: Vollman, Peterson; Brunner, Jane

Subject: Please speed improvements of Claremont-College Safeway

The present Safeway is ugly and cramped. North Oakland persons like myself who need affordable necessities will burn less gas and bike tire rubber when Safeway grows and provides more choices of products. The proposed design reduces traffic problems and improves safety just by getting rid of the gas station with its in/out traffic right in this difficult intersection.

It's great that you receive the concerns of neighbors who oppose an upgrade. However, Safeway has the right to improve its property. The NIMBY folks should petition demolition of the tall offices opposite on Claremont and the blocky Bank of America opposite on College rather than fight against the Safeway proposal.

Thanks for your attentiion. I must work tonight and cannot comment in person.

Vollman, Peterson

From: Larry Baack [ljbaack@pacbell.net]
Sent: Monday, November 30, 2009 9:26 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com
Cc: Brunner, Jane; Vollman, Peterson; gwozniak@cityofberkeley.info; TBates@cityofberkeley.info; jharrison@cityofberkeley.info; transportation@cityofberkeley.info; attorney@cityofberkely.info
Subject: Case Number ER09-0006

I attended the scoping Hearing of the Oakland Planning Commission this month on the Safeway proposed project at College Avenue. I have also reviewed the Initial Study for the EIR that was distributed by staff at the meeting. I am writing because I *fundamentally oppose* this project. Having been a member of the Regional Planning Committee for ABAG, I am much aware of projects that have impacts that cross planning jurisdictions. Certainly this is such a project as it has many potential significant impacts on neighborhoods in both Oakland and Berkeley. Some of these impacts have been addressed in the draft Initial Study. Certainly the impact of increased traffic congestion on both communities would be extremely negative if the project , as proposed, were to proceed. A project which proposes to almost triple the square footage of the present operation (the proposed Safeway store plus the proposed attendant shops equal about 64,000 sf versus the present approx 23,000 sf) will bring a huge number of new cars to an already badly congested area, and certainly will bring many more delivery trucks and eighteen wheelers to service the stores. Increased congestion and air pollution will be the result.
In that context the wording in the draft Initial Study regarding Air Pollution is totally inadequate and inaccurate (See Section IIIg) and needs to be revised.

Other impacts have been improperly classified as having no significant impact or no impact. Examples of these are the discussion of Land Use and Planning. There can be no doubt that the proposed project fundamentally conflicts with Oakland's General Plan and with the C-31 Zone Designation, on which the members of the Rockridge Neighborhood worked so hard. Therefor it will definitely have a Potentially Significant Impact on Land Use. Similarly, the proposed project would have a very substantial impact on the Aesthetics of the district and would very negatively impact the vistas of the stretch of College Avenue from Claremont to beyond Alcatraz. Equally important it would fundamentally damage the visual character and quality of the Avenue. College Avenue has a special character that has been maintained through the years in both the Rockridge/Claremont areas as well as the Elmwood. The street has a certain aesthetic character that is consistent from Broadway to the campus, and both jurisdictions and their communities have worked hard over the years to sustain that character. The visual impact of the proposed project is simply in conflict with this aesthetic and cultural character of the area, and therefor its impact is certainly significant in this regard.

This project is certainly one that has impacts on both Oakland and Berkeley. As proposed it is a classic example of exporting many negative externalities to a neighboring jurisdiction, in this case Berkeley. For both communities, this proposed project raises many environmental issues, and all of them should be investigated and carefully assessed with site specific analysis for negative impacts on surrounding communities. I believe those impacts to be very substantial, and they will demonstrate that the proposed project by Safeway, as proposed, is basically incompatible with maintaining environmental quality in the effected neighborhoods. It is for this reason that as a resident of this neighborhood for more that sixty years I oppose this proposal.

Sincerely,

Lawrence J. Baack
160 Brookside Drive

From: Jonathan Bair [j@jonathanbair.com]
Sent: Wednesday, November 18, 2009 2:15 PM
To: Blake.Huntsman@seiu1021.org; Doug Boxer; sgalvez@phi.org; Colbruno, Michael; mzayasmart@sf.wrtdesign.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; Vollman, Peterson
Cc: Elisabeth Jewel
Subject: Claremont Safeway EIR scoping session

Dear Planning Commission:

I am unable to attend tonight's scoping session on the Claremont Safeway's Environmental Impact Report but would like to suggest areas for review. As Chair of Oakland's Bicycle and Pedestrian Advisory Committee, and a frequent customer of this Safeway, I am very concerned about the auto-oriented design of the current store and the hazards it poses to pedestrians, as well as the deleterious effect the large surface parking lot has on adjacent street-fronting businesses. Please review the impacts of the redesign as they relate to pedestrians, bicyclists, and transit users who frequent the store from all over the city, and please consider Safeway's efforts to improve non-auto accessibility as a mitigation to the increased traffic a better-designed store may generate.

Sincerely,

Jonathan Bair

Jonathan Bair
510 847 0632

Vollman, Peterson

From: Jeff and Millie [jeffmillie@yahoo.com]

Sent: Friday, November 20, 2009 10:56 AM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com

Cc: Vollman, Peterson

Subject: College Ave. Safeway support from a local Oakland neighbor

I am writing you today to express my support for the expansion plans for the Safeway store on College Ave. and Claremont in Oakland. While I was not impressed with the original plans which were submitted over a year ago for the store's expansion, the new plans as they appear now go a long way to alleviating my concerns about scale, traffic, parking and the overall assimilation of such a large store into the community. As a family that patronizes College Avenue shops and restaurants on a literally daily basis, I think the new Safeway, as its rendered at http://lowneyarch.com/projects/retail/safeway.html, would be a massive improvement. The addition of smaller shops on the east side of College, the public space and roof terrace, and the much needed parking greatly improve the entire area and I think lead to an overall increase in commerce and revenue of every business nearby. I would assure local merchants who are afraid of losing business to a new, larger Safeway, that we would continue to patronize their establishments the same as we do today. In fact, the largest single impediment to our shopping at the local stores instead of larger stores such as Whole Foods, or Berkeley Bowl is the lack of parking in the neighborhood. The Safeway expansion project would seem to significantly improve that, and hopefully would make it easier for us to make quick trips to those merchants nearby the Safeway store. (Assuming of course that the parking in the Safeway project would be for the entire vicinity and not limited to Safeway patrons only.)

While not without concerns, the new plans seem to be carefully thought out, and appear to address some of the largest issues of overall size, scale, continuity with the neighborhood, public space and parking and traffic flow problems. I am sure that you are hearing vocal opposition on any number of counts to this project, and just wanted to ensure that our voice of support was heard in the mix.

Regards,

Jeff Baird
600 Alvarado Road
Oakland, CA 94705

Michael & Kelly Barrett
2720 Alcatraz Avenue, Berkeley, CA 94705

Pete Vollman, Planner III,
City of Oakland, Community & Economic Development Agency,
250 Frank H. Ogawa Plaza, Suite 2114,
Oakland,
CA 94612

Case Number ER09-0006

Dear Mr. Vollman

I would like to comment about the proposed redevelopment of the Safeway supermarket at College/Claremont, in Rockridge.

First, I fully support that an EIR should occur for this proposed development. On the topics that are listed in the Notice of Preparation of Draft Environmental Impact Report you particularly reference traffic, air quality and noise.

<u>Traffic</u>
It is clear that a detailed assessment is needed of the changes in traffic patterns that this project would generate. It is not clear whether a roughly doubled store will generate roughly twice the amount of vehicular traffic, but it's a good starting assumption. However, that assumption should be validated.

Also, the changes in the entrances / exits onto College & Claremont make it highly likely that there will be significant changes in traffic patterns of cars entering and leaving the proposed store parking lot. In particular, much of the traffic entering the store today does so via the two entrances on College Avenue. Because of the reconfiguration of the entrances, it is highly likely that much of this traffic will instead divert up Alcatraz Avenue, turn right onto Claremont, and enter the store from there. This section of Alcatraz is in fact much less trafficked than all the other sections, and mostly carries stopping traffic, trying to find parking spaces for businesses on College, and a relatively small amount of through traffic going up Alcatraz/Claremont.

Because of the fact that this section of Alcatraz Avenue is in Berkeley, I respectfully request that the traffic analysis includes the appropriate counterparts from Berkeley, and is validated by them.

On a related note, the current design proposal by Safeway calls for one of the major vehicular entrances and exits, to be located immediately behind the residences on Alcatraz. This was a conscious choice on the part of Safeway, and the architects, and will cause more impact on this community than other design alternatives. The impact from this traffic – which would be avoidable if the project does not go ahead, or if a different design were to be adopted – should also be considered. This factor will also have a relevant impact on both air quality & noise.

Air quality

Safeway has shown fairly consistently that it is unable to fully comply with CA air quality requirements for idling diesel engine powered delivery trucks, given the closeness of the loading dock to the residences on Alcatraz. While the proposed design relocates the loading dock slightly, there is still a high likelihood of violation of existing CA regulation. An alternative design, which removes the loading dock from the vicinity of these residences would be strongly preferable.

As noted above, a larger store will presumably mean higher sales (else Safeway would not even be proposing the new store), and therefore more semi-trucks making deliveries. Ergo, air quality would likely be worse in this new proposal than is the case today.

Noise

A larger store is presumably likely to generate more noise in the general neighborhood. Given that traffic is in fact one of the major sources of noise, I'd suggest that this factor is a significant one. As noted earlier, the conscious design decisions that Safeway and their architects have made in their proposed design, will substantially increase noise levels for the residents of Alcatraz Avenue, by dint of placement of a major vehicular entrance/exit ramp behind these houses.

Other factors

I was personally surprised that the scope of the existing proposed Draft Environmental Impact Report did not include Land Use and Planning considerations. It is clear that the proposed development is massively out of compliance with both the letter and spirit of the Rockridge C31 zoning. Additionally, because Safeway has publicly stated on many occasions that it intends to offer goods for sale which compete with existing vendors in Rockridge, there will clearly be impact on the general commercial environment on College Avenue.

Conclusions

My own personal view is that this current proposal by Safeway is neither necessary, nor in keeping with the general commercial environment in Rockridge. It will negatively impact local residents, especially those in the immediate vicinity of the site, and local stores. Given that Oakland is under no obligation to permit this development, I believe it is fully incumbent on the city to use the EIR process to demonstrate the full level of impact that this development would generate, if it were to be approved.

Sincerely,
Michael Barrett

Michael & Kelly Barrett
2720 Alcatraz Avenue, Berkeley, CA 94705

November 30th, 2009

Pete Vollman, Planner III,
City of Oakland, Community & Economic Development Agency,
250 Frank H. Ogawa Plaza, Suite 2114,
Oakland,
CA 94612

Case Number ER09-0006

Dear Mr. Vollman

I commented in writing before the recent Planning Commission EIR scoping hearing about the proposed redevelopment of the Safeway supermarket at College/Claremont, in Rockridge, and indeed spoke at that meeting. In this letter, I wanted to expand upon my prior letter and verbal statements.

I believe there are two separate questions: first, should a development of this size/scale occur on this site, and second, whether this design is acceptable. Some of my concerns address the first question, and others are informed by the second.

I fully support that an EIR should occur for this proposed development. On the topics that are listed in the Notice of Preparation of Draft Environmental Impact Report you particularly reference traffic, air quality and noise.

Traffic

It is clear that a detailed assessment is needed of the changes in traffic patterns that this project would generate. It is not clear whether a roughly doubled store will generate roughly twice the amount of vehicular traffic, but it's a good starting assumption. However, that assumption should be validated.

Also, the changes in the entrances / exits onto College & Claremont make it highly likely that there will be significant changes in traffic patterns of cars entering and leaving the proposed store parking lot. In particular, much of the traffic entering the store today does so via the two entrances on College Avenue. Because of the reconfiguration of the entrances, it is highly likely that much of this traffic will instead divert up Alcatraz Avenue, turn right onto Claremont, and enter the store from there. This section of Alcatraz is in fact much less trafficked than all the other sections, and mostly carries stopping traffic, trying to find parking spaces for businesses on College, and a relatively small amount of through traffic going up Alcatraz/Claremont. We are therefore concerned about the impact that this increased traffic on Alcatraz may have on our ability to safely exit from our driveways, and about the safety of crossing the street for ourselves, our neighbors and the neighborhood children.

Because of the fact that this section of Alcatraz Avenue is in Berkeley, I respectfully request that the entire traffic analysis includes the appropriate counterparts from the City of Berkeley, and the conclusions are validated by them.

On a related note, the current design proposal by Safeway calls for one of the major vehicular entrances and exits, to be located immediately behind the residences on Alcatraz. This was a conscious choice on the part of Safeway, and the architects, and will cause more impact on this community than other design alternatives. The impact from this traffic – which would be avoidable if the project does not go ahead, or if a different design were to be adopted – should also be considered. This factor will also have a relevant impact on both air quality & noise.

Additionally, at the EIR scoping hearing, Commissioner Boxer requested that you perform a traffic analysis of a design alternative at which the College Avenue vehicular entrance/exit is deleted. This option will maximally impact the neighbors on Alcatraz by dumping most of the Safeway traffic either onto Alcatraz Avenue, and/or onto the northern ramp that is proposed for the location immediately behind these residences. I respectfully suggest that you should also review another alternative, in which the northern/Claremont underground vehicular entrance/exit referred to above is deleted, or substantially relocated a considerable distance away from the neighboring properties. Apart from anything else, the Safeway proposal calls for a new traffic light at this location, and deletion of this entrance would obviate the need for that, allowing for freer movement of traffic on Claremont.

<u>Air quality</u>
Safeway has shown fairly consistently that it is unable to fully comply with CA air quality requirements for idling diesel engine powered delivery trucks, given the closeness of the loading dock to the residences on Alcatraz. Neighbors have regularly noted violations when trucks park with their engines idling at the northern edge of the current Safeway lot for 20 or 30 minutes. While the proposed design relocates the loading dock slightly, there is still a high likelihood of violation of existing CA air quality regulation. An alternative design, which removes the loading dock from the vicinity of these residences would be strongly preferable, and I strongly suggest that this should be researched within the context of the EIR.

As noted above, a larger store will presumably mean higher sales (else Safeway would not be proposing the new store), and therefore more semi-trucks making deliveries. Ergo, air quality would likely be worse in this new proposal than is the case today.

<u>Noise</u>
A larger store is presumably likely to generate more noise in the general neighborhood. Given that traffic is in fact one of the major sources of noise locally, I'd suggest that this factor is a significant one. As noted earlier, the conscious design decisions that Safeway and their architects have made in their

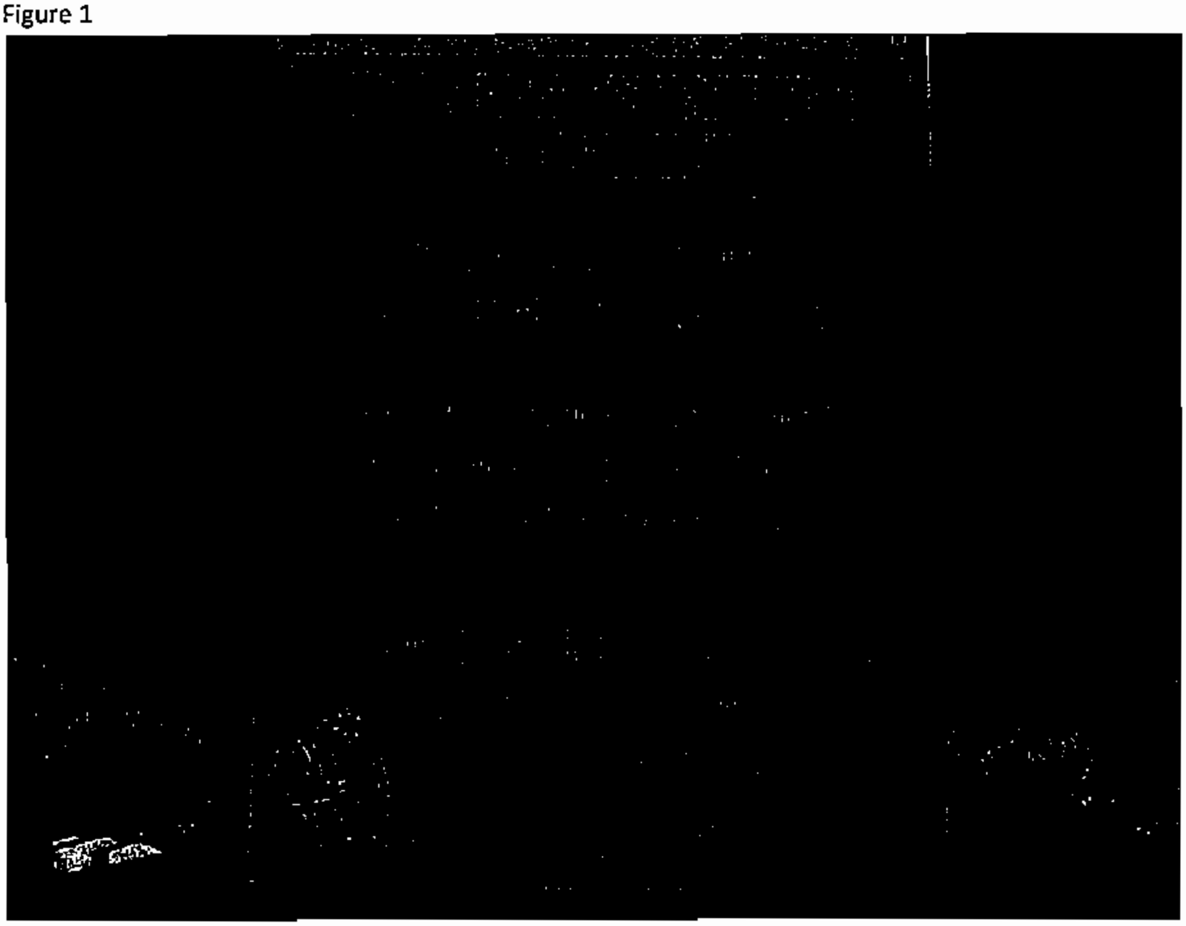
proposed design, will substantially increase noise levels for the residents of Alcatraz Avenue, by dint of placement of a major vehicular entrance/exit ramp behind these houses.

Parking

It was noted at the EIR scoping hearing that Safeway proposal would delete a large amount of parking on College Avenue. The statement was made however, that the new garage would offset that currently available street parking. I think this is factually incorrect. At the hearing, I mentioned that you should view the opinions of the Alcatraz neighbors as not representing NIMBYism - we already literally *have* a Safeway store in our backyards - but rather as of the closest observers of the manner in which Safeway conducts its business at the existing store.

Today, Safeway does not permit the public to park in the existing lot. Each entrance/exit to the existing lot is clearly marked with a sign making this fact plainly clear, and threatening towing for violators. I have attached a photograph of one of these signs (Figure 1), which makes Safeway's intentions crystal clear. These signs also give the lie to the letter writer (from one of the letter writers who commented prior to the hearing) thanking Safeway for allowing them to park while they shopped locally. Factually, today Safeway simply doesn't permit this.

Figure 1



You should therefore expect that, as Safeway operates this store, they will operate it to essentially the same policy. If you attempt to prevent them from doing this, I have no doubt that they will simply propose pay parking instead, with ticket validation for Safeway customers. Briefly, I could ask why anyone expects the same operator of the store to behave differently in the future?

Of course, any such change of operating policy on Safeway's part will surely have a large change on traffic behavior of vehicles entering/exiting the complex, as the necessary automated gates would meter traffic flows. Thus, traffic lights at these intersections would be even less effective. I suggest that you incorporate into the traffic assessment, a study of how effective the entrance/exits would manage traffic if automated gates were in place.

Aesthetics

The current proposal from Safeway contemplates a 10 foot buffer between the northern edge of the development, and the neighbors on Alcatraz & College. From our perspective, this is generally a good thing, but we do have some reservations about it

First, we are concerned about shading of the back yards along Alcatraz. The current design should largely obviate shading – but the planting regimen proposed within the buffer zone could entirely change that. Plantings of trees or bamboo in the 10' to 12' height range could provide good privacy. Some of us grow our own food in our back yards, and if the Safeway buffer zone is planted with poorly selected tall trees, it could literally take the food from our tables.

Second, the buffer zone has the capability of being an area that could be a magnet for ne'er do wells, and encouraging criminal activities. The design of the buffer zone could be changed in such a way as to make access effectively impossible for such unintended and unwanted access. Further, this could also improve upon the sound characteristics of the project, by use of a large sound wall (say 8' to 10' high) on the southern side of the buffer.

At least on the Northern edge of the lot, the current Safeway parking lot is only lit by streetlights on Claremont, which reduces the effect of unwanted light pollution into the residences on Alcatraz. I am unsure whether the current proposal from Safeway details the location of proposed lighting, as the publicly available design renderings omit details such as street lighting and traffic lights. However, I suggest that this topic – light pollution – should also be within scope of the EIR.

Finally, while the proposed roof garden on the roof of the structure at the College/Claremont is attractive, it could easily turn into an area that (like the buffer zone) attracts criminals, and general "quality of life" crimes. I have no idea whether Safeway has recognized the existence of this possibility, and made any suggestions as to how to manage it. Regardless, I would suggest that this possibility – and potential suggestions as to how to manage it – should be covered within the EIR.

Land Use and Planning

I was personally very surprised that the scope of the existing proposed Draft Environmental Impact Report did not include Land Use and Planning considerations. It is clear that the proposed development is massively out of compliance with both the letter and spirit of the current C31 zoning. As was mentioned during the EIR scoping hearing, C31 zoning was adopted *for* Rockridge. Rhetorically, how far out of compliance does a proposed development have to be, in order for the City to conclude that Land Use & Planning considerations apply? Additionally, because Safeway has publicly stated on many occasions that it intends to offer goods for sale which compete with existing vendors in Rockridge, there will clearly be impact on the general commercial environment on College Avenue. (This is especially true considering the likely situation with parking, as noted above.)

Safeway's neighborhood consultation meetings

At the EIR scoping hearing, Safeway were congratulated for listening to the community's input during their neighborhood consultation meetings. Apparently, no one has been informed of the way in which these sessions were conducted. Safeway used meeting facilitators to manage these meetings, which covered different aspects of the proposed design – but size was a topic that was obdurately kept from the discussion by the facilitators.

Throughout the process, the vast majority of participants nonetheless expressed the opinion that the proposed store was too large. Eventually, a Safeway representative let it slip that size was the one non-negotiable item to them, and that they regarded a 50,000 SF store as the minimum. At that point, most of the various participants formally withdrew from the process, as the overwhelming sentiment was that Safeway had not been open and honest in its communication. The meetings broke down, and no more consultations were held.

Conclusions

My own personal view continues to be that the current proposal by Safeway is neither necessary, nor in keeping with the general commercial environment in Rockridge. It will negatively impact local residents, especially those in the immediate vicinity of the site, and the local stores. Given that Oakland is under no obligation to permit this development, I believe it is fully incumbent on the city to use the EIR process to demonstrate the full level of impact that this development would generate, in the unfortunate scenario that it were to be approved as it is currently proposed.

Sincerely,
Michael Barrett

c.c.: Councilwoman Jane Brunner
Oakland Planning Commissioners

Vollman, Peterson

From: Nanbartell@aol.com
Sent: Saturday, November 28, 2009 4:47 PM
To: Vollman, Peterson
Subject: Safewat

Dear Mr. Vollman:

I'm concerned about the size of the planned new Safeway. It's out of proportion to the neighborhood and completely unnecessary given the duplicate services that are already in the neighborhood.

To raise the new building to accommodate retail space underneath doesn't make sense, given the number of closed businesses on College and the existence of every kind of store you could need up and down College. The businesses across the street will no longer be able to see sunlight, nor will the people who walk down the street.

A higher building will probably block views of the houses on Alcatraz as well.

I hope you can stop this behemoth or at least restrict it to one level without reducing parking.

Sincerely, Nancy Bartell, neighbor on Lewiston in Berkeley

12/01/09

To: City of Oakland Planning Commission and Staff
From: Robin Bishop, Rockridge resident
Re: Safeway on College EIR Draft per Scoping Hearing 11/18/09

Dear Commissioners and Staff (Mr. Peterson Vollmann):

I am both a concerned neighbor of the Safeway on College and a longtime resident, having been born at Alta Bates and growing up mostly in this very neighborhood. I am also simply curious about how we as citizens can make Oakland a better—no, the best—place to live in the SF Bay Area; that's why we are still here and not in, say, Marin. As artists and professionals, we want to stay and contribute as much as we can to the betterment of this particular community in this particular city; my husband is a local engineer and teaches at CCA, a nearby Oakland arts institution, and I am involved in Peralta, own a nearby business, and work as a wordsmith for local authors and tech concerns. We use public transit whenever we can, are deeply invested in the art life and culture of this city, deliver the local news, put up parking signs, and participate in local events as we can, because this community is our community and we love it. We will relocate from our longtime home of Oakland only if driven out by intolerable conditions of noise, traffic, pollution, crime, alienation, etc., in our agreeable community of Rockridge/Elmwood.

I understand that the Commissioners work very hard, put up with a lot, and are not even paid a token of esteem for this. Having authority and responsibility without recompense is also a laudable and noble thing, as is being the best citizen one can manage. I don't envy you, and we all saw how long you worked the other night. I also see that "Staff," Peterson Vollmann, has much of the responsibility and none of the final authority for what finally comes to pass in the form of a bricks-and-mortar monument for the ages, whether it passes the test of time or not. (We see many abandoned buildings in Oakland, and not a few of them are failed Safeways; we also know of many fabulous commercial developments with plazas and fountains and esplanades that suddenly went the way of Dubai in and around the Bay area, now abandoned.)

At the end of the EIR scoping hearing on November 18 recently, Mr. Vollmann asked for direction as to whether or not to include some items in his EIR study beyond those of air quality, noise, and transportation and traffic, and any items "addressed by standard conditions of approval." These included but were not limited to such items as land use and esthetics. The discussion ended, as far as I could tell, with a comment from the Commission that "absent direction from the Commission, Staff will exercise their discretion." I would therefore like to request that these very items Mr. Vollmann started but did not finish listing be included in the forthcoming draft EIR. The fact that he had to ask for such clarification and that the board is not used to such a query from Staff is indication enough that, in order to exercise proper discretion, they should be allowed as worthy subjects for further study in this case, if in no others. I believe there is ample testimony to the effect that the local, very concerned, community very much wants such subjects to be considered at this stage of the investigation, when it is appropriate, in order to avoid big, big trouble and endless headaches later on. Only the Commission has the power to make sure this is actually done, and only the residents who have poured all their hopes and expectations, along with endless hours of effort and discussion, will suffer if it is not done at this crucial juncture, before the juggernaut of city and corporation roll on under their own weight and inertia, even if to the detriment of the trust and lives of the communities they are to serve and thus gain from.

I am not learned enough in the language and ways of City or corporate function to know exactly what to say to make this case in the most bureaucratically sound way possible; we, as citizens, have learned a lot, but maybe not the essential words and terms that spell legitimacy and "mean business." I hope the Commission understands and can act on behalf of its concerned citizens in the face of well-versed corporate and business interests, for we count on this part of local government to speak for us, not for those who stand to profit from us. I think you do understand and take this to heart, as you have nothing to gain from, say, Safeway Corp., either. If we need to depend on Safeway to respond to our requests--for instance, for a smaller, urban/village-sized footprint--we are simply out of luck, and many very fine and expressive pillars of the local community (Oakland architects, toxicologists, designers, attorneys, ecologists, senior advocates, etc.) along with many regular, long-term residents, will be very, very unhappy. So is it also in terms of environmental impact beyond even esthetics, land use, etc. So please, please include in the EIR everything you think may be or become an issue, even beyond your tenancy or current laws or zoning codes. In order to refresh your memory, you may refer to the hearing segments themselves on You Tube; simply search for Safeway EIR or most any other conceivable tag and they will pop up (by shakycam1).

In any case, I think these are a few of the things that should be included in the upcoming draft EIR study:

1) The effects of bus stop placement and reduced or changed transit (by serving the UC students at all hours from in front of the store and next to a proposed already-disputed single driveway into the parking area across from 63rd Street, big problems may arise, for instance, and the pollution from said buses on the café/restaurant patrons, open-air market, local residences, etc., are all also legitimate issues for study now).
2) The effects on Sixty-third Street and other residents of increased traffic, increased demands for parking (already insufferable, and this huge store/retail project will TAKE AWAY two existing spaces), increased foot traffic from out-of-area opportunists (already a crime breeder here), etc., including what will happen in the below-grade, obscured parking area (that uses Sixty-third Street as its funnel) and the upper open seating plaza when criminal or dysfunctional elements figure it out). (There are lots of muggings here already; I have experienced it myself in front of Safeway and have a torn shoulder to prove it. Well-off area next to freeway entrance/exit and transit, poorer area = need for foresight, security.)
3) The effects on the fast-growing (+ 600% in three years) population (because of the neighborhood's charm and livability) of small children on Sixty-third Street (in particular, but on other surrounding residential streets as well) of increased traffic, noise, pollution, and crime agents that will be the natural inevitable consequence of this size megastore/shopping complex at our corner.
4) The possible negative effects of this particular land use for what amounts to a megastore of the very definition of a big-box type.
5) The effects of this particular kind of esthetic on a well-established, close-knit, relatively stable, happy community of near-European esthetic (open-air flower market, open-air produce market, specialty art gift boutiques, the best French bakery in all of not-Paris, pizzerias, open-air cafes and coffee/tea importers with a magnificent view of the hills soon to be obscured by Safeway, salons, etc.). Most of the business owners are also very local Rockridge/Elmwood residents, so will be doubly affected and doubly unhappy; unhappy bakers and florists and coffee roasters and produce vendors do not make

good croissants, wedding cakes, bouquets, birthday arrangements, double mocha lattes, fruit compotes, etc.). These might be considered quality-of-life effects, which may fall under both land use and esthetics, etc., including the effects of corporate competition on surrounding small, local, independent merchants. (Safeway Corp. is among the top five profit-takers in the area, next to Chevron, I believe, and disingenuously did not reveal its current plans for an even more gargantuan expansion with retail at THE Rockridge Safeway complex at nearby 51st and Broadway, Oakland, now pre-leasing.) This includes the problem of chain retail outlets on the ground level, which is something the community will not tolerate.

6) Shadowing on surrounding streets and their residents, shoppers and pedestrians, and obscured sight lines by a large, two-storey shopping complex, whereas now we clearly see all the surrounding sunny, wooded hills from most locations (soon to be obscured by this shopping complex, a very unpleasant and possibly unsafe prospect).
7) The effects of the teardown and construction on this site, including the gas station, from noise, pollution, diverted traffic, inconvenience, etc.
8) The substitution of a local for a regional air quality study for the EIR (the reasons are obvious: other parts of vast Oakland may not yield the accurate local data needed for this project and community).
9) The effects on Safeway workers of all of the above as well as the project in general (for instance, checkers complain they will not have as much work because of new automated self-check stalls).

I am sure there is more to say, but this will have to do for now. Please avail yourselves of the video clips on You Tube and review the testimony by local concerned residents and your own discussions to proceed with caution and diligence so we don't all have to suffer through endless reprisals and actions if essential stones are left unturned in this, the best opportunity to do it right the first time, upcoming draft EIR.

One last thing: I hear that the C-31 zoning designation that local Rockridge residents initiated forty or so years ago because of this particular Safeway store (one catalyst, architect Glen Jarvis, spoke at the scoping hearing, you may remember) is to be replaced with an even more restrictive C-N1 zone. I am not sure what this means, but I am sure you will or should take it under advisement when considering what efforts are appropriate and necessary at this stage in order to have the best project for the area and community, one that can go forth with alacrity and lack of intense friction, and maybe even with the wholehearted support of the community.

We are not looking, like perhaps the transient UC student was, for Safeway to come up with "12 kinds of lamb after midnight." We are looking for a highly livable market in a highly livable community. This isn't it, yet.

Thank you for listening. I believe you will do your best on our behalf, from your considered responses 11/18. May your salary become commensurate with your duties tirelessly done for us, your fellow volunteer concerned citizens of Oakland.

Robin Bishop, longtime resident (+20 years)
(wakerobins@yahoo.com)
344 63rd Street Oakland 94618
510-547-5890

Vollman, Peterson

From: RAB [RAB510@earthlink.net]

Sent: Monday, November 30, 2009 4:44 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: jharrison@cityofberkeley.info; transportation@cityofberkeley.info; Brunner, Jane; Vollman, Peterson; gwozniak@cityofberkeley.info; attorney@cityofberkeley.info

Subject: Oakland Planning Case No ER09-0006 Safeway on College

Dear Mr. Vollman and Commissioners,

I oppose the Safeway project as currently planned.

The Initial Study for the EIR does not adequately address the substantial probability that traffic and air quality will be severely impacted.

Gridlock is already a frequent occurrence at the intersection of College & Ashby. In fact, all of College Avenue, from Claremont to the campus is often at maximum capacity. Even though much of this problem is in Berkeley, rather than in Oakland, the Oakland Planning Commission cannot allow the petitioner to ignore it.

At the same time, the increase in automobile and truck traffic will have a deleterious effect on air quality **in the College Avenue corridor**. Again, the petitioners must not be allowed to get away with generalized contentions when there are specific conditions which should be studied.

I also oppose the planned project because its' massive size will have a negative imposition on the aesthetic ambiance of the neighborhood.
Just last week, from the west side of College Ave. while we were admiring the amazing glory of a double rainbow over the Claremont hills and the sunshine reflecting from the hillside homes, we were saddened to realize that the proposed project would block this view forever.
Scenic vistas are part of what we love about where we choose to live. Shouldn't aesthetic considerations be addressed in the EIR as well?

I would support updating the current store.

Rita Brenner
2728 Garber St.
Berkeley

Vollman, Peterson

From: Gretchen Brosius [gretchen@clientfirstinsurance.com]

Sent: Monday, November 02, 2009 9:55 AM

To: Vollman, Peterson

Subject: Case Number ER09-0006- College Avenue Safeway expansion

As a resident and Oakland business tax payer in the neighborhood of the College Avenue Safeway I can only urge the Planning Department to deny this expansion in its entirety. This is a walking neighborhood of small shops. We have extremely limited parking. Traffic is one lane each way and is constantly and consistently congested with the current stores. There is no way to improve this traffic pattern, and in reality it encourages the neighborhood ambience and walkablity.

This is not Danville where a larger Safeway with additional retail space serves a drive-up-and-go population. This is a small and cozy part of Oakland that is valued for this very character. The noise, the traffic and the resulting air pollution by increased traffic is not appropriate to this small neighborhood.

Should Safeway feel it cannot be fiscally successful without this level of expansion, and then I would suggest they abandon the store and sell. There are many other businesses that would value this neighborhood for its small cozy walking population and choose to fit in rather than push it way to something that is not reasonable for the traffic, parking, and congestion.

Please feel free to contact me should I be able to provide further reasons why this expansion should be denied in total. Thank you.

Gretchen Brosius
Principal
Client First Insurance Services
484 North St.
Oakland, CA 94609
(510) 652.8699
Llc # 0B09119
gretchen@clientfirstinsurance.com
www.clientfirstinsurance.com

Planning and Development Department
Land Use Planning Division

December 2, 2009

Mr. Peterson Vollmann
Planner III
City of Oakland, CEDA
250 Frank Ogawa Plaza, Suite 3315
Oakland, CA 94612

RE: COMMENTS ON INITIAL STUDY / ENVIRONMENTAL CHECKLIST FOR SAFEWAY PROJECT AT 6310 COLLEGE AVENUE, OAKLAND

Dear Mr. Vollmann,

This letter provides preliminary comments on the Initial Study and Environmental Review Checklist (IS/NOP) published by the City of Oakland for the proposed Safeway project at 6310 College Avenue. The City received the IS/NOP on November 3, 2009.

According to the IS/NOP, the project would involve demolition of the existing 25,000-square-foot store, parking lot and service station and construction of a two-story, approximately 64,860-square-foot building that would contain a 50,400-square-foot Safeway supermarket, about 11,500 square feet of ground floor retail spaces for approximately eight retail shops, and a partially below-grade parking garage with about 173 spaces (replacing about1063 existing parking spaces).

This project would be developed immediately adjacent to the City of Berkeley, and therefore is likely to have effects beyond the jurisdiction of Oakland. The City of Berkeley therefore requests that the EIR evaluate all potential impacts regardless of location, and according to the standards of significance applicable to the area of impact. For example, the City of Berkeley may have a different standard of significance for intersection operations or noise levels, which should be included in the City of Oakland's analysis of impacts in Berkeley. Furthermore, any necessary mitigation measures should be coordinated with the City of Berkeley to evaluate their desirability and feasibility.

The IS/NOP identifies potential impacts in a broad range of topic areas. The IS/NOP concludes that there would be no impact or a less-than-significant impact in the following areas:

- Agriculture
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation.

The IS/NOP states that standard conditions of approval would reduce the impacts to a less-than-significant level for the following topic areas:

- Aesthetics – light and glare for neighbors
- Biological – tree removal / nesting habitat
- Cultural – potential buried resources
- Geology – erosion during construstion
- Hazards – gas station clean-up, demolition activities
- Hydrology – hazardous materials, erosion, stormwater treatment
- Utilities and Services – stormwater runoff, waste reduction.

According to the IS/NOP, impacts that could be significant and will require further evaluation in the EIR include:

- Air Quality – Emissions from construction and operations
- Transportation – Traffic and parking, hazards, transit, alternative transportation
- Noise – Impacts of construction and operations
- Cumulative – Incremental, direct and indirect effects.

The City of Berkeley has not reached any conclusion at this time as to the adequacy of the conclusions presented in the IS/NOP, and may have additional comments at such time as the full EIR is prepared and circulated for public comment.

Of particular interest at this time is the project's potential transportation impacts, which will be more fully evaluated in the EIR. The City requests the opportunity to review the traffic and parking report and findings to ensure they address a range of issues that may affect the City and its residents. These include but are not limited to:

- the already-congested College Avenue corridor
- improvements that may be needed at College/Alcatraz
- better signal coordination methods and hardware
- possible signalization of Claremont and Alcatraz
- trip generation and parking demand based not just on the store's size but actual field data and comparable activity levels
- neighborhood impacts such as traffic and parking
- parking garage management

- trip reduction strategies including employee transit and similar programs
- driveway operations on College and on Claremont, including possible turn lanes
- alternative transportation system impacts and mitigation measures, such as bicycle lanes and routes, bicycle parking, pedestrian crossings, and transit services.

The City of Berkeley appreciates the opportunity to comment, and desires to be on the distribution list for all further documentation for the project, including public hearing notices, Draft EIR, and Final EIR, as well as staff reports and pertinent technical reports. The City may have additional comments during the project review process.

Staff from the City of Berkeley would be pleased to meet with the applicant and City of Oakland to review the project and EIR scope to ensure a complete study that also satisfies the needs of the City of Berkeley. If you have any questions about these comments, or would like to schedule a meeting, please contact me as listed below.

Sincerely,

Steven Buckley, AICP
Principal Planner

(510) 981-7430
sbuckley@cityofberkeley.info

Vollman, Peterson

From: Jerome Buttrick [jerome@buttrickwong.com]
Sent: Tuesday, December 01, 2009 4:31 PM
To: Vollman, Peterson
Cc: Brunner, Jane; Wald, Zachary
Subject: Fwd: Safeway @ College, No Project Scheme

Pete-
I discussed + submitted a No Project Alternative at the scoping session on Nov 18th. I gather that the EIR requires discussion of a project that looks at the site if no project were approved. I can provide an electronic copy for you use if that would be helpful. (The files are too large + were returned to me.)
Also, while you are doing the EIR you should consider a 30,000sf store option that expands the current size by 30%, is greener, would cost less, would not require closing the store, is more in keeping with the character of the neighborhood, and more closely hones to both the existing and proposed zoning. This alternative has been proposed by the community for over two years without any serious consideration by the applicant. It is a reasonable alternative and should be included in the EIR.
I can provide you a copy of that as well.(The files are too large + were returned to me.)

Thanks,
--Jerome Buttrick

Jerome Buttrick, AIA, LEED AP
Buttrick Wong Architects
T 510.594.8700 x15
C 510.282.1436

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

November 23, 2009

ALA024034
ALA-24-R3.06
SCH#2009102100

Mr. Pete Vollman
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Dear Mr. Vollman:

College Avenue Safeway – Notice of Preparation

Thank you for including the California Department of Transportation (Department) in the environmental review process for the College Avenue Safeway. The following comments are based on the Notice of Preparation. As lead agency, the City of Oakland is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, and implementation responsibilities as well as lead agency monitoring should be fully discussed for all proposed mitigation measures and the project's traffic mitigation fees should be specifically identified in the environmental document. Any required roadway improvements should be completed prior to issuance of project occupancy permits. An encroachment permit is required when the project involves work in the State's right of way (ROW). The Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's California Environmental Quality Act (CEQA) concerns prior to submittal of the encroachment permit application; see the end of this letter for more information regarding the encroachment permit process.

Traffic Impact Study

The environmental document should include an analysis of the impacts of the proposed project on State highway facilities in the vicinity of the project site. Please ensure that a Traffic Impact Study (TIS) is prepared providing the information detailed below:

1. Information on the plan's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed. The study should clearly show the percentage of project trips assigned to State facilities.

2. Current Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets, highway segments and intersections.

Mr. Pete Vollman/City of Oakland
November 23, 2009
Page 2

3. Schematic illustration and level of service (LOS) analysis for the following scenarios: 1) existing, 2) existing plus project, 3) cumulative and 4) cumulative plus project for the roadways and intersections in the project area.

4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State highway facilities being evaluated.

5. The procedures contained in the 2000 update of the Highway Capacity Manual should be used as a guide for the analysis. We also recommend using the Department's *"Guide for the Preparation of Traffic Impact Studies"*; it is available on the following web site: http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf .

6. Mitigation measures should be identified where plan implementation is expected to have a significant impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

We encourage the City of Oakland to coordinate preparation of the study with our office, and we would appreciate the opportunity to review the scope of work.

We look forward to reviewing the TIS, including Technical Appendices, and environmental document for this project. Please send two copies to the address at the top of this letterhead, marked ATTN: Yatman Kwan; Mail Stop #10D.

Encroachment Permit
Any work or traffic control within the State ROW requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information: http://www.dot.ca.gov/hq/traffops/developserv/permits/

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans which clearly indicate State ROW to the address at the top of this letterhead, marked ATTN: Michael Condie, Mail Stop #5E.

Should you have any questions regarding this letter, please call Yatman Kwan of my staff at (510) 622-1670.

Sincerely,

for LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse

December 1, 2009

3130 Lewiston Avenue
Berkeley, CA 94705

TO: Oakland City Planning Commission
FR: Lewis Carroll
RE: College Avenue Safeway EIR scope

Dear Sir / Madam

The EIR scope needs more work.

1) Claims regarding traffic by proponents of the Safeway expansion are ludicrous on their face. College Avenue, a main North-South artery, is only two lanes and is already barely passable during morning and evening rush hours, and for much of the week-end.

2) Our neighborhood commerce is oriented toward pedestrian shopping by area residents. A quick map search of the area reveals that there are ten large grocery stores within a 3 mile radius of College and Claremont, and up to 200 food-related businesses (excluding restaurants) within a 6 mile radius. The Safeway expansion, as currently configured, will not serve the community, as we can only consume so much food. It is an obvious 'zero-sum game' in which the expanded store could only succeed by drawing traffic from far outside the area and by draining the life juices from nearby businesses.

3) Safeway already has a spotty record of success operating stores in the area. A Safeway store on Claremont Avenue near Telegraph was closed and shuttered for years until the building was finally renovated and converted to professional office space. Another Safeway store on Shattuck Avenue was also closed and shuttered for many years until eventually occupied by the Berkeley Bowl.

With this kind of record and the presence of another large Safeway on Broadway – only slightly more than a mile away – points to likely business failure and another derelict building.

Yours sincerely,

Lewis Carroll

Vollman, Peterson

From: John Chalik [jchalik@prodigy.net]
Sent: Tuesday, December 01, 2009 3:53 PM
To: michaelcolbruno@clearchannel.com; mzmdesignworks@gmail.com; vienv.truong@gmail.com; vincegibbs.opc@gmail.com
Cc: Vollman, Peterson
Subject: Fw: Subject: Case Number ER09-0006; opposition to current Safeway College Avenue proposal and IS

apologies if this is a repeat

John Chalik
308 63rd St.
Oakland, CA 94618
Phone: 510-652-6312 Fax: 510-652-2300

----- Forwarded Message ----
From: John Chalik <jchalik@prodigy.net>
To: To: <Blake.Huntsman@seiu1021.org>; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com
Cc: jbrunner@oaklandnet.com; mailtopvollman@oaklandnet.com
Sent: Tue, December 1, 2009 3:46:43 PM
Subject: Subject: Case Number ER09-0006; opposition to current Safeway College Avenue proposal and IS

Dear Commissioners,

I am the owner of the commercial property directly across from Safeway, 6301 - 6323 College Avenue. My tenants include Yasai Market, The Meadows, Heartware, LuLu Rae Confections, Wood Tavern, Vino!, Ver Brugge Meat, Fish and Poultry, and La Farine. Some would say that my property values stand to increase a great deal from the proposed development and resulting increase in shopping volume in this area. I fear the opposite as I believe this already-congested neighborhood will become one to avoid.

When I spoke at the November 18th scoping session, I asked in reference to C-31 zoning, "How big is too big?" This is not a rhetorical question, but rather intended to explore just how the City views its role vis a vis the General Plan and the Zoning Code. I am concerned that City staff is ignoring the purpose of the Zoning Code. How else to explain the acceptance of a proposal to more than double an already-grandfathered 22,500 sq. ft. store without so much as a land-use consideration in the EIR?

Why isn't Safeway asked to explain and defend exactly what it is they intend to do with all this added space before there is a determination of exception to zoning? Should it be sufficient that Safeway has decided this is something that will serve their corporate interests with no further consideration or justification of impacts that the neighborhood and City will live with forever? (The closing and fencing of the 76 Station site is but one example of the arrogance of Safeway's approach to our community.) If a 230% increase of a space that is currently 3 times the allowable area (4 1/2 times under CN-1) does not reach the Commission's zoning threshold, then I respectfully ask is there any limit at all?

If this proposal was being brought to you by an independent developer, would the project be viewed in the same way? I have heard that Dion Aroner's firm is being paid tens of thousands of dollars per month to help

Safeway achieve its goals. I'm sure I speak for many in hoping that deep pockets and aggressive lobbying will not be allowed to alter the outcome of something so important to the future of Rockridge and the City of Oakland.

What makes disregard of the intent of the zoning even more puzzling is the proposed new CN-1 zone which is intended to better preserve the small-store pedestrian-oriented values of C-31. How can the more protective requirements of CN-1 be reconciled with the carte blanche approach that is being accorded Safeway?

For these reasons I request the following:

1. Add land-use to the EIR requirements with particular attention to (a) the impact of this "big box" approach on the community, and (b) its disregard for the letter and spirit of C-31 zoning.
2. Conduct a hearing as soon as possible to consider whether the proposed project should be denied forthwith based on its incompatibility with the general plan and C-31 zoning.

Thank you for consideration of these concerns.

Sincerely,
John Chalik

John Chalik
308 63rd St.
Oakland, CA 94618
Phone: 510-652-6312 Fax: 510-652-2300

From: Vollman, Peterson [PVollman@oaklandnet.com]
Sent: Monday, November 16, 2009 11:17 AM
To: Rena Rickles
Subject: FW: Case Number ER09-0006

Follow Up Flag: Follow up
Flag Status: Completed

Peterson Z. Vollmann
Planner III
CEDA – Planning & Zoning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612
Phone: (510) 238-6167
e-mail: pvollman@oaklandnet.com

-----Original Message-----
From: Tim Choate [mailto:timchoate@gmail.com]
Sent: Thursday, November 05, 2009 1:07 PM
To: Vollman, Peterson
Cc: Safewayneighbors@sbcglobal.net; Brunner, Jane; Wald, Zachary
Subject: Case Number ER09-0006

Hi Mr. Vollman - As a nearby neighbor of the proposed new Safeway store at College and Claremont Avenues, I'd like to formally register my concerns with you about Safeway's proposal. While all of us in the area appreciate Safeway's desire to improve their current store, it feels that our real concern about the scale of the proposal is continuously overlooked.

Specifically, I have these concerns:
1. The proposed new Safeway store is a behemoth that doesn't belong in this small, sweet walking neighborhood. The proposed design is new industrial, more appropriate to downtown Walnut Creek than to Rockridge and will definitely change the intimate feel of the immediate neighborhood. In fact, the existing store design with its curved roof is much more appropriate to this neighborhood. An upgrade within the existing structure would be so much better and nicer for the neighborhood.

2. Traffic - As you probably know, College Avenue North of Claremont Avenue is virtually unusable at most times of the day already. Those of us who live in the neighborhood have been forced to find alternate routes to leave the neighborhood as College Avenue is backed up most of every day and in both directions between Claremont and Ashby avenues. Those alternate routes often take us to Claremont Avenue to reach Highway 24. In addition to the significant new traffic which the new Safeway store will generate in general, traffic this neighborhood can't accomodate, Safeway is proposing to add a new stoplight and even greater additional traffic on the Claremont Avenue side, which is the primary road the neighborhood uses currently to avoid the backups on College Avenue. The resulting

traffic impacts on the neighborhood on both sides of Claremont Avenue will be horrendous even without the additional traffic light.

3. Parking - There was considerable neighborhood concern about an original proposal to have the parking lot on the roof the new store. This was one area that Safeway seemed to listen to. However, on the latest design it appears a new employee parking lot is on the roof and, much worse, it appears the loading dock may be on the roof. If I am reading this correctly, this proposal is very bad as we'd have delivery trucks arriving day and night on the roof, generating much greater negative noise impact to the neighborhood and lights that would shine at greater heights from trucks. Any loading docks should definitely be required to be on the ground level and frankly I think its completely unreasonable to have any roof parking whatsoever in a neighborhood like this.

Overall, I see the blocking off of the gas station has already begun and it feels that this project just continues forward despite all the concerns of the neighborhood. I'm hoping I'm wrong about this and that both Safeway and the city will listen to those of us who have to live closely with this project, both during the construction and for many years to come.

Please let me know what else I can do to help insure this project becomes more realistic in scale and to help insure no parking or loading is allowed on the roof.

Thank you,
Tim Choate
3160 Lewiston Avenue

Vollman, Peterson

From: Susan Shawl [safewayneighbors@sbcglobal.net]

Sent: Sunday, November 29, 2009 1:52 PM

To: michaelcolbruno@clearchannel.com; vienvtruong@gmail.com; vincegibbs.opc@gmail.com

Cc: Brunner, Jane; Vollman, Peterson

Subject: Fwd: Scoping of Case Number ER09-0006

Begin forwarded message:

From: Lynne Costain <lynnecostain@yahoo.com>
Date: November 29, 2009 1:37:55 PM PST
To: <Blake.Huntsman@seiu1021.org>, <dboxer@gmail."com ">, <sgalvez@phi."org">
Subject: Scoping of Case Number ER09-0006

As a fifty year resident of both the Elmwood/ Rockridge neighborhoods, I am disappointed in the EIR prepared for the above referenced Safeway on College project. I read the EIR and was appalled at it's superficiality. I attended the Scoping Session held in front of the Planning Commission but I did not feel that the issues that are of paramount concern were adequately addressed due to time constraints.

1.Any study of traffic impact must be be expanded to include **cut through streets**. Major cut through streets are Chabot Road, Presley, Golden Gate Avenue and Miles. These streets are routinely used to access the College Avenue area from Highways 24 and 13 by drivers avoiding congestion on Ashby.

2. Traffic studies should co-ordinate with **any impact from the Fourth Bore construction**. If these projects were to occur simultaneously the neighborhood impact would be horrific.

3. **Aesthetics are a major issue and should not have been omitted.** The proposed building is not the low profile, small business style of the surrounding neighborhood.

4. **The Land Use issue is huge.** This project does not conform with C-31 zoning which the residents of this neighborhood put in place many years ago. The present Safeway only exists because it was grandfathered in. The right to replace it with a store twice as large was not grandfathered in.

5. **Air Quality needs to be more realistically explored**- the claim that traffic will be less with this store (due to the removal of the gas station) is outrageous. Safeway is proposing to add space for multiple new stores in addition to the 50,000 square feet devoted to its own purposes.

Please prepare (or request to be prepared) an EIR that is a realistic assessment of the impact of this project on this wonderful small retail neighborhood.

Sincerely,

Lynne Costain
6400 Chabot Road
Oakland, California
510-652-6749

Vollman, Peterson

From: DNACRADY@aol.com

Sent: Monday, November 16, 2009 10:05 AM

To: Vollman, Peterson; Safewayneighbors@sbcglobal.net; Brunner, Jane; Wald, Zachary; Ddcprivate@aol.com; arcsmith@gmail.com; pcstjohn@earthlink.net; DanicaT05@comcast.net; DNACRADY@aol.com; nancyfriedberg@sbcglobal.net; joelrubenzahl@gmail.com; mosilverstein@gmail.com; hofer52@gmail.com; hofer36@gmail.com; EdgeGuy@aol.com; jeffgillman@hotmail.com; ulrich@passagesconsulting.com; drm1A2@sbcglobal.net; psansari@hotmail.com; patrishmb@hotmail.com; arf@bharf.com; kenpaulalex@yahoo.com; galex@att.net; jerome@buttrickwong.com; rockridgefans@gmail.com

Subject: Case Number ER09-0006

Dear Mr. Vollman:

We live on Claremont Avenue, immediately adjacent to the Safeway parking lot. We are entirely opposed to the proposed Safeway expansion. While we appreciate Safeway's attempt to address some of the smaller concerns of the immediate neighbors, at no time did Safeway address our continually reiterated and largest concern: that the project was just too big and inappropriate for the site.

We do not want a suburban mall in our urban neighborhood. We are currently extremely well served by numerous food markets (large and small) within easy walking and driving distance. We have no need for an enlarged Safeway.

Please do not allow Safeway to alter the nature, the scale, the aesthetics and the spirit of our neighborhood in this egregious manner forever.

Sincerely,
Adele and David Crady
3306 Claremont Avenue
Berkeley, CA

Vollman, Peterson

From: DNACRADY@aol.com

Sent: Tuesday, November 24, 2009 10:02 AM

To: Vollman, Peterson; Brunner, Jane; Wald, Zachary; gwozniak@ci.berkeley.ca.us

Subject: ER09-0006

Dear Mr. Vollman:

At last week's planning commission meeting, in reference to the scope of the new Safeway project, one of the commissioners was overheard to remark that Safeway "deserves" the new, enlarged store. This would seem to indicate that the commissioner has prejudged the project without reference to it's merits and significant demerits, it's inapropriateness to the site and the willingness of Safeway to overlook the rights of it's Berkeley neighbors in order to bully through a project that benefits the Oakland tax base.

As contiguous and hugely impacted neighbors, it would be our hope that you would judge this project based on the impact it will have on the environment, the traffic flow, the neighborhood and the items you neglected to include in the scope of the EIR (aesthetics, land use/planning) and NOT on the preferences, prejudices and prejudgements of members of the commission who may feel that Safeway deserves to place a huge Walnut Creek mall in the midst of of Rockridge.

While we understand the pressing economic realities that make it desirable for the city of Oakland to submit to the considerable force Safeway represents, we hope that ultimately, you will in fact consider the tremendous long term impact such an outsize eyesore will have on degrading our community; the impact it will have on diminishing the current mix of small shops and local businesses; the simple fact that it will not, in any significant way, maintain or enhance the neighborhood that each of has spent many years (and thousands of our tax dollars) enjoying and attempting to protect and preserve.

Sincerely,

Adele and David Crady
Claremont Avenue
Berkeley CA

Vollman, Peterson

From: George Davis [gwdavisii@earthlink.net]
Sent: Monday, November 30, 2009 11:10 AM
To: VinceGibbs.opc@gmail.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; sgalvez@phi.org; dboxer@gmail.com; MzmDesignWorks@gmail.com; Blake.Huntsman@seiu1021.org
Cc: Vollman, Peterson; Brunner, Jane
Subject: Case Number ER09-0006

To all Oakland Planning Commissioners,

I will address an area of significant concern that was overlooked in the Initial Study of the Safeway Project on College Ave.

The "I.S." is fundamentally flawed in that it does NOT address in any commensurate degree the important issue of traffic and transportation. To wit: "Since the project would replace an existing supermarket and gas station, the net increase in retail space (of the proposed project), and the associated traffic generation, would be much lower." It is readily apparent that the increase in retail space will turn the complex into a shopping destination because of its location at the base of the Oakland Hills and other suburban areas.

Absolutely this will have a Potentially Significant Impact! To agree otherwise is shirking the duty of the the City of Oakland and its Planning Commissioners.

Respectfully,

George W. Davis
6389 Florio St.
Oakland, CA 94618

gwdavisii@earthlink.net

DAVID DE FIGUEIREDO
2712 ALCATRAZ AVENUE
BERKELEY, CA 94705-2706

November 29, 2009

Oakland Planning Commissioners and staff
Oakland, California

Re: Case Number ER09-0006

Dear Commissioners:

Please include the following comments to the referenced Initial Study and environment review checklist. These items need to be included in the EIR for this project.

I am opposed to the Safeway on College project as currently proposed. I also believe that the Initial Study does not cover all the areas needed for the Environmental Impact Report; specifically it is deficient in both Aesthetics and Land Use.

Under **Aesthetics**

Please move to Potentially Significant Impact the following questions:

Questions a, c, d, and i.

The proposed building

- will have significant impact on the scenic vista (eliminate what little view we have from Alcatraz Ave),
- will be out of scale with the balance of the neighborhood (both the Berkeley and Oakland sides of College Avenue),
- at night it will cast more light into our backyards and along the back of our houses now that the building will be two stories, and
- does not fit at all with the C-31 zoning requirement or even the new CN-1 zone proposed (which limits retail to 5,000 sq. ft. with a maximum variance of 30,000 sq ft).

Under **Land Use And Planning**

Please move to Potentially Significant the following questions:

Questions b and c.

- The discussion says "The greatest potential for land use conflicts occurs along the site's northern boundary, which abuts the back of a street of single-family residential homes. However, the project design is intended to reduce that conflict potential by adding a 10-foot-wide landscape buffer between the Safeway store and parking area, where there is currently no buffer other than property line fencing." There is also no store or building presently along the property line. The proposed project will add a building and elevated parking along our common border. This is a great conflict with the land use presently.

- Question c discussion indicates that this proposed project will be in the C31 zoning. See the discussion above about C31 and CN-1 zoning under Aesthetics. If this project wouldn't be allowed under the proposed CN-1 zoning, why is it being considered now?

The **Travel and Transportation** section needs to be expanded to include not only College and Claremont Avenues in Oakland, but also College, Claremont and Alcatraz Avenues in Berkeley. The proposed project will undoubtedly increase traffic on Alcatraz Avenue in Berkeley as drivers get frustrated (as they do now) waiting to turn left into the Safeway parking lot while waiting in incredibly long lines just to get to Claremont Avenue in Oakland. The **Air Quality** section needs to include air quality data from the present site. The increase in idling cars and the doubling of the loading dock will degrade further the air quality (unless Safeway is planning to park a trailer in the second loading dock as they have done with the present site – see below).

I am also skeptical about the 10 foot buffer. Is Safeway planning on maintaining this? I don't want this to become another trouble spot in Rockridge/Elmwood (and along our property line), filled with the homeless, the druggies and assorted other undesirables. If you are relying on Safeway to patrol and maintain this, their track record, in my opinion, is less than stellar when it comes to the existing store. Here is the view from my backyard:

That trailer has been parked at their loading zone for 15 years. We gave up trying to get it moved. The refrigeration used to run day and night until we called them at 10:00 pm every night to turn it off. We had to cut back the ivy that Safeway allowed to overtake the fence they put up in order to reduce their vector and vermin problems.

Notice the mold growing on the side (upper left corner of the trailer). They cleaned it once in 15 years and only after they started their hard sell on the new proposed Safeway shopping center. In addition, my neighbors and I have continually complained about their trash (and the related smells that emanate from their compactor), vermin, recycling, trash in our yards and general noise level from the trucks that are idling or backing into and hitting the loading dock. I just don't believe that they will be good stewards of this strip of land.

In closing I ask that we contiguous neighbors be given the same level of recognition under C31 as any Oakland resident would. As I have stated, I am not opposed to a new Safeway, just a 60,000 sq ft plus version.

Respectfully submitted,

David de Figueiredo
2712 Alcatraz Ave
Berkeley, CA 94705

Vollman, Peterson

From: David Denton [david.denton@sbcglobal.net]
Sent: Saturday, November 21, 2009 6:49 PM
To: Vollman, Peterson
Subject: Reference Case Number ER09-0006 Rockridge Safeway

Hi Peterson,
I was at the EIR scoping meeting (did not speak) on Wednesday night. I was confused by the motion being passed in that one commissioner believed that the EIR would address different uses than those proposed (specifically senior housing). I was under the impression that an EIR could only address the impact of the proposed project. Is it really possible that other uses with unknown densities, economic structures, etc. could be evaluated by an EIR team? I am completely baffled!

Regards,

David Denton

From: Sandy Der [Sandy@TaodeKitchen.com]
Sent: Tuesday, November 17, 2009 5:30 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com
Cc: Vollman, Peterson
Subject: Support for new Rockridge Safeway

Dear Planning Commissioners:
I am a 12 year resident of Rockridge and care very much about my neighborhood. I believe that the current plans put out by Safeway for the Rockridge neighborhood will benefit the neighborhood very much. The current store is much too small, difficult to navigate and limited in selection - not to mention ugly. The new proposed store will enhance the neighborhood with an updated look and add to retail with new shops. It will be a good anchor to this side of the BART station (Market Hall on the other) and, in my opinion, will attract more customers to the shops (even the current small specialty food stores) on this end of College. I will welcome the enhanced shopping that is mere blocks from my home. In the spirit of progress and modernization, Sandy Der

--
Sandy Der
Chef, Certified Nutrition Consultant
Tao de Kitchen and Better Way to Wellness
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From: Anthony DiNicola [t_dinicola@yahoo.com]
Sent: Tuesday, November 03, 2009 8:11 PM
To: Vollman, Peterson
Subject: er09-0006

Mr. Vollman:

I would like to register support for the proposed Safeway (college) redesign. Although it is larger, greater commercial density along college in N. Oakland would be welcome.

Safeway has already demonstrated great sensitivity to environmental/ social impacts. It is nice to Safeway to include additional space for non-Safeway retailers.

I hope the city of Oakland speeds approval so Safeway can get on with their project. I also hope the city does not get overly influenced by the radical minority that seems to opposed to any updates/ development.

Thanks,
Tony DiNicola
5357 Shafter Ave
94618

VIA EMAIL

December 1, 2009

Diana M. Dorinson
3205 College Avenue #6
Berkeley, CA 94705

Peterson Vollman, Planner III
City of Oakland
Community & Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

RE:* Case Number: ER09-0006 – *Comments on Scope of EIR for College Avenue Safeway Project

Dear Mr. Vollman:

I would like to provide my comments on the scope of the upcoming environmental review for the proposed project to remodel and expand the Safeway at College & Claremont. I live in a rental unit less than 50 feet from the project site. Unlike many of the other contiguous neighbors, I am excited that these parcels are being considered for more dense development, because of their location in a vibrant mixed-use community close to transit. I am also pleased that Safeway has now proposed an urban form and design features that have more relevance to the rest of the neighborhood. However, the proposal also includes *substantial* increases in retail space—with an anchor tenant space that is far above zoning guidelines for the area—and so I have a number of concerns about the project and the potential for significant environmental impacts during both construction and operation.

The Notice of Preparation states that the Initial Study has already screened out a number of environmental factors, and that the Draft EIR will only study three areas: air quality, noise, and transportation/traffic. I am concerned that constraining the analysis to such a narrow focus at this early stage may be inappropriate for a project which so extensively alters the existing pattern of land use within this neighborhood.

An Initial Study is frequently and prudently used to narrow the focus of the EIR document to those areas of impact which could be potentially significant even after standard conditions are met, in order to conserve resources and expedite project review. However, the benefit of excluding certain topics from further consideration should only be conferred when conditions clearly rule out the need to evaluate and mitigate. If there is any doubt as to the level of potential impact, the lead agency should err on the side of being more expansive in its review, so as to ensure a full and complete environmental record.

Accordingly, I have also included my comments regarding a number of the environmental elements beyond the three you specifically requested, including several areas where the Initial Study fails to support its own conclusions about the need for further environmental review. All of these items deserve additional explanation or response from the lead agency and/or the project sponsor, in order to assure the public that the findings of the environmental study are sound and to avoid significant re-work of the DEIR at a much later stage. I have organized my comments in the same sequence as the Initial Study.

Finally, I have provided additional suggestions in two areas not specifically addressed in the Initial Study: impacts to greenhouse gasses and a list of suggested project alternatives to be studied in the EIR.

Thank you for your attention to these and other community concerns.

Sincerely,

Diana M. Dorinson

COMMENTS ON INITIAL STUDY CONTENT

This section details my feedback on specific portions of the Initial Study, including the introductory descriptions and the detailed CEQA checklist of environmental effects:

- **PROJECT DESCRIPTION –** The number of existing parking spaces is not consistent throughout the document. Page 1 indicates the existing of "a 96-space surface parking lot", but page 5 indicates that the "Safeway store provides approximately 106 parking spaces." There could be many logical reasons for using different numbers in different contexts, such as inclusion of street parking spaces or those on the Union 76 portion of the property, but this is not adequately explained in the document. **The EIR consultant should specifically address the different existing and proposed uses of different types of parking on the project site (street parking, employee parking, customer parking, etc.), in order to accurately document likely changes to traffic and transportation due to the project.**

- **I. AESTHETICS** – The Initial Study claims that impacts in all but one area will be less than significant. Additional study is warranted in two areas before such a conclusion can be verified:
  - The discussion contained in the Initial Study takes a very confident tone as to the lack of visual impact, based primarily on the fact that the current street-level appearance of the property itself is not appealing. I agree that the current design, form, and setting of the existing buildings are unattractive, but as a resident of the neighborhood, I appreciate having views of the ridgeline of the Oakland-Berkeley hills. While not necessarily considered 'scenic' when compared to soaring mountains or rugged coastline, I think the combination of dense mixed-use with the lovely hillside vista is one of the primary charms of Rockridge. I am concerned that the full planned height of the building on the College Avenue side may block these views. A number of the drawings submitted as part of the project proposal are marked as "not to scale." As a result, it is difficult to know whether the visual impacts of the project will actually be "less than significant" as claimed. **Either the project sponsor should make a stronger commitment to protect the ridge views, or aesthetic considerations should be studied in the EIR to confirm whether mitigation—such as minor additional setbacks or a modified roof-line—would be appropriate in order to preserve the natural setting of the neighborhood.**

- Similarly, residents living immediately north of the project currently have relatively open views to the south out over the existing building roofline. This provides nearly all of the sunlight for a number of residential units, including multiple apartments and two houses that are otherwise completely hemmed in by blank walls. Although a 10 foot buffer zone has been proposed between the Safeway and residences, **the EIR should evaluate existing sunlight exposure and shadowing in order to confirm that nearby residents will not be negatively impacted. If impacts are found, additional setback of the second level along north edge of the building may be warranted as mitigation.**

- **III. AIR QUALITY** – I support the clear need for the EIR to evaluate air quality impacts of both construction and operation of the project, and I would like to add:
  - The discussion in the Initial Study specifically mentions some contaminants (NOx, diesel) but not others (PM10, ROG). **The EIR consultant should be unambiguously directed to examine all criteria pollutants and toxic air contaminants, not only those specifically cited in the text of the study.**
  - The Shawl-Anderson Dance Center operated near the corner of College Avenue & Alcatraz Avenue offers classes to children and could constitute a sensitive receptor. Both Peralta Elementary School and Claremont Middle School are located within a mile of the project. None of these schools are mentioned in the Initial Study discussion. **The effects of additional pollution from traffic and related congestion on these three school locations should be studied in the EIR.**

- **VII. HAZARDOUS MATERIALS** – Reading through the commentary and standard conditions, it is not entirely clear whether the impacts in these areas will be less than significant. For example:
  - Conditions # HAZ-7 specifies that workers should be protected from asbestos, PCBs and lead, but says nothing about protecting the health and safety of neighboring residents and those passing by the work site. I can see the back wall of the Safeway from my window, and I work from home, so high risk construction activities are of particular concern to me. **If there are no existing Development Standards that can adequately address the potential for non-workers to be exposed to toxic substances during demolition, excavation, and construction, then Hazardous Materials should also be considered for study in the EIR.**
  - The project description in the Initial Study discusses the existence, but not the planned disposition of, the underground storage tanks on the gas station site. Presumably the USTs will be removed to build the structural foundation for the buildings, but this is not made clear in the environmental discussion. The regulatory conditions imposed by Condition #HAZ-8 require full remediation of the soils on the site, but do not clarify responsibility for the actual tanks. Covering the tanks with a major structure could lead to leakage and contamination of groundwater in the future. **If the USTs will not be removed as part of the project, the long term impact of delaying full remediation of the gas station site should be studied in the EIR.**
  - Regarding item VII.(c) – In addition to the parochial school mentioned in the discussion, the Shawl-Anderson Dance Center is located immediately north of the project site and offers classes for children. Demolition work would be within 100 feet of the school, which often keeps the windows open for ventilation during dance classes. **If the standard development conditions are not broad enough to ensure that the children are not exposed to toxic substances during demolition and construction, then environmental analysis and design of project-specific mitigation should be considered in the EIR.**

- **VII. HYDROLOGY AND WATER QUALITY – Item VIII.(m) does not have explanatory discussion to justify the conclusion of "No impact" contained in the Initial Study. Additional documentation is warranted to confirm that adequate pre-review has been conducted on this item, and that further environmental study is not required.**

- **IX. LAND-USE AND PLANNING** – The Initial Study claims that impacts in all but one area will be less than significant. Additional study is warranted in two areas before such a conclusion can be verified:
  - Item IX.(c) discusses potential conflicts with applicable plans and policies intended to avoid or mitigate environmental effects. The subsequent discussion mentions the C-31 zoning, provides several statements about existing permitted uses and design features, and makes a brief mention of the minor variances anticipated for parking and loading facilities. However, it makes absolutely no mention of the fact that the proposed project violates the square footage limitations in the C-31 zoning. At 50,400 square feet, the proposed size of the Safeway store is more than twice as large as the existing store, and it is nearly <u>seven times as large</u> as the 7,500 square-feet limit in the current zoning. The failure to include this key feature of the project application in the discussion does not inspire confidence that the most significant physical land use change contemplated in the proposal has been adequately reviewed by the lead agency. Although the C-31 zoning itself may not have been adopted for the express purpose of avoiding or mitigate environmental effects, zoning and other land use planning are legitimate tools used to manage and distribute environmental impacts where they can best be accommodated within an urban environment. The Initial Study reports that the design is "sensitive to the use permit criteria" established for this zoning district. However, a Conditional Use Permit for the anchor tenant's proposed violation of the size limitation has not yet been approved. As a result, it is not possible to know whether the final permitted uses will, in fact, have no significant impact. Moreover, the awarding of a conditional use permit for such a significant violation of the zoning could by some as tacit approval for future exceptions and violations, removing most of the value from the process of land use planning and zoning. **In order to support objective decision-making, the EIR should evaluate the implications of allowing a use permit for a project that is so significantly out of scale with current zoning, both locally in the neighborhood and also for the city as a whole.**
  - **Item IX.(d) does not have explanatory discussion to justify the conclusion of "No impact." Additional documentation is warranted to confirm that adequate pre-review has been conducted on this item, and that further environmental study is not required.**

- **XIII. PUBLIC SERVICES** – As regards fire protection and police services, it is surprising that there is no discussion of the potential impacts on the City of Berkeley's resources. The parcel in question lies on the Oakland-Berkeley border, so coordination with Berkeley could be an important factor in final permitting. For example, the Berkeley Fire Department (B.F.D.) maintains a station less than half a mile away on Russell Street near College Avenue. This station could be called to serve many of the immediate neighbors of the project, and increased traffic congestion or changes to traffic circulation could have impacts to B.F.D. operations. Response times for the Berkeley Police Department may also be affected, and should be considered in the EIR. **Coordination with the City of Berkeley emergency response must be an explicit part of the project permitting phase in order to avoid negative impacts to the level of service for project neighbors to the north. To the extent that additional study and analysis is warranted, the EIR should evaluate impacts on public services.**

- **XV. TRANSPORTATION/TRAFFIC** – I support the clear need for the EIR to evaluate transportation & traffic impacts of both construction and operation of the project, and I would like to add:
  - This project happens to be located at a mini-transportation node within the neighborhood, where two major local bus lines (AC Transit 51 and 7) intersect with a Transbay line (AC Transit E). Also, the AC Transit 9 and Rockridge BART station are within a half mile of the project. Being well-served by transit, this location is ideal for additional density and can help to reduce auto-dependency, but only if non-auto alternatives are preserved and enhanced within the area. AC Transit has recently proposed a significant re-organization of its bus routes in order to reduce operating expenses, although most of the services adjacent to the site will be preserved at current levels. In particular, the AC Transit 51 is proposed to be split into two routes at Rockridge BART, which will create a new operating paradigm in the College Avenue corridor. The 'existing conditions' that will be evaluated in this study are likely to be evolving during the study period itself. **Close coordination with AC Transit service planners is recommended to ensure accurate evaluation of transit impacts and appropriate design of mitigations under the new bus route structure.**
  - Beyond the changes from the region-wide effort to restructure bus services, the EIR consultant should be aware that one of AC Transit's internal studies concludes that most of the delay on route 51 in this area is due to stoplight timing in Rockridge and south Berkeley. **To the extent that additional demand for auto travel is created by this project, it would be an excellent opportunity to mitigate the associated delay and congestion with a coordinated signal timing study, which could potentially enhance all travel within the corridor.**
  - In addition to fixed route transit, a number of non-transit alternatives to auto travel thrive within the area around the project. There is a casual carpool pickup point along Claremont Avenue which provides significant Transbay capacity to local commuters. **The EIR should address impacts on casual carpool, including potential mitigations to maintain access for drop-off and pick-up activities during both construction and operation.**
  - Many bicyclists use College Avenue for commuting to and from U.C. Berkeley and Rockridge BART. These cyclists must presently negotiate a myriad of hazards in the project area, including the many driveways, intersections, turning movements, and changes in road configuration near the site. The project proposal includes numerous bike racks for cyclists to park their bikes while shopping, but it does not presently consider the accommodation of cyclists on the road network as they attempt to arrive or depart from the store area; bike racks are pointless if it is dangerous to access them. **Impacts to cycling should be specifically evaluated in the EIR, and the environmental analysis should consider how complete streets principles would allow for the safe joint use of the roadway by all modes.**
  - Existing traffic congestion in the area around the proposed project is already significant. The City of Berkeley has installed extensive traffic calming measures to prevent neighborhood cut through traffic in south Berkeley. As a result, College Avenue is particularly congested, with daily backups of extending from Derby Street in Berkeley through to Claremont Avenue in Oakland. Small changes in traffic congestion due to the project can have ripple effects far beyond the intersections in the immediate vicinity of the project site. **The EIR should use an expanded study area for traffic analysis to ensure that traffic impacts and the potential for increased congestion are fully understood and appropriately mitigated, especially across jurisdictional boundaries.**

- Cumulative impacts from other proposed development are also likely to be problematic in this area. Planning studies for AC Transit BRT on Telegraph Avenue are already projecting degraded level of service for nearby intersections, as drivers adjust to the reduced capacity on Telegraph. If additional vehicles are also drawn to the project area because of increased retail space and the availability of additional free parking, these negative impacts would be exacerbated. **The EIR should study the cumulative impact of potential traffic changes on Telegraph Avenue together with residential development currently approved for the Temescal neighborhood and retail development proposed for the shopping center at Broadway and Pleasant Valley.**

- One of the reasons for existing traffic congestion in the project area is the numerous deliveries of inventory and supplies to the local businesses. Parallel parking and frequent double-parking constricts traffic flow and creates a danger for pedestrians and bicyclists. In a commendable effort to align with the small shops character of the C-31 zoning, the project proposal now includes several additional retail spaces, and more deliveries will be likely required to serve these merchants. There is no indication in the Initial Study as to whether Safeway would contemplate allowing the loading docks to be used for deliveries to the small shops, although this is unlikely, since the loading docks would probably open directly into the rear of the Safeway. **The EIR should include a more specific analysis of the impacts both created by and experienced by commercial truck and delivery activity within the project area. In particular, mitigations should be designed to minimize interference with transit operations and bicycle & pedestrian travel.**

- Another source of complexity in the local traffic circulation is created by the many driveways opening onto College Avenue on or near the site. Three of these driveways are proposed to be removed as part of the project. The proposed driveway to remain happens to be located at the intersection with 63rd Street and very close to the busiest uncontrolled crosswalk in the neighborhood. Also, a left turn pocket is proposed from northbound College Avenue onto 63rd Street, and a bus stop would be relocated to a position on the east side of College Avenue just south of 63rd Street. The concentration of so many auto, bus, and pedestrian movements in such a small area could be extremely problematic. **The EIR should analyze alternative circulation patterns to the one proposed in the project description, in order to determine whether modified circulation can accommodate increased traffic without degrading the safety or performance of the roadway network:**
    - The EIR should evaluate an alternative where the <u>driveway access to and from College Avenue is completely eliminated</u> with all traffic entering from and exiting to Claremont Avenue. As currently proposed, the one driveway on College Avenue would need to accommodate all of the existing turning movements, plus the additional entrances and exits of any increased vehicle traffic drawn to the expanded project, with very little increase in roadway capacity. At the same time, Claremont Avenue already has two lanes in each direction, is underutilized relative to its capacity, and is proposed to have a traffic signal installed to manage the movements of cars, bicycles, and pedestrians. Elimination of the College Avenue driveway would allow for a seamless pedestrian experience along College Avenue, and reduced conflicts between autos, pedestrians, and bicycles for the entire project.
    - Another alternative which should be evaluated is to retain the driveway access on College Avenue, but to <u>restrict turning movements at the location of the driveway</u>. This could potentially include any or all of the following: no left turns from the parking lot to southbound College Avenue, no left turns

from northbound College Avenue to westbound 63rd Street, and/or no left turns from eastbound 63rd Street to northbound College Avenue.

- The driveway entrance to the Bank of America parking lot and the associated "Keep Clear" zone on College Avenue also create congestion in the project area, occasionally blocking traffic at the intersection with Claremont Avenue. The EIR should analyze the effect of <u>eliminating some or all of the access to and from the bank parking lot and College Avenue</u>, potentially including any or all of the following: eliminating left turns from northbound College Avenue into the lot, eliminating right turns from southbound College Avenue into the lot, and/or eliminating vehicle exits from the lot onto College Avenue.

- It is clear that building multi-lane roadways and a sea of parking to accommodate peak-period auto demand is unsustainable and inappropriate in this urban village context. However, the transportation and traffic analysis should be sensitive to the implications of constrained parking availability in this already congested area:
  - This project proposes 145 public parking spaces to replace and expand the parking already available on the site. More parking and a more pleasant shopping experience will likely draw more traffic to the neighborhood. Safeway has stated that it hopes to increase revenue not by increasing vehicle trips and VMT, but by increasing the amount that each shopper spends on each visit. There is little to make this claim more than an aspiration as there is no way the project sponsor can guarantee such an outcome. Still, should they be successful in their efforts to increase revenues without increasing traffic, this means the shoppers would stay longer than they do now, occupying the parking spaces for more time and potentially increasing overall utilization. Also, Safeway has graciously offered to let all neighborhood shoppers park in the lot. As such, we can expect that the parking will be fully utilized, especially in peak shopping hours on evenings and weekends.
  - The Initial Study mentions on page 59 that an estimated 100 to 120 net new jobs would be created by this project, and suggests that these jobs will be, "taken by workers living in the area." There is nothing in the reference documents cited or the project description that indicates how close the workers might be expected to live or how they would commute to and from their jobs. There is a significant likelihood of additional travel to the neighborhood generated by these employees, with a meaningful component likely to be travel by auto. Only 28 parking spaces will be for dedicated employee use and the main parking area is designated for customer use, implying that the other employees who commute by auto will need to find parking within the neighborhood.
  - The City of Oakland documentation on thresholds of significance describes the fact that neighborhood parking shortages tend to self-correct, as customers and employees learn about the difficulty of accessing a particular area by auto and choose either to use a different mode or to patronize a different locale all together, until the entire system reaches a new equilibrium. While true in principle, there are three major concerns with how this rebalancing could play out in Rockridge, as described below.
    1. <u>Choosing another mode</u> – The AC Transit 51 bus is one of the best bus routes in the local transit system. And yet, it is plagued by delays through precisely this corridor. Additional traffic circling from drivers seeking parking (up to the maximum that the road network can withstand) will only further degrade the level of service provided to transit users—not just those traveling to this shopping area, but <u>all</u> transit riders on the route. The transit route is fixed but autos can re-route to avoid congestion, which exacerbates the real and perceived travel time differential between autos and transit. Bus speeds could become so slow that some bus riders to conclude

that transit does not represent a viable alternative to traveling by auto, abandoning transit for some or all of their travel needs. This would represent a step backward in a Transit First city, particularly if current transit users who have no business in the project area stop riding the bus because of the traffic problems created by the project. **The impact of traffic congestion on transit service quality, and the implications for transit mode share, auto-use, & related congestion, should be evaluated in the EIR. Mitigation measures should be designed to enhance transit travel through the College Avenue corridor and along Claremont Avenue.**

2. Choosing another shopping district – On its face, the impact of some shoppers being driven away from the neighborhood altogether is expected to be less severe. As some shoppers leave, more space is opened on the road network for others who formerly avoided the neighborhood to return. Still, this implies that the roads will always be at maximum levels of congestion and that parking will always be fully utilized. To the extent that road & parking congestion is not yet at this peak level, some amount of incremental delay and VMT (together with the associated noise & air pollution) is attributable to the project. **The difference between existing conditions and the new equilibrium should be examined before concluding that there will be no long term impact from additional circling related to the search for parking.**
3. Implications of a fully-utilized road network – While customers can choose another retail area for their business, employees and residents have less choice for their daily trips and may continue to drive even if congestion reaches very high levels. This problem takes much longer to self-correct, because it is harder for people to relocate where they live and work. **The incremental vehicle movements created by additional jobs (and any housing) created by this project should be evaluated in the EIR.** Also, to the extent that the traffic and parking issues created by employees and residents (who take longer to modify their behavior) crowd out former customers (who have many choices for where to shop), this could lead to depressed economic activity in the area. As indicated above, a congested road network could also drive away former bus riders who were once customers in the project area, further reducing the economic viability of local businesses. While not strictly an environmental impact, Oakland is currently making significant efforts to reduce retail leakage from the City, and **the risk of negative economic impacts should be quantified for decision-makers in the context of the choices they will be asked to make about how to manage and mitigate adverse transportation and traffic impacts.**

- On a more short-term basis, the removal of the surface parking lot during the construction could have significant effects on the neighborhood. This parking is presently used by shoppers who do business both with Safeway and the other merchants. The project design does not appear to allow for phased development that could preserve on-site parking. **The EIR should evaluate the provision of alternative parking options during construction—such as angled street parking on College Avenue—in order to mitigate traffic and parking impacts to the local neighborhood.**
- As described above, the effects of increased congestion through this already busy corridor lead to more problems than simply increased VMT, delay, noise, and air pollution. They can also change mode share and the location of economic activity, which has further induced impacts for VMT and delay in other parts of the city and the region. **The EIR must evaluate the actual impact of specific mitigation strategies designed to make transit & biking more attractive, and not simply assume that any strategy that enhances non-auto options will be enough to resolve all of the problems created by the project.** Mitigations particularly appropriate for this setting include:
    - Employer parking cash-out and other travel demand management programs that can encourage use of transit, walking, & biking by employees
    - A campus shopping shuttle that can provide direct service for U.C. Berkeley students and reduce their auto trips
    - Improved bicycle facilities for employees, including secure bicycle parking (lockers), and shower & changing facilities.
    - Transit priority measures for roadway design, such as dedicated lanes, queue-jump lanes & bus-bulbs
    - Revised signal timing and/or signal priority technology, including coordination between City of Oakland, City of Berkeley, and Caltrans, due to the proximity to the significant congestion on College Avenue at Ashby Avenue/Highway 13.
    - Traffic calming on adjacent streets, so that any diverted autos do not create additional hazards for pedestrians and bicyclists

- **XVI. UTILITIES AND SERVICE SYSTEMS – Item XVI.(d) does not have explanatory discussion to justify the conclusion of "No impact." Additional documentation is warranted to confirm that adequate pre-review has been conducted on this item, and that further environmental study is not required.**

ADDITIONAL SUGGESTED AREAS TO ITEMS IN THE EIR

Beyond my specific suggestions for the environmental effects reviewed as part of the Initial Study, I have two additional suggestions for the content of the environmental analysis and subsequent DEIR/FEIR:

- **GREENHOUSE GASSES (GHGs)** – CEQA guidelines currently do not discuss criteria, thresholds, or mitigation measures for emissions of GHGs. However, per the requirements of SB97, the Natural Resources Agency is planning to adopt revised CEQA guidelines on January 1, 2010 which will instruct lead agencies to consider GHG impacts. **In the interest of preparing a complete and fully compliant environmental record, GHG impacts should be studied in the EIR.**

- **PROJECT ALTERNATIVES** – The lead agency should consider alternatives to the proposed project, potentially including any or all of the following:
  - The proposal submitted by ULTRA, which has larger set-backs in the center of the College Avenue frontage and second-story offices more in keeping with the neighboring businesses across the street
  - A proposal that includes housing within the project, which could potentially include units designated for students, seniors, or workforce housing for project employees
  - A proposal with a smaller Safeway store, in order to evaluate whether significant impacts to air quality, noise, and transportation/traffic can be reduced to less than significant impacts based on the scale and size of the retail space
  - A proposal for a remodeled Safeway store of approximately the same size as the present store, similar to a proposal Safeway themselves had suggested during their most recent public outreach efforts

Vollman, Peterson

From: aceble@berkeley.edu
Sent: Tuesday, December 01, 2009 3:56 PM
To: Vollman, Peterson
Subject: Safeway Rebuild at College and Claremont Avenues

Importance: High

Two letters follow:

To Whom It May Concern:

I oppose the Safeway Rebuild Plan in its current form. I am concerned about the POTENTIALLY SIGNIFICANT IMPACT on the aesthetics of our neighborhood, i.e., the adverse effect of this oversized building on a neighborhood of small, individually owned shops. These shops are what make our neighborhood unique.

Eleanor Moscow
33 Oakvale Avenue
Berkeley, CA 94705

To Whom It May Concern:

I am opposed to the proposed Safeway Rebuild Project because of the potentially significant impact it would have on our neighborhood.

In my judgment, the environmental impact report demonstrates the total lack of understanding of the possible results of the project. The size is such that it is tantamount to being a "shopping mall." The result would be that our streets would be clogged with traffic and our air would be unbreatheable. I exhort you to re-assess your plans and reduce the size and scope of this project.

Anita C. Eblé
19 Oakvale Avenue
Berkeley, CA 94705

Anita

RCPC ROCKRIDGE COMMUNITY PLANNING COUNCIL
5245 COLLEGE AVENUE PMB 311 OAKLAND, CALIFORNIA 94618 510•869-4200
www.rockridge.org

November 30, 2009

Mr, Peterson Vollman, Planner III
City of Oakland
Community and Economic Development Agency
250 Frank Ogawa Plaza, Suite 2112
Oakland CA 94612

RE: EIR Scoping for College Avenue Safeway Shopping Center Project (Case # ER09-0006).

Dear Mr. Vollman,

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the above-referenced project. As the community organization representing the residents of Rockridge, the Rockridge Community Planning Council (RCPC) has a number of concerns about the potential environmental impacts of this project, as well as thoughts on project alternatives that should be studied in the EIR.

To begin with, RCPC wants to make it clear that it is not intrinsically opposed to updating or even replacing the present College Avenue Safeway store. While the current store has provided, and continues to provide, valuable service to residents of the area, RCPC recognizes that there could be significant benefits from improving the store's layout and expanding its available storage space. RCPC also acknowledges that the small street-level shops proposed as part of Safeway's shopping center project could, if used to expand the range of locally owned small businesses along College Avenue, provide additional benefit to the community. However, RCPC has major concerns about the potential impacts from the 50,000 square foot expansion of the Safeway store proposed as part of this project. RCPC is also concerned about the cumulative impacts from that store added to the proposed small shops, as well as the cumulative impacts when combined with other recently approved or planned projects in the areas.

Should an EIR be Prepared?

The Initial Study (IS) and NOP both proceed on the premise that the project, as proposed, should be considered and potentially approved. As will be explained in further detail below, however, RCPC believes that the project is fundamentally inconsistent with the underlying land use designation for the site, both in the general plan and in its zoning. There is no requirement that the city approve, or even seriously consider, a project proposal that is inconsistent with the site's land use designation. The city has the right, and indeed the duty, to reject such a project. Consequently, because the city need not do any environmental review of a project it rejects, RCPC would suggest that the city need not prepare an EIR at this time. Instead, it can, and should, simply reject the project as inconsistent with the site's land use requirements and ask Safeway to either submit a project proposal that is consistent with the city's land use requirements, or submit a project that includes a proposal to amend the general plan and zoning to make the project consistent with the site's land use designation. Obviously, RCPC believes the former alternative would be far preferable.

Project Objectives

The IS that accompanied the NOP does not discuss the project's objectives, but identifying project objectives is a necessary component of the project description. (CEQA Guidelines §15124(b).) While Safeway may have its own intentions (e.g., increasing company profits) for proposing this project, it is for the City, as lead agency, to define to appropriate project objectives to guide its consideration of the project. RCPC would suggest that an appropriate objective for the project would be to better serve the surrounding local community with food and related retail services while minimizing adverse impacts and conforming to the requirements set by the city's general plan and the zoning for the site.

Land Use Impacts

The IS indicates that the project is not expected to have any significant land use impacts. (IS, page 55.) RCPC must respectfully disagree. The proposed project is fundamentally inconsistent with both the general plan land use designation and the zoning designation for the site. The IS takes an overly narrow view of when a land use plan, policy, or regulation has been adopted for the purpose of avoiding or mitigating an environmental effect. Viewed properly, the project's inconsistencies with the general plan and zoning implicate numerous environmental impacts and necessitate consideration of how conformance to the city's land use policies might reduce or avoid impacts.

The Oakland General Plan, in its Land Use and Transportation Element (LUTE), lays out a general land use strategy for the city. Fundamental to that strategy is the division of the city into two basic types of areas: "grow and change" areas and "maintain and enhance" areas. (LUTE, pp.123-125.) The LUTE goes on to explain that grow and change areas are areas where the city expects to focus and concentrate growth, while maintain and enhance areas are areas where "changes in use and density will be small." (LUTE at p. 124.) The College Avenue area in general, and the project site in particular, is designated as a maintain and enhance area. (LUTE, p.218.)[1]

The choice of which parts of the city were designated as grow and change and which as maintain and enhance was made with conscious awareness of the environmental effects of extensive growth. Grow and change areas include the downtown area and major commercial corridors such as Telegraph Avenue and Broadway below 51st Street[2]. These are areas where wide thoroughfares have sufficient capacity to handle the additional traffic that accompanies growth. College Avenue, by contrast, is a

[1] It should be noted that the City has repeatedly cited a "grow and change policy" both in project staff reports and in court-filed legal documents. Presumably, there is also a corresponding "maintain and enhance policy."

[2] The IS identifies both College Avenue and Claremont Avenue as "major arterials." (IS at p. 2.) While there is no question that both streets are arterials, RCPC must question whether a street with two travel lanes can be called a "major arterial." Similarly, Claremont Avenue, while it does have four travel lanes, has more the function of a collector street than of a major arterial connecting major activity nodes in the city.

two-lane street that is already highly congested in the vicinity of the project site. Its designation as a maintain and enhance area reflects knowledge of the potential adverse impacts that growth would have, and a strategy intended to avoid those impacts.

Similarly, the project site's general plan land use designation is "Neighborhood Center Mixed Use" (NCMU). To quote from the LUTE, "Future development within this classification should be commercial or mixed uses that are *pedestrian-oriented and serve nearby neighborhoods*, or urban residential with ground floor commercial." (LUTE at p. 149 [emphasis added].) Again, the pedestrian orientation and the intent that uses serve nearby neighborhoods both aim at restricting broader auto-oriented uses that would overtax the available transportation infrastructure. For comparison again, Broadway below 51st Street is, instead, designated as "Community Commercial," in recognition of that street's ability to handle the traffic associated with larger auto-oriented uses[3].

The proposed College Avenue Safeway Project is inconsistent with both the general plan's land use strategy and its land use designation for the site. Expansion of the Safeway store from 23,000 sq.ft. to over 50,000 sq.ft., plus the addition of over 11,000 sq. ft. of additional retail uses has to qualify as a "grow and change" project. Similarly, a 64,000 sq. ft. project that includes within it a 175 car parking structure can hardly be identified as neighborhood-serving or pedestrian-oriented. The project's inconsistency with the LUTE is directly related to the potentially significant impacts (e.g., traffic, air quality, noise) that the IS identifies. The EIR should therefore discuss the project's inconsistency with the LUTE and consider whether alternatives consistent with the LUTE (see below) would have lesser impacts.

The analysis of the proposed project's inconsistency with the site's C-31 zoning is similar. C-31 zoning is "intended to create, preserve, and enhance areas with a wide range of retail establishments serving both short and long term needs in attractive settings oriented to *pedestrian comparison shopping*, and is particularly appropriate along important *shopping streets* having a special or particularly pleasant character." (Oakland Planning Code §17.48.010 [emphasis added].) Again, the pedestrian-orientation of the C-31 zoning is key, and is obviously intended to mesh with the NCMU land use designation. As with NCMU, the intent of promoting pedestrian-oriented shopping is to avoid the traffic impacts that would accompany more intensive auto-oriented commercial uses such as shopping centers.

Again, as already explained, the Safeway project, with its 175 car garage and its self-contained nature, does not fit with the C-31 zoning. Further emphasizing the project's incompatibility with C-31 zoning is its requirement for no less than four use permits, plus two variances[4]. (IS at p. 2.) A

[3] The LUTE's discussion of the Community Commercial designation goes on to explain that it is intended to accommodate, "larger-scale auto-oriented developments which require sizeable off-street parking areas." This seems a pretty good description of Safeway's College Avenue Shopping Center proposal.

[4] The IS identifies both variances as minor variances. However, the Oakland Zoning Ordinances specifies that any variance whose impacts require study in an EIR must be classified as a major variance. Both the parking and loading variances being sought for this project implicate the project's traffic impacts, which are being studied in the EIR. They should therefore both be considered major variances.

use permit is a deviation from the standard allowable uses in a zone. A variance is an even greater deviation, and should not be granted unless its denial would put the property at an unfair disadvantage, compared to other properties in the area. Further, one of the use permits is for a single commercial establishment exceeding 7,500 sq. ft.[5] The proposed project is more than six-times the maximum allowed without a use permit, and more than three times the size of the next largest business (Trader Joe's) found anywhere on College Avenue. These deviations are directly related to the project's identified potentially significant impacts. Consideration of zoning compliance, and whether achieving better zoning compliance might reduce project impacts, requires study in the EIR.

Blight Impacts

Also related to the project's inconsistency with city land use policies is its potential to cause physical blight in the surrounding commercial area. As already noted, this is a large auto-oriented use in an area intended to promote smaller pedestrian-oriented retail stores. A typical shopper at a large supermarket like the proposed 50,000 sq. ft. Safeway store will drive into and park in the lot, enter the store, do their shopping, go back and load their shopping into their car, and leave[6]. These shoppers will provide no benefit to the remaining retail on College Ave. Indeed, they will provide even less benefit than does the current Safeway. Because of its small size, the current Safeway encourages shoppers to go across the street to local stores to get items they couldn't find in the Safeway. The new store, with its touted greater variety, will reduce this behavior.

While it might seem at first glance that the eight small shops associated with the project would assist the retail environment, many of the customers going to those small shops will be parking in the shopping center's self-contained parking structure. There will be a natural tendency for those shoppers to restrict their shopping to the area closest to their car, meaning in this case those eight small shops and the Safeway store.

In addition to these impacts, the new Safeway shopping center will put added strain on the traffic capacity of College Avenue. College Avenue is a major access for customers along its length. Its congestion can deter customers from coming to the area to shop.[7] This would only add to the damage the Safeway Shopping Center would do to businesses along College Avenue, especially when economic prospects are not bright to begin with. If businesses along College avenue fail and close, the area could again face the kind of blight impacts (including litter, physical deterioration, increased

[5] Under the draft CN-1 zoning currently being considered to replace C-31, this number would drop to 5,000 sq.ft.

[6] The EIR should include analysis of the shopping patterns at similar grocery store-anchored shopping centers to determine whether shoppers tend to shop more widely once they have arrived, or, as suggested, limit their shopping to a narrow radius. This will help determine the extent to which the project would tend to promote blight.

[7] In addition, the new shopping center, while almost tripling the existing floor space, increases the parking by only slightly more than 50%. Even that overestimates available parking, since some current on-street parking spaces are proposed to be eliminated. Currently, the Safeway parking lot provides some parking for surrounding merchants. With its reduced parking ratio, the new shopping center will be much less available for patrons of surrounding merchants. This will be a further disincentive for potential customers to patronize College Avenue merchants beyond the shopping center. The EIR should also consider the blight-inducing impact of the increased parking deficiency.

crime, and rodent infestations) it experienced in the 1970s in the wake of the BART and Highway 24 construction projects. The EIR needs to address this unpleasant possibility.

Of more immediate concern is the proposal that the project include a public rooftop terrace at the corner of College & Claremont. It is unclear from the application who would be responsible for policing and maintaining this terrace area. Given that it would be largely invisible from street level and isolated from the Safeway store, there appears a large potential for this area to be poorly maintained and to become a source of blight. In addition, also because it would be largely invisible from street level, there is a risk of criminal activity. Both these potentially significant impacts need to be addressed in the EIR.

Aesthetic, Cultural, and Historic Impacts

The IS dismisses the project's potential cultural/historical impacts by noting that neither the current Safeway nor the gas station are historic structures and the surrounding area is not currently a historic district. This is not a sufficient analysis. While the surrounding area may not currently be a historic district, the CEQA checklist asks more broadly whether the project might adversely change the significance of an historic resource, and includes as historical resources, resources that would be justified for inclusion or eligibility for inclusion on an historic resource list.

While College Avenue is not currently designated as an historic district, it has been an active commercial district for over 100 years. Indeed, one of the stores almost directly opposite the Safeway Store, Chimes Pharmacy, is currently celebrating its hundredth year on College Avenue. (See attached article.) The current much-admired character of College Avenue as a thriving commercial district owes much to its long-established historic nature. There is little doubt that College Avenue is qualified to be designated as a historic district and a request for such designation is currently under discussion. While the addition of the eight small shops would probably not greatly affect the district's cultural and historic value, the addition of the 64,000 sq. ft. Safeway Shopping Center almost certainly would. The EIR needs to discuss this impact, as well as the aesthetic impact of adding this very large new visual element to an area that relies on its small shop atmosphere for its charm.

Energy Use, Sustainability, and Global Warming Impacts

The IS acknowledges the project's potential to result in cumulatively significant global warming impacts (IS at p.29), but peculiarly fails to identify the project's potential to result in cumulatively significant energy use or sustainability impacts[8]. The project would more than double the size of the existing Safeway store. A supermarket tends to be a fairly energy-intensive use, with large amounts of lighting and refrigeration equipment. More than doubling the current size can be expected to significantly increase energy use, even if new equipment results in improved energy efficiency[9]. Further, a large amount of energy will be consumed in demolishing the old store, disposing of the debris, and building the new shopping center. In addition, a larger store will mean more customer

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[8] It should be noted that the Oakland General Plan's LUTE notes the importance of sustainability.

[9] While the store may date from the 1960s, the equipment currently in use in the store is far newer, and any increased energy efficiency is likely to be only incremental. This should be taken into account in determining energy impacts and their significance.

auto trips, especially since nothing about this shopping center appears aimed at discouraging auto use or encouraging public transit access. That, in turn, will also increase energy use as well as greenhouse gas emissions. The EIR should also examine the overall energy use and sustainability of the enlarged store and shopping center, including product sources and supply chains. (e.g., what percentage of goods will be locally produced? What will be the energy use in transporting good to the store and disposing of waste products? What percentage of good sold in the store will be produced sustainably [e.g., without use of petroleum products or other nonrenewable resources]?)

Finally, the 50,000 sq. ft. Safeway store space would be very difficult to reuse if the store were to close. Safeway has, in the past, closed two stores in the local area: one on Claremont Avenue in Oakland (less than a half-mile from this site) and one between Adeline and Shattuck Avenue in Berkeley. In each of those cases, the store sat empty and unused for an extended period of time after the closure. This is not good sustainability practice. The EIR should discuss the relative ease or difficulty of reusing the Safeway store space if that store were to close. If the empty store would be likely to sit idle for an extended period, that should be considered a significant impact.

Transportation and Noise Impacts

The NOP identified traffic and transportation and noise as two of the impact areas to be studied in the EIR for the project. RCPC concurs. However, RCPC wants to point out that studying transportation impacts goes far beyond just asking about traffic congestion and intersection levels of service[10]. To begin with, because of the existing congestion along College Avenue, any traffic increases are likely to exert a domino effect and cause congestion at considerable distances from the project site. Intersections to be studied should therefore extend at least as far as the U.C.B. campus to the north, Ashby/Claremont and Tunnel Road to Highway 24 to the northeast, College/Broadway and Broadway/Pleasant Valley/51st to the south, and Claremont/Telegraph, Telegraph/51st, Shattuck/51st, Alcatraz/Adeline, and Telegraph/Ashby to the west. In addition, SR 24 and its interchanges between Broadway and 51st Street should be analyzed for project impacts, both individual and cumulative.

The IS discusses the difference between the "existing" traffic generation rate, including the current Safeway store and the 76 service station at College and Claremont, and that expected for the proposed project. Of course, the 76 station has now been closed, so it is questionable whether its traffic generation should be considered as a "no project" condition. In any case, service stations generally have a high percentage of "pass-by" trips – that is, trips that are not generated by the project, but are "on the way" within an already-existing trip. The Institute for Transportation Engineering estimates that 45% of service station trips are pass-by trips. By comparison, a supermarket like the existing Safeway is estimated to have 20% pass-by trips. The pass-by trips need to be subtracted from any calculation of traffic generation for existing uses.

Because of the existing congestion of College Avenue, the project is likely to increase the incidence of "cut-through" traffic on nearby residential streets, and especially on 63rd St. and on Alcatraz Ave. east of College Ave. The latter would be especially true if an alternative involves eliminating all curb

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[10] Currently pending changes to the CEQA Guidelines propose to de-emphasize intersection level of service analysis in favor of broader analyses of mobility effects. The EIR's analysis should include consideration of the new criteria for determining the significance of transportation impacts.

cuts on College Avenue. The EIR's consideration of cut-through traffic impacts should include not only traffic congestion but also pedestrian/bicycle safety, noise, vibration, light and glare, and local air quality impacts. Both automobile and truck traffic should be considered, with a particular emphasis on discouraging the use of residential streets by large (and noisy) delivery trucks, especially during nighttime and early morning hours. It should also be noted that, while both College Ave. and Claremont Ave. are designated as arterial streets, they are also both residential streets. Consequently, the EIR needs to study the impacts of this project on the residential aspects of those streets, including noise, vibration, pedestrian safety, and the ability of residents to get in and out of their driveways safely, as well as just vehicular traffic flows.

College Avenue is a major bicycle route to and from the UCB campus. It, Alcatraz Avenue, and Claremont Avenue are all designated bicycle routes in the Oakland General Plan. Bicycle lanes have not yet, however, been marked on any of these street. Consequently, bicycling on these streets, and especially on College, is somewhat hazardous. The College/Claremont/Florio/62nd St. intersection is particularly hazardous to bicyclists. The increased traffic from this project is likely to increase these hazards and result in additional bicycle/car accidents and associated injuries. The EIR should analyze this impact and, where feasible, propose appropriate mitigation. Similarly, while there are several designated bicycle boulevards in the vicinity (e.g., Colby, Hillegass, Woolsey), these are also likely to experience increased auto and truck traffic due to the project, and an associated increased risk of bicycle accidents. Again, appropriate mitigation should, where feasible, be identified and proposed. As a related comment, the project plans show extensive bicycle racks, something RCPC applauds. However, the racks are shown as being located on the Claremont street frontage. At least a portion, if not the majority, of bicycle parking should be moved to College Avenue, which is likely to be the predominant route for bicycle access to the site. The sponsor should also consider providing secure bicycle storage at the site. Such storage could serve not only the Safeway store and the eight small shops, but also other merchants along this section of College Ave.

Pedestrian safety may also be put at risk by the project. The Claremont/College/62nd/Florio intersection is already hazardous for pedestrians. The increased traffic from the project will increase that hazard. The EIR should consider what mitigation measures may be available to reduce that impact. Other pedestrian crossings along College will also be implicated by the project, as well as pedestrian crossings on Claremont and on nearby residential streets. Again, impacts should be identified and, where feasible, mitigation proposed.

College Avenue is the routing for AC Transit's 51 line, one of the District's most well-patronized and important routes. The section of College Avenue between Claremont and Ashby has been identified by AC Transit as an existing problem, in terms of causing schedule delays and "bunching" of busses. The additional traffic from this project is likely to make these problems significantly worse. The EIR needs to address the project's effects on AC Transit and propose appropriate mitigation, if feasible. The project could also impact on bus lines using Claremont Avenue, as well as those using other nearby streets where traffic will be significantly increased. Again, these impacts should be analyzed and, where appropriate, mitigation proposed.

College Avenue already has two traffic signals in close proximity at Claremont and Alcatraz. It appears likely that the proposed garage entrance at 63rd St and College will require an additional signal. With three signals in such close proximity, there is a strong likelihood of increased congestion due to the signal interactions. The EIR needs to address the feasibility of signal coordination and whether it would be effective, especially given that the Alcatraz signal is in Berkeley while the Claremont signal and any signal installed at 63rd Street would be in Oakland. A similar concern needs to be addressed in terms of the proposed additional signal at Claremont/Auburn/Mystic. Especially if the garage entrance is removed from College Ave., the project will also likely warrant placing a signal at the Alcatraz/Claremont intersection. Again, signal interaction effects on congestion, as well as on pedestrian safety, need to be considered. In addition, the EIR needs to address the potential problems that might be raised by delivery trucks stacking in the eastbound lanes of Claremont waiting to cross the oncoming traffic and enter the Safeway parking/loading area.

While the project includes 174 parking spaces, those include spaces not only for customers, but also for employees and vendors. The application includes a variance for reduced parking. The EIR needs to analyze the extent to which this project, including not only the Safeway store but also the associated eight small shops, would have a parking deficiency and would contribute to a cumulative parking deficiency in the area. While there is some CEQA caselaw to the effect that a parking shortage is not, in itself, an environmental impact, there is no question that, to the extent a parking shortfall results in secondary traffic, air quality, pedestrian safety, and other impacts (e.g., due to illegal double parking, parking in driveways, crosswalks, and handicapped ramps, "cruising" for available parking spaces, etc.), those impacts must be considered in the EIR. Any analysis of parking sufficiency and parking-related impacts must also take into account the proposed removal of on-street parking spaces to accommodate bulb-outs and other project features.

Air Quality Impacts

As already noted, the IS did identify the potential for global warming, as well as other project-related air quality impacts. The EIR also needs to study the potential for local air quality impacts, particularly at the already-congested intersections along College and Alcatraz. The effect of the additional traffic at the 63rd/College intersection and along Alcatraz east of College also should be studied. For each of the major intersections surrounding the project, a series of local baseline measurements of existing pollutant levels should be done. The measurements should be done at different seasons and with different meteorological conditions to take into account the large amount of potential variation in pollutant levels, depending on local conditions. The analysis of local air quality impacts should also take into account the timing of deliveries and the time delivery trucks spend both stuck in local traffic and idling in Safeway's loading area.

While the IS identifies the potential for the project to result in an increase in toxic air contaminants (TACs), the discussion focuses entirely on TACs generated from diesel exhaust fumes. However, concrete used in construction projects often contains significant amounts of Cr^{+6} in the form of chromate ions. (*See*, e.g., Klemm WA (1994) Hexavalent Chromium in Portland Cement in 16 Cement, Concrete & Aggregates (1994).) Until recently, it was assumed that once the concrete had hardened, the chromate ions were immobilized and harmless. Recent data have shown, however, that chromate can be leached from concrete and can be remobilized into dust during demolition.[11] (See scoping comment letter being submitted by Mr. Norman Ozaki, toxicologist.) Consequently, the EIR needs to discuss the potential for forming TAC during demolition and appropriate mitigation for resulting significant air quality impacts. Mitigation should also take into account that Chromate ions are highly soluble and thus may also result in toxic runoff impacts on the Bay if mitigation consists merely of spraying water during demolition to "take down" the dust.

Shadow Impacts

The IS commented on the potential for shadowing impacts on the neighboring residences to the north of the project along Alcatraz, but discounted the potential for impacts because of the addition of a 10 foot setback from the property line. While this may mitigate some impacts (e.g., nighttime lighting impacts) it does not necessarily mitigate shadowing impacts, especially because the new project will be considerably taller than the existing store. The IS also rejects the potential for any impacts on solar collectors, on the basis that no solar collectors are currently installed. (Is at p.27.) The IS ignores the fact that this project may not be built for several years, and in the interim additional solar collectors could be installed. More broadly, with both state and federal government attempting to encourage the installation of solar collectors on private homes, the EIR needs to address whether the project's increased height would interfere with the efficacy of and act as a disincentive for installing solar collectors on any of the neighboring homes. The EIR should also address the impact of the project's increased height in terms of shadowing neighboring backyard gardens, and in reducing daylight (i.e., daytime bright sky) access of neighboring homes.

Public Services Impacts

The IS indicates there will be no significant increase in demand for police or fire services from the project. The project includes an extensive off-street parking facility that will be located partially below ground level and will be largely invisible from the street/sidewalk. This parking facility, like the Safeway store, would presumably be open on a 24 hour basis. Especially during the nighttime hours, this raises the potential for increased criminal activity, including purse-snatching and robberies, in this parking area. The EIR needs to discuss the potential for increased criminal activity and, if found significant, identify appropriate mitigation in terms of increased security for the parking area. In particular, especially given Oakland's severe budget shortfalls, the EIR cannot assume that Oakland police coverage will be sufficient to mitigate the risk of criminal activity.

Cumulative Impacts

A number of the impact areas, both those identified in the IS and NOP and additional impacts identified here, are far from unique to the College Avenue Safeway Shopping Center Project. Consequently, there is a significant potential for cumulative impacts. The EIR needs to consider the potential for cumulative impacts in areas including transportation impacts, air quality impacts, noise and vibration impacts, and global warming and energy impacts.

Projects that should be considered in the cumulative impact analysis include the following: Rockridge Shopping Center reconstruction, Creekside Mixed Use Project, Civiq Mixed Use Project,

[11] In addition, the silica dust release during demolition of concrete is also a potent carcinogen.

Kingfish Mixed Use Project, Caldecott Improvement Project, Telegraph Avenue Bus Rapid Transit Project, and the 30,000 sq. ft. Wright's Garage reuse project at College and Ashby in the Elmwood section of Berkeley.

Alternatives

Given the project's inconsistency with the general plan and zoning, RCPC believe that the consideration of alternatives should focus on project alternatives that would better meet the city's land use policies and designations. The following are several categories of alternatives that RCPC believes the EIR should include in its analysis.

Modified No-Project Alternative

CEQA requires that an EIR include a no-project alternative – i.e., what would happen if no action was taken. RCPC believes that in addition to a no-project alternative, the EIR should also discuss a "modified no-project" alternative. This would be an alternative that would not implicate CEQA in that it would not require the city to consider any discretionary approvals, but would involve the project sponsor engaging in a number of actions that would improve the utility and productivity of the existing Safeway store. These could include: 1) redesigning the store's interior to increase aisle width, improve product display, and improve the efficiency of the store's check-out area, 2) improve the efficiency of the store's lighting and refrigeration equipment, 3) reconfigure and restripe the parking lot area to provide for more efficient customer access and potentially more customer parking spaces, 4) reconfigure the store's loading area to provide light and noise screening from adjoining residences.

Remodel and Minor Expansion

This alternative would leave the bulk of the existing store intact, but would, in addition to many of the changes listed in the "modified no-project" alternative, also include modifying the store's external structure to improve its appearance and provide for a limited expansion of the store area (up to 30,000 sq.ft.), including additional storage space and an improved loading area that would be buffered from the adjoining residences.

Rebuild to a 30,000 sq.ft. store with small shops

This alternative would be similar in some ways to the proposed project, but would reduce the size of the proposed Safeway store from 50,000 sq. ft. to 30,000 sq. ft. This might allow the entire project to be placed in a single story, or, alternatively, might allow for additional parking spaces and eliminate the need for a parking variance.

Mixed-use project with 30,000 sq.ft. store and residential units

Rebuild a 30,000 sq. ft. store with residential units above the store, or with both the store and residential units built over a common parking garage. (Similar conceptually, but on a smaller scale, to the Trader Joe's project at 1801 University in Berkeley.)

Thank you for allowing RCPC to comment on the scope of the project EIR. Please notify us of all future events in the City's consideration of this project.

Sincerely,

Stuart M. Flashman
RCPC Board Chair

Andrew Charman
RCPC Board Vice-Chair

cc: Council Member Jane Brunner
Zachary Wald


Photo: Don Kinkead

The Neighborhood Merchant

by Theresa Nelson

Neighborhood History: Which Establishment on College Avenue is the Oldest?

This series of articles started with the late 20th century expansion of business in the Rockridge neighborhood. In the 1970s, Rockridge rebounded from the many homes and other buildings demolished to build Highway 24 and BART in the 1960s, when residents left for the suburbs and local business declined. We continued with a review of the many stores and businesses opening since 2000. In this final article in the series, we take a look backwards to the earliest days of the Rockridge business district.

When this neighborhood began developing in earnest in the first decade of the 20th century, the farms, canneries and dairies of earlier decades were mostly gone, replaced by bungalows, duplexes and small apartment buildings in the new Arts & Crafts style. Many people who left San Francisco after the 1906 earthquake stayed in Oakland, which doubled in population in 10 years, creating a demand for housing and local businesses to serve growing needs. Real estate developments were annexed to the growing city of Oakland, and streets were paved. New businesses were established along College Avenue, which boasted an electric streetcar linking to the Key System and trans-Bay ferries. The nearby Sacramento-Northern Railway line had its Rockridge stop at what is now the corner of Shafter and College Avenues. The Vernon-Rockridge Improvement Club was founded – in many ways the forerunner of the Rockridge Community Planning Council – and it campaigned for and raised money for a new library, two schools, street cleaning, and a firehouse. Some things never change ... RCPC has worked on similar issues during its 25- year history.

One of the stores from that very first decade of the neighborhood is still in business ... its name will be revealed later in this article. To set the stage, take a look at some interesting maps from Oakland's history, online at: www.teczno.com/old-oakland. The map from 1912 is a nice marker to begin the story: what is now known as the Rockridge neighborhood was then a cluster of tiny subdivisions, some only a few blocks in size, with interesting names: Vernon Park, Fairview Park, Brookside, Woodlawn Park, Rose Lawn Park, Roberts and Wolfskil Tract, Colby Tract, Woolsey Tract, Oak Ridge, Rock Ridge, White Tract, Country Club Terrace, and Claremont. The excellent book, *Rockridge,* from Arcadia Publishing, chronicles the neighborhood's development and has a wealth of wonderful old photos of Rockridge. It's available at Diesel Books and Pendragon Books on College Avenue.

A few establishments have recently provided anniversary dates from **1984 to the present**, and these include:

Cotton Basics, 1985
Kate Levinson, Ph.D., MFT, 1986
Elegant Nail Salon, 1992
Bambino Thrift Shop, 1994
Next Eyewear, 1998

And now for more history, going back through the decades:

Since 1980–1983:
Zachary's Pizza, 1983
Fenton McLaren, 1982
TranSports, 1982
Green Graphics, 1981
Pasta Shop, 1981
Claremont Rug Company, 1980
Duck Soup Family Playschool, 1980
Rockridge Rags, 1980
Yasai Market, 1980

Since 1979, Celebrating 30 Years:
Alexander Pope Skincare and Hair Studio
Brass & Glass
Ver Brugge Meats & Seafood

Since 1975–1978:
Hudson Bay Caffe (formerly, The Dancing Goat), 1978
TenTe's Hair 'n' All, 1978
The Burrito Shop, 1978
San Francisco Dancewear, 1975

Since 1974, Celebrating 35 years:
Eddie's Liquors
Law offices of Kletz & Moll

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New on College

Dr. Frances Dalton, Family Practice & Biomedical Acupuncture
5330 College Avenue, Suite 230
(above Form Vintage Modern)
510/420-1860
doctordalton.com@gmail.com

Neighborhood Merchant

from page 10

Since 1970-1973:
BART Rockridge station, 1973
Rockridge Café, 1973
First Federal Savings & Loan, 1972
Rockridge Antiques (now Rockridge Furniture & Design), 1972
Bodytime, 1971
Pendragon Books, 1971
La Farine Bakery, 1970
Jarvis Architects, 1970

Since 1969, Celebrating 40 years:
Rightway Shoe Repair

Since 1960-1968
The Graduate, 1968
Safeway, 1964
Bank of America, 1960

Since 1959 Celebrating 50 years:
Shawl-Anderson Modern Dance Center

Since 1953:
Stauder Automotive

Since 1949, Celebrating 60 years:
Shields, Harper & Co.

Since 1940-1947
Bosko's Framing Gallery, 1945
Rockridge Optometry, 1946

Since 1930-1939
George & Walt's Bar, 1939
Rockridge Barber, 1936
Dreyer's Grand Ice Cream, 1935
Bill McNally's Irish Bar, 1933

Since 1920-1929
The Levant Oriental Rugs, 1927
The Rockridge Masonic Hall, 1925
The School of the California Guild of Arts and Crafts (now the California College of the Arts), 1922
76 Service Station, 1920; stop in to see some wonderful historical photos

Since 1919

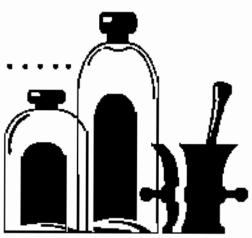
This year is the 90th anniversary of our own Rockridge Library. It was opened in 1919 in a now long-gone building on Shafter Avenue and then moved to a storefront on the corner of College and Miles Avenue where it stood until it was closed in 1986. It functioned in a trailer on the grounds of Claremont Middle School from 1987-1996, while a group of neighborhood volunteers raised funds and helped pass a parcel tax to build a new library. The new Rockridge Branch Library opened in 1996 at the corner of College and Manila Avenues.

Since 1913

Recently celebrating its 95th anniversary, is Claremont Middle School at the corner of College and Miles Avenue.

Since 1909

And celebrating 100 years – yes, 100 years – in Rockridge is **Chimes Pharmacy** at 3210 College Avenue near Alcatraz, phone 510/652-1990. Though their history is long and proud, they're up-to-date, online (www.chimespharmacy.com) and are reviewed on yelp (www.yelp.com/biz/chimes-pharmacy-berkeley). Current proprietor, John Gelinas, is only the third owner in the store's history. (See more about John and Chimes below.)



John Gelinas, Pharm. D., grew up in Rockridge in the 50s and 60s. He noted some ways the neighborhood has changed: in the 60s there were relatively few children compared with today. He explained that years ago, no matter its size, most families had only one car. Back then people could park all day on the street (there were no meters). He also noted that lots more people are out walking these days, where many of the stores provide for basic daily needs.

John showed me a tattered and yellowed prescription book from 1909. Back then pharmacies filled prescriptions by compounding, that is, creating customized mixtures from a doctor's notes. Except for the dubious "patent medicines," there were no brand-name drugs like penicillin or Prilosec to simply take from a bottle. Handwritten prescriptions were pasted into the book by date, with the very first one dated 5th of September 1909, by Dr. Albert Gilliham, M.D., in Berkeley. Looking through the old prescriptions, we saw all kinds of compounds and elixirs created, with ingredients like syrup of aspirin, ipecac, bismuth, caffeine, and even cocaine, which was legal at the time.

When you visit these long-time establishments, let the owners know how much they and their commitment to Rockridge are appreciated. And please stop by Chimes Pharmacy and say hello to John Gelinas and his staff, and wish them a happy 100th birthday!

Vollman, Peterson

From: Kevin Flynn [tanglenet@yahoo.com]
Sent: Monday, November 30, 2009 12:47 PM
To: Vollman, Peterson
Subject: College / Claremont Ave Safeway Redesign

Dear Mr. Vollman,

I'm writing to express my concerns and those of my neighbors who live on Hillegass Ave, one block from the proposed Safeway expansion on College and Claremont.

1. The scale of the redesign appears to be suitable for a store in a low density area in the suburbs and but not for a high density area such as the existing location.

2. It is not sensitive to the large amounts of existing traffic on College Ave which is caused by the two lane street and the result of the City of Berkeley blocking off streets through their neighborhoods on the other side of Alcatraz, funneling all traffic on Alcatraz and College.

3. It is not sensitive to the large amounts of traffic on Claremont Ave, which is a main thorough fare for commuters coming down and going up to the Berkeley / Oakland hills.

4. Our street which is one block below College Ave, does not have permit parking. As a result, this area, known as the Rockridge Triangle, suffers from commuters parking in this area to use BART, hospital employees who work at Alta Bates, and employees of businesses and patrons of businesses who go to College Ave to shop, eat, etc. In my opinion, this store redesign would add to the parking congestion we now experience.

5. Our street is also a "cut across" from Claremont to Alcatraz by large trucks and commuters who want to bypass the current congestion on College Ave. In my opinion, I see traffic increasing on our street as a result of the proposed redesign.

I am not against the renovation of the building. I am against the size of the building as being out of scale with the existing businesses and out of scale for the surrounding residents. I strongly urge you to limit the size of the building to mitigate the negative impacts traffic, parking and air quality on the surrounding residents.

Sincerely,

Kevin Flynn
6201 Hillegass Ave
Oakland, CA 94618

Vollman, Peterson

From: Marcos Gandara [gandarama@comcast.net]
Sent: Sunday, November 22, 2009 5:49 PM
To: Vollman, Peterson
Subject: Thumbs up for Safeway at College and Claremont

Love this project...

Marcos Gandara and Liz Gazzano
560 Dwight Place

Vollman, Peterson

From: Bill and Kathy Garcia [billandkate@sbcglobal.net]

Sent: Friday, November 27, 2009 3:11 PM

To: Vollman, Peterson; Brunner, Jane; Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Subject: Safeway on College case ER09-0006

Dear Sir:

I am opposed to the current plans for the new Safeway store proposed on College Ave. I request that Land Use/Planning issues be included in the proposed EIR. This project will "Result in a fundamental conflict between adjacent and nearby land uses", per section IX. b. This project will also "Fundamentally conflict with any applicable land use plan (Oakland's General Plan) policy ("Maintain and Enhance"), or regulation (C-31 Zone designation), per section IX.c. The proposed store will change that area of College Ave irreparably, and I think for the worse. The impact of this store on the nearby commercial and residential neighborhood must be studied in the EIR.

I live a few blocks from the Safeway on College Ave. Thank you for considering my comments,

William Garcia
6026 Rockwell St, Oakland 94618
420-1579

Vollman, Peterson

From: Foster Goldstrom [fostergoldstrom@gmail.com] on behalf of Foster Goldstrom [foster@goldstrom.com]

Sent: Sunday, November 29, 2009 10:16 AM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; Brunner, Jane; Vollman, Peterson; jharrison@cityofberkeley.info; transportation@cityofberkeley.info

Subject: Oakland planning Case Number ER09-0006 SAFEWAY

I opposed the Safeway on College project as presented. I want the EIR to study the following:

Aesthetics
The project will have a substantial adverse effect on the scenic vista.
The project will substantially degrade the existing visual character or quality of the site an
The project will require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code addressing the Provision of adequate light related appropriate uses.

Land Use/Planning.
The project will result in a fundamental conflict between adjacent or nearby land uses.
The project will fundamentally conflict with any applicable land use plan (Oakland's General Plan), policy ("Maintain and Enhance"), or regulation (C-31 Zone designation), of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.

I love the general small town charm of College Ave and a box box store will definitely change the entire feel of the area.

Concerned Neighbor and Safeway custormer,

Foster Goldstrom
7133 Chabot Re.
Oakland, Ca 94618

Vollman, Peterson

From: Peter Grame and Sean Maguire [petensean@dc.rr.com]
Sent: Tuesday, November 17, 2009 5:09 PM
To: Brunner, Jane; Wald, Zachary; Office of the Mayor; Vollman, Peterson; susan@fansco.org; Elisabeth Jewel
Subject: Case Number ER09-0006 - support

I am a neighbor and supporter of the proposed new Safeway on College Ave. I like the retooled design, landscaping and additional retail space. My only concern is with the garage entrance at 63rd and College Ave. Traffic is already snarled at this intersection. Good luck, Pete

Vollman, Peterson

From: Bryan Grunwald [bg@bryangrunwald.com]
Sent: Tuesday, November 17, 2009 5:17 PM
To: dboxer@gmail.com
Cc: Vollman, Peterson
Subject: College Ave. Safeway Project

Hi Doug,

I support this project. My concerns are interim parking. When under construction the current merchants will lose the free parking they get on the Safeway lot. I suggest diagonal parking on Claremont in the commercial zone west of College as a mitigation. I also suggest that College be widened to three lanes, plus on-street parking. This will require cooperation with Berkeley as one house is on the Berkeley Oakland line will need be set back on it's lot. It is the one next to the Indian restaurant. Safeway should provide the requisite parking. Frankly, I would like to see Senior Housing on the upper stories as an alternative to the project, to a maximum height of 50' due to this site being within a half of a mile of BART.

--

Bryan Grunwald, AIA, AICP
BRYAN GRUNWALD ASSOCIATES
6440 Hillegass Avenue
Oakland, CA 94618
P 510.420.1812
F 510.420.1819
E bg@bryangrunwald.com
W bryangrunwald.com

Vollman, Peterson

From: Tegan Hoffmann [tchurcherhoffmann@yahoo.com]
Sent: Sunday, November 29, 2009 10:57 PM
To: Vollman, Peterson
Cc: RockridgeTriangleTraffic_SafetyGroup@yahoogroups.com
Subject: Safeway EIR

Dear Peter Vollman,
I am writing regarding the Safeway EIR. I am deeply concerned that the Planning Commission is making a grave mistake to not take into account issues of traffic, pedestrian safety, and bicycle safety on the neighborhood streets of Safeway. In particular - Colby, Hillegass, and 63rd street. The Safeway EIR must examine traffic impacts on the neighborhood arterial streets as well as parking impacts. Nearby residential streets are neither designed nor intended for heavy volumes of through traffic, but can be expected to face impacts from additional automobile and even truck traffic, as vehicles make their way to or from Safeway, or seek parking. In particular, Colby and to a slightly lesser extent, Hillegass, are already used, to the exasperation of the residents, as cut-throughs for traffic between Alcatraz and Claremont, by drivers trying to avoid College Ave. The larger store will almost certainly exacerbate these existing problems. Furthermore, pedestrian safety is at risk if more people use these streets as a cut through. Colby is the "bicycle route" and safety is a concern too if the volume and speed continues to increase.
Thank you for your consideration,
Tegan and Pascal Hoffmann
6015 Colby Street

Tegan Churcher Hoffmann PhD
home: 510.655.2201
cell: 510.847.3167
tchurcherhoffmann@yahoo.com

Vollman, Peterson

From: ellen jacobs [ej_00@yahoo.com]
Sent: Tuesday, November 17, 2009 9:14 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com
Cc: michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vollman, Peterson
Subject: New Safeway at Claremont and College

Dear Planning Commissioners,

Both of us wish very much we could be at the meeting on Wed Nov 18 regarding the new Safeway - however, our work and commute will not permit us to attend. However, we both would like you to take into consideration our views on the project-which in summary we support as it is currently designed;

- We have looked at the plans and thought about them a lot as we walk our neighborhood over the past many months and feel they have taken into account the aesthetics and personality of the neighborhood in the design. It will be a greatly improved area (and hopefully will spur BofA to update it's utilitarian eyesore of a bldg). We are excited about this project and the improvements and services it will bring to the neighborhood...

We have been at other meetings with some of our neighbors who will always be quick to say the sky is falling with any change...please know we do not agree with these folks and have talked to many of our neighbors who also support the project as is - it's time to move forward. Please support this project.

Ellen Jacobs
Darryl West
2634 Woolsey St.
510-684-5748

Vollman, Peterson

From: Gary Jones [garyjones@yahoo.com]

Sent: Wednesday, November 18, 2009 9:09 AM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com; Brunner, Jane

Cc: Vollman, Peterson

Subject: Support for New Safeway Project

Hello all,

My wife and I would like to lend our support to the new Safeway project in the Rockridge area. We've been shopping there now for about 5 years since we moved into the area. The new facility looks to be a huge improvement to the area and we think the current plan is fantastic. We're not just getting a new Safeway, but also 8 new storefronts which will create jobs and bring in more revenue to the city. The architecture plan looks great and would much improve the look and feel of the neighborhood.

Sincerely,

Gary and Mandy Jones
149 Strathmoor Dr 94705

November 12, 2009

Oakland Planning Commission
c/o City of Oakland
Community and Economic Development Agency
Planning Division
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Dear Commissioners:

The undersigned community groups from the Rockridge/Elmwood/Temescal area are submitting this joint letter to comment on the scoping for the proposed College Avenue Safeway replacement project. While each of our groups has its own separate focus and may be submitting a separate comment letter, we are submitting this comment letter to emphasize a shared concern about the environmental review of this important project.

As you are aware, the zoning for the project site is C-31. While the city's zoning ordinance is currently undergoing revision, the new proposed zoning, CN-1, would continue to maintain similar standards. C-31 emphasizes pedestrian-oriented comparison-shopping, while also allowing compatible mixed-use development such as residential development above first-floor retail shops.

The current 61,000 sq. ft. Safeway proposal, while acknowledging zoning requirements by including ground floor retail shops, is still glaringly inconsistent with the area's C-31 zoning. A massive 50,000 sq. ft. store (more than ten times the size of the average College Avenue store), with its own self-contained 175 car parking garage, does not fit with C-31's objective of providing pedestrian-oriented comparison shopping. Our groups all agree that the EIR for this project needs to include analysis of alternatives that are more appropriate for the site and consistent with its C-31 zoning. Among these should be one that provides for mixed-use development of the site, including first-floor pedestrian-oriented retail uses and upper-story residential use.

Please note that, by signing this letter, the groups listed below are not necessarily endorsing a mixed-use residential alternative, only stating that such an alternative, along with other alternatives consistent with the site's C-31 zoning, should be studied in the EIR.

Sincerely,

Friends And Neighbors of College Ave. (FANS), a coalition of neighborhood groups including:
- Rockridge Community Planning Council (RCPC)
- Claremont Elmwood Neighborhood Association (CENA)
- Concerned Neighbors of the College Avenue Safeway
- Contiguous Neighbors to the College Avenue Safeway
- Contiguous Merchants to the College Avenue Safeway
- Rockridge/Elmwood Local Architects and Planners
- Rockridge District Association

Standing Together for Accountable Neighborhood Development (STAND)
Urbanists for a Livable Temescal Rockridge Area (ULTRA)

Lisa Haage
5849 Colby Street
Oakland, CA 94618
lhaage@hotmail.com

December 1, 2009

Peter Vollman, Planner III
City of Oakland
Community and Economic Development Agency
250 Frank Ogawa Plaza, Suite 2112
Oakland CA 94612

Re: EIR Scoping for College Avenue Safeway Shopping Center Project (Case #ER-09-0006)

Dear Mr. Vollman:

I am writing regarding the Safeway EIR. I am concerned that the Planning Commission is not taking into account a number of critical issues regarding this project, and that as currently configured, this project could have drastic negative effects on the vibrant neighborhood in this area, and harm both the immediate neighbors as well as the overall economic and cultural value of this area to the city as a whole.

Safety Concerns for Pedestrians, Cars and Bikes

In particular, I am concerned that the issues of traffic, congestion, and concomitant pedestrian, vehicular and bicycle safety need to be taken into account. This is an area that is, under the general plan designations, to focus on "commercial or mixed uses which are pedestrian-oriented and serve nearby neighborhoods". It currently does just this, and is one of the very reasons why this area has remained largely successful and attractive for Oakland residents and visitors. Yet a project of this site would exacerbate the very real safety concerns for such a heavily used area. I have seen many near accidents in this area, between cars attempting to enter or exit Safeway, others trying to park on College, bikes being hit by cars opening doors in the very tight area, pedestrians dodging heavy traffic and the like.

The area of the current Safeway and nearby shops is heavily used by local residents, many of whom, including myself, travel there principally by foot. However, this is a very heavily congested area already, and it is often already difficult and unsafe to walk in this area, particularly in the area of College and other streets near the Safeway site.

Air Quality, Climate Change and Liveability Issues

A larger store here, particularly one specifically designed to attract increased use of cars rather than foot traffic as is the one currently contemplated, is both out of character for the area and out of step with the current need to reduce auto use and emissions, and the growing move to support and enhance pedestrian uses. As it is, traffic entering and exiting this site create idling cars and more traffic would increase this.

It would be exciting to see Oakland taking a lead in forward thinking regarding land use planning, climate change and liveability by protecting and enhancing this successful pedestrian area.

Additional Traffic on College and Lack of Street Parking
A larger store here would clearly put added strain on the traffic capacity of College Avenue. As it is, it is often very difficult and dangerous to cross College. It is discouraging to even think about the increased traffic this project would cause and the effect on safety and increase in congestion. It discourages shopping at smaller shops, reachable by foot. Moreover, there is insufficient off-street parking and removal of some street parking, which would only exacerbate the idling and circling of car, with additional safety, air quality and loss of character and economic vitality of the overall neighborhood shopping area.

Additional Congestion Over a Broader Area and Safety Issues
This is designed as a destination store, and would have significant and very negative impacts on so-called arterial and other streets in the neighborhood, especially along residential streets such as 63rd, 62nd, Colby, Hillegas and Alcatraz. The Safeway EIR must examine traffic impacts on these streets as well as parking impacts. These nearby residential streets are neither designed nor intended for heavy volumes of through traffic, but would clearly be subject to additional automobile and even truck traffic, as vehicles travel to and from Safeway. Already, in particular, Colby is used as a cut through for drivers attempting to avoid the congestion of College. A larger store and more traffic, as is clearly contemplated by the plans, would clearly exacerbate this. I live on Colby and am routinely faced with large trucks using Colby as a route, as well as very heavy private vehicle traffic. It is difficult to even cross Colby much of the time and it is increasingly unsafe to do so.

Moreover, given the safety concerns in Oakland, anything we can do to promote pedestrian safety and pedestrian use of the area and getting people out of their cars helps make the area and residents safer.

Any traffic study used for this project should use an accurate baseline (including times of day and days of the week since traffic and impacts vary widely in this area), especially since the very recent closure of the gas station on College.

Need to Coordinate with AC Transit Routes and Traffic Impacts
College is also heavily used by a popular AC Transit route, serving both the neighborhood and commercial district, with many buses traveling on the street. Increased traffic would worsen the current situation of heavy congestion and the difficulty of buses competing with even more private vehicles when buses attempt to stop to take on or disgorge passengers. We should be encouraging bus use here, both for air quality and for congestion reduction reasons, not making it even more difficult for buses and bus riders

to use this route. Obviously, buses need to use College since that is where the attractions are, and if they were moved off College this would decrease the attractiveness of riding the bus even more, as well as exacerbate the traffic in the neighboring areas.

Cumulative Impacts
I have a number of other concerns regarding the potential cumulative impacts of other planned projects in this general area, such as the Rockridge center, bus rapid transit on Telegraph, creekside development in Temescal, etc. These must be taken into account as well.

Size of the Project
Overall, the project is simply inappropriately large and unnecessarily so. It dwarfs any other retail in the area, and is completely out of character. But moreover, all of the traffic and environmental impacts noted above are increased mathematically by the size of the proposed store. At a bare minimum, the City should require that a smaller store option be studied, and one which would provide mixed use. Clearly a smaller store would be economically feasible and would be much more in line with the idea of enhancing pedestrian traffic and livability as well as reducing air and noise pollution in this congested area.

Other Concerns
There are a plethora of other issues which should also be taken into consideration, such as the nose and vibration from truck and increased auto traffic, especially in light of the older homes in the neighborhood.

I only found out last night that comments were due today, so was not able to coordinate with others in the neighborhood who have expressed similar concerns to those listed above, but I assure you that these are widely and deeply held concerns, and represent the many residents in the area surrounding the project site. They are not meant to be negative but reflect a commitment by Oakland residents to try and make this city as liveable as possible and to protect the economic and cultural contributions made by this area to the overall City.

Thank you for your consideration and I ask to be kept apprised of future developments regarding this project.

Very Truly Yours,

Lisa A. Haage

Vollman, Peterson

From: Nancy Hendrickson [nancyh330@yahoo.com]

Sent: Monday, November 30, 2009 10:55 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: Brunner, Jane; Vollman, Peterson

Subject: Case Number ER09-0006

To The City of Oakland Planning Commissioners:

I have reviewed the Initial Study for the Safeway Shopping Center at College and have significant concern with the analysis as presented. I oppose the project as it is currently proposed. My over riding concern is that the project is out of scale with the neighborhood.

- I am concerned that the streets cannot handle the current traffic and the traffic that this project. This project is designed to increase commercial activity will make traffic more unbearable. Most evenings and weekends traffic is backed up on College between Alcatraz and 62nd Street. Traffics studies need to look at peak demand times.

- I am concerned that the market does not exist to handle eight new store fronts and a Safeway twice the current size with an even larger Safeway located just down the Street at Broadway and 51st. I dread an empty over sized regional development with empty storefronts like those in the current Dreyer's building a block away. I have lived in the neighborhood over 20 years and I have watched the shops change hands many times.

- I am concerned about safety going to and from Safeway. An upstairs garage with many nooks and crannies seems like an easy target for additional crime in the neighborhood.

My specific concerns in the IS are outlined below.

Section 1- Aesthetics –

a) The IS concludes that the project would not have a substantial effect on scenic vistas. This is misleading. Right now on College and 63rd one can see the Oakland hills. With a two story building extending from College and Claremont to between 63rd and Alcatraz there will no longer be this view. The loss of the view of the hills is illustrated in the visual simulations in the IS in Figures 12 and 13. The hills are visible in the photographs of the current site and are not visible in the simulations of the proposed project. As a resident of the neighborhood this is a significant impact on scenic vistas that should be addressed in the EIR.

c) The IS concludes that the project has a less than significant impact on the visual character or quality of the site and its surroundings. The project includes eight new storefronts and a store twice the size of the existing Safeway. It is two stories high where the current store is only one story and does not cover the entire site. This changes the character of the neighborhood from one with a handful of small local specialty shops to twice the number. The IS states that the project will result in a "taller and more massive and more intensely developed corner." As described in the IS, this is a significant change in the visual character as site. As a resident of 62 nd Street, a more "intensely developed corner" is a very significant impact that should be addressed in the EIR.

III. Air Quality

g) The IS concludes that an EIR is required to evaluate air quality and I agree. In the discussion of item g it states that "since the project would replace an existing supermarket and gas station the net increase in retail space would be much lower." This comment is misleading. It is true the net increase on an undeveloped piece of property would be greater than a development on this property, but the project is more than twice the size than the current store and its purpose is to increase commercial activity. It is a significant impact to air quality.

VII. Hazards and Hazardous Materials

As noted in the IS, the Union 76 Station is found on the Cortese List because of former leaking underground storage tanks (USTs) at the site. Some soil was removed and MTBE has been detected in the groundwater. The IS does not indicate that the remediation of the underground storage tank is complete or if soil gas samples were collected to assess the potential for vapor intrusion at the development. A more complete assessment of the status of the UST is including an assessment of the vapor intrusion pathway is needed in the IS or in the subsequent EIR.

IX. **Land Use/Planning**

b) My understanding is that contrary to what is stated in the IS, the project fundamentally conflicts with Oakland's General Plan and C-31 Zone designation. How can such a significant change designed to increase commercial activity and self described as taller, massive and more intensely developed not be considered a significant impact? How can a grocery store twice the size aimed to increase commercial activity be "designed for pedestrian shopping"? People will want there car to bring home there groceries. How can such significant change be considered "appropriate along important shopping streets having a special or particularly pleasant character" ? The impact on land use is significant and should be addressed in EIR

Thank you for your consideration. Again I want to voice my opposition to the proposed Safeway as it is currently proposed.

Nancy Hendrickson

330 62nd Street

Vollman, Peterson

From: Marcia Hofer [hofer36@gmail.com]
Sent: Tuesday, November 17, 2009 11:21 AM
To: Vollman, Peterson
Cc: Concerned Neighbors; Brunner, Jane; Wald, Zachary
Subject: Case Number ER09-0006

Dear Mr. Vollman,

My husband and I moved to Rockridge in 2001, one and one-half blocks from the existing Safeway at College and Claremont Avenues. We specifically chose this location because of the eclectic mix of small local businesses in the neighborhood, which contribute so much to the unique character of Rockridge.

As you are well aware, C-31 zoning is designed to protect precisely this type of neighborhood, with its combination of small-business and residential use. The size of Safeway's proposed project for this site is so COMPLETELY at odds with the intention of this zoning ordinance that I believe it must be rejected.

You are undoubtedly also aware that there is overwhelming opposition to this proposal in the neighborhood. A massive development project so out of scale for its location is unacceptable to us. I sincerely hope that the commission will take the views of the many neighborhood groups who are opposed to this project into account as it considers this application.

Please send copies of this letter to all the members of the Planning Commission.

Sincerely yours,

Marcia Hofer

Vollman, Peterson

From: Marcia Hofer [hofer36@gmail.com]

Sent: Monday, November 30, 2009 10:44 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: Brunner, Jane; Vollman, Peterson

Subject: Case Number ER09-0006

To the Planning Commission:

I am writing to express my strong opposition to this project, as well as my concern that the Initial Study does not adequately address issues which will significantly affect the surrounding neighborhood.

The Initial Study, on p. 17, under the heading AESTHETICS asks whether the project would "substantially degrade the existing visual character or quality of the site and its surroundings" (item c). This item is rated as having "less than significant impact" in the study.

It is inconceivable to me that a project of this size, which can only be described as gigantic compared to any existing business in Rockridge, could be considered NOT to have a negative impact on its surroundings. I will quote the first two sentences of the Study's discussion of this item:

"c): The existing visual characteristics of the project site is a utilitarian, standardized, and familiarized commercial development sited within a large auto oriented surface parking lot, which is inconsistent with the characteristics of the College Avenue shopping district. The proposed project would result in a taller, more massive, and more intensively developed commercial center at this key retail corner in north Oakland than what presently exists at the site." (p.18)

So the Initial Study clearly states that the existing Safeway store is already "inconsistent" with its surroundings, and that the proposed project would be "taller, more massive and more intensely developed". How could this project NOT degrade the "existing visual character or quality of the site and its surroundings"? Based on the language of the Initial Study itself, it is clear that the proposed project would definitely have a Potentially Significant Impact and must be evaluated with regard to this issue.

I attended the Planning Commission meeting on November 18th, and was struck by the Commissioners' regretful acknowledgment that as a result of proper procedures not being followed, the Courthouse building was demolished, resulting in a vacant lot and a large group of enraged neighbors. In discussing this unfortunate failure, several Commissioners noted that it will be important to consider future proposals with greater care. While the specifics of the Courthouse demolition and the proposed Safeway project are quite different, I would like to point out that we who live in Rockridge look to the Planning Commission to safeguard the character of our neighborhood. As you are well aware, the existing Safeway store was built long before the current C-31 zoning was put in place, and certainly could not be approved under it today. Any project that can be described by your own staff as "massive" has no place in Rockridge, and we ask you to consider this proposal carefully in light of the General Plan, which states that the existing character of the neighborhood should be maintained and enhanced.

Sincerely yours,
Marcia Hofer

Vollman, Peterson

From: Ricardo Hofer [hofer52@gmail.com]

Sent: Tuesday, November 17, 2009 9:47 AM

To: Vollman, Peterson

Cc: Safewayneighbors@sbcglobal.net; Brunner, Jane; Wald, Zachary; Ddcprivate@aol.com; arcsmith@gmail.com; pcstjohn@earthlink.net; DanicaT05@comcast.net; DNACRADY@aol.com; nancyfriedberg@sbcglobal.net; joelrubenzahl@gmail.com; mosilverstein@gmail.com; hofer36@gmail.com; EdgeGuy@aol.com; jeffgillman@hotmail.com; ulrich@passagesconsulting.com; drm1A2@sbcglobal.net; psansari@hotmail.com; patrishmb@hotmail.com; arf@bharf.com; kenpaulalex@yahoo.com; galex@att.net; jerome@buttrickwong.com; rockridgefans@gmail.com

Subject: Case Number ER09-0006

RE: Project #ER09-0006 College Ave Safeway

Dear Mr. Vollman,

Unfortunately I will not be able to attend the meeting of the Planning Commission on Nov. 18, in which Safeway's proposed new building at College and Claremont will be discussed.

I am a neighbor and want to register in the strongest possible terms my opposition to such a huge building in our neighborhood. I have great concerns about the proposed building's extreme violations of the C-31 zoning ordinance, its impact on the small businesses that characterize this area, the irreparable damage that such a huge structure will do to the character of our neighborhood, and the nightmarish traffic problems that can be easily predicted. However, since I understand the focus of this meeting is on environmental issues, I will limit my remarks to the grave negative environmental impact that Safeway's proposal would have. I will list just a few:

1. The huge increase in large truck traffic that a store more than twice the size of the current one will inevitably entail.

2. Safeway is undertaking to double the size of its store with the clear expectation of attracting more customers. More customers means many more car trips, with the obvious negative environmental impact.

3. More than doubling the size of the store will have a large impact on the demands on all kinds of natural resources, like water and energy.

I will greatly appreciate your sending copies of this letter to all the members of the Planning Commission.

Sincerely yours,

Ricardo Hofer
370 63rd Street
Oakland, CA 94618

Vollman, Peterson

From: Glen Jarvis [gjarvis@jarvisarchitects.com]
Sent: Monday, November 30, 2009 7:03 PM
To: Vollman, Peterson
Subject: Case File #ER09-0006, 6310 College Ave- College Avenue Safeway

November 30, 2009

From:

Glen Jarvis, Architect - College Avenue business and Safeway residential neighbor

5278 College Avenue

Oakland, CA 94618

By email to:

Mr. Peterson Vollman, Planner

Community and Economic Development Agency

City of Oakland

250 Frank Ogawa Plaza, Suite 2112

Oakland, CA 94612

RE: Case File #ER09-0006, 6310 College Ave- College Avenue Safeway

Dear Mr. Vollman,

The following are environmental impact comments based on CUP's and Variance requests.

There are 4 listed Conditional Use Permits for the proposed Safeway store, and there could be at least that many more when the 8 stores at sidewalk level are occupied:

17.48.040 Conditionally permitted facilities:

General food sales, for Safeway, these are 24 hours a day, 7 days a week impacts

& Alcohol sales are 20 hours a day, 7 days a week.

Will there also be **automotive fee parking,** like in Montclair, and those impacts?

The 8 stores at street level will probably need additional food and alcohol sales CUP's. There is likely at least one restaurant, serving alcohol, and there is a possibility of fast food sales.

17.48.050, other possible permitted facilities with special review are:

Outdoor sidewalk seating, and **Telecommunications facilities**

17.48.070 Driveways on College and Claremont Avenues

Driveway use interrupts the pedestrian flow along contiguous storefronts, and is a safety issue. Vehicles turning into driveways also interrupt College Avenue and Claremont Avenue vehicle traffic. The Claremont/College intersection is at level E & F now based on previous reports. Can this block of College Avenue stand a major increase in traffic? How is bus traffic and loading affected?

Claremont Avenue Traffic:

Downhill traffic picks up speed as the speed limit increases at the north Safeway boundary as traffic enters Oakland. Cars backed up onto the street from driveways at this point are a traffic hazard. Cars and trucks making left turns onto the Safeway property back up traffic too.

17.48.080 Special regulations:

Store size over 7,500 square feet (soon to be reduced to a 5,000 sq ft threshold):

The current Safeway was built under a different planning code, and is a non-conforming C-31 use. Increasing the size of this store needs to conform to the new Oakland General Plan besides the current zoning. College Avenue is not planned for a "big box" store.

Traffic impacts:

Traffic, parking impacts and loading requirements need to address not only the City of Oakland's parking requirements, but also to analyze the **actual** anticipated traffic for the Safeway store, plus the additional 8 new shops and restaurants.

Traffic impacts need to be calculated for smaller versions of this project.

Residential impacts:

We now experience many parking problems including cars patrolling like at Berkeley Bowl and Trader Joe's. In addition, many College Avenue diners and shoppers walk more than a block into the adjacent residential neighborhood. Employees also use the residential streets for blocks off the avenue. The residential streets do not have the capacity for extra traffic and commercial parking. This problem becomes acute when residents return home from work. We remember the Market Hall coming back in a later phase with a much larger two level parking lot that accommodates more than the city's minimum requirements for their small addition, and a parking count that better reflected their needs. Many Market Hall and Trader Joe's shoppers also use the adjacent BART parking lot. Safeway has a large site, but can it accommodate the all traffic it will generate? There is not room nearby for overflow like the BART lot.

Loading:

College Avenue has a delivery truck double-parking problem now. How will this demand for loading be affected by the new Safeway store and the 8 new businesses? Safeway is a 24 hour, 7 day a week operation, and delivery trucks waiting at night and on weekends also have noise and air quality problems. Noise and diesel emissions of idling trucks at the quiet time of the day and night are at odds with the required Use Permit findings. Safeway relies on their vendors for delivery and shelf stocking besides their own large trucks. We have seen these trucks stack up with the current operation. At times even the busses can't get through. Loading issues are real and need to be addressed in other ways than requesting a variance. The Grand Avenue Safeway neighbors report loading problems at that smaller store, we don't want similar problems later too.

There currently are noise and health problems with Safeway's trash compaction machinery and pickup. What are the trash and recycling impacts?

Parking count increase/square foot increase ratio:

The current project has a 75% increase in parking, and a 175% increase in store area. This small increase in parking as compared to the project size is a major concern.

Overburdened residential streets:

Other current traffic problems include College Avenue traffic taking alternate routes through the Berkeley and Oakland residential areas. There are a lot of cars taking alternate routes around this part of college Avenue. Alternate routes with increasing extra and unacceptable traffic include Ashby/Hillegass to Woolsey/Benvenue to Alcatraz/ Hillegass to Claremont/Hillegass intersections. Cars also divert off this route onto Woolsey across College to Claremont, with some using Eaton. Alcatraz is an alternate connection used for north-south traffic, as is 63rd and 62nd Streets. The residents of both cities have complained and requested additional traffic controls if not just for the safety of their children. So far all that has happened is the addition of speed humps where closures were requested. Often it is hard to turn a car around, or just get into a residential driveway with the current traffic flow. Residents near College Avenue have a lot of competition for street parking places. Most of the houses were built a hundred years ago with minimal off street parking. We want to enhance the historic Rockridge and Elmwood districts, and be able to raise families here, not add additional impacts.

Another result of inadequate parking is many cars patrolling, like Berkeley Bowl customers that Safeway wants to attract to this store. Waiting for a space to open up causes cars to back up into the street. Other undesirable results are blocking driveways, double parking, anger, unsafe driving, and more.

The impacts need to address a project and alternatives that meet all the impacts for a project that can make the required findings of:

Compatibility with adjacent uses

Convenient, functional, attractive buildings

Enhance successful the surrounding area

Meet design review criteria

onforms with Oakland's General Plan, and other plans, and district regulations

Variances Required (17.148):

17.116.080 Parking & 17.116.140 Loading

Where variances are requested, the environmental impact of the shortages needs to be addressed. On a site of this size, and starting with a clean slate, all parking and loading requirements need to be met without variances or CUP's as a way to meet the Conditional Use Permit findings, especially the CUP for a store size over 7,500 square feet.

This community considers these to be major variances, not minor. With this application in its current form, it is hard to see how all, or even any of the following variance findings can to be satisfied:

1. A hardship, or precludes an effective design solution

2. Deprives applicant of privileges enjoyed by others

3. Does not adversely affect the abutting properties

4. Does not constitute a grant of special privilege

These comments are intended to clarify and expand on the comments I made at the Planning commission scoping session on November 18th. I look forward to a better Safeway.

Sincerely,

Glen Jarvis

Vollman, Peterson

From: Michael Alvarez Cohen [mdacohen@hotmail.com]
Sent: Wednesday, November 18, 2009 9:15 AM
To: Vollman, Peterson
Cc: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com; Elisabeth Jewel
Subject: FW: Important hearing on proposed Safeway rebuild tomorrow night – please attend

Dear Planning Commissioners,

Per the email below,
if you want to augment and diversify feedback
on the Safeway store (as well as other land use issues) --
especially from the majority of citizens with moderate opinions --
then checkout the Open City Hall internet-based serviced
used by a growing number of
local governments, elected officials, and public works directors.

Open City Hall is an on-line public comments forum
with the order and decorum of a government public hearing.
It maintains the same high standards of
civility, fairness, and First Amendment freedom of speech rights
that are maintained in your conventional public hearings.

Clients include the City of Palo Alto, and
Berkeley councilmember Gordon Wozniak.

For more information about Open City Hall, please go to
http://www.PeakDemocracy.com .

------ Forwarded Message
From: Elisabeth Jewel <elisabeth@ajepartners.com>
Date: Tue, 17 Nov 2009 16:41:50 -0800
Subject: Important hearing on proposed Safeway rebuild tomorrow night -- please attend

Dear Safeway Neighbors:

Tomorrow night (Wednesday), the proposed rebuild of the Safeway store at College and Claremont will have its first public hearing in front of the Oakland Planning Commission. This hearing is called a scoping session where all the subjects that will be studied as part of the environmental impact report will be discussed.

The opponents of the new store are working hard to pack the meeting with people who will speak against the project. They are using the scoping session to try to stop the project from moving forward. You can check their website at www.fansco.org <http://www.fansco.org/>

If you would like the planning commissioners to know that many neighbors support building a new

modern store with new shops on the street level, please come to the hearing and speak. Each person is allowed 2 minutes during public comment. It's important to fill out a speaker's card when you arrive.

Here are the details of the meeting:

Wednesday, November 18th , 6:00 p.m
Oakland City Hall
14th/Broadway in Downtown Oakland
Hearing Room 1 (1st floor to the right as you enter)

City Hall is accessible to BART (12th Street Station) or you can park at the Clay Street Garage on Clay between 14th and 15th Streets.

If you cannot attend, please send an email to the Planning Commissioners reiterating your support for the project. It is important they hear from you.

Here are their addresses:

Blake Huntsman: Blake.Huntsman@seiu1021.org <mailto:Blake.Huntsman@seiu1021.org>
Doug Boxer: dboxer@gmail.com <mailto:dboxer@gmail.com>
Sandra Galvez: sgalvez@phi.org <mailto:sgalvez@phi.org>
Madeleine Zayas-Mart: mzayasmart@sf.wrtdesign.com
<mailto:mzayasmart@sf.wrtdesign.com>
Michael Colbruno: michaelcolbruno@clearchannel.com
<mailto:michaelcolbruno@clearchannel.com>
Vien Truong: VienV.Truong@gmail.com <mailto:VienV.Truong@gmail.com>
Vince Gibbs: Vincegibbs.opc@gmail.com <mailto:Vincegibbs.opc@gmail.com>

Please also copy Oakland city planner Pete Vollman: PVollman@oaklandnet.com

Please feel free to call me with any questions you may have. Thank you for your interest and support.

Sincerely,
Elisabeth
Elisabeth Jewel
Community Affairs Consultant to Safeway

Elisabeth Jewel
Aroner, Jewel & Ellis Partners
1803 6th St., Suite B
Berkeley, CA 94710
510/849-4811 ph
510/849-4827 fax
www.ajepartners.com

Vollman, Peterson

From: Jan Klingelhofer [janklingelho@earthlink.net]

Sent: Friday, November 20, 2009 4:44 PM

To: Elisabeth Jewel

Cc: Vollman, Peterson; Brunner, Jane

Subject: Re: Update from Safeway on rebuild of store at College/Claremont

Dear Ms. Jewel,

I was present at the scoping meeting, and I would like to protest Rena Rickles' positive characterization of the "stakeholder" meetings that Safeway organized. I attended every one of those meetings, and greatly resent the implication that these community meetings IN ANY WAY represented a dialogue between Safeway and concerned citizens, or altered Safeway's plans to build a store

THAT IS SIMPLY TOO BIG FOR THE NEIGHBORHOOD.

If you and Safeway continue to paint the sad, tainted and embarrassing process of those meetings as anything other than a sham that ended in disgust and acrimony, I will take it upon myself to write to local publications about that fraud. It is shameful behavior.

Jan Klingelhofer
On Nov 20, 2009, at 1:53 PM, Elisabeth Jewel wrote:

> November 20, 2009
>
> Dear Safeway Neighbors:
>
> This week the Oakland Planning Commission conducted the first hearing on the proposed rebuild of the Safeway at College and Claremont. This meeting was a scoping session designed to discuss what items will be studied in the Environmental Impact Report.
>
> Safeway's architect, Ken Lowney, made a presentation to the Planning Commission of the slides and drawings you may have seen on the website at www.safewayoncollege.com. The hearing room was full of neighbors and other interested parties such as bicycle and pedestrian advocates. The Commissioners heard from about 21 speakers whose comments ranged from questioning the purpose of the rebuild to challenging the zoning conformity and asking for alternative projects to be studied (including one with senior housing). An architect representing a group of neighborhood architects presented a plan that made a small addition to the store while extending the parking area to cover most of the lot including the gas station parcel. Many conveyed concerns over traffic, zoning, parking, air quality, conformity with C-31 zoning, environmental sustainability and pedestrian/bike safety.
>
> The Planning Commission agreed with the Oakland City Planning Department staff position that the EIR will study transportation and traffic, noise, and air quality. In addition, the Planning Commissioners requested that the EIR study the possible addition of housing, impact of the driveway on 63rd St., parking lot usages as well as bicycle and pedestrian impacts. The EIR consultant, working at the direction of the Planning Department, will now study these issues and prepare a comprehensive report in about six months. There will be another Planning Commission meeting scheduled when the draft report is released.
>
> Commissioners will continue to receive written public comment until December 1st. In the mean time, please feel free to direct your comments or questions about the project to me. We have posted 4 informational handouts that Safeway gave Commissioners on our website. Please continue to check the website for updates. You can also read more about what happened at the meeting by going tohttp://oaklandliving.wordpress.com/
>
> Thanks for your continuing interest in the rebuilding of this Safeway store.
>
> Sincerely,

Elisabeth
Elisabeth Jewel
Community Affairs Consultant to Safeway

Elisabeth Jewel
Aroner, Jewel & Ellis Partners
1803 6th St., Suite B
Berkeley, CA 94710
510/849-4811 ph
510/849-4827 fax
www.ajepartners.com

Vollman, Peterson

From: Jan Klingelhofer [janklingelho@earthlink.net]
Sent: Monday, November 30, 2009 7:35 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com
Cc: Brunner, Jane; Vollman, Peterson
Subject: Case Number ER09-0006

Dear Planning Commissioners,

I am opposed to the Safeway on College project as currently proposed, and believe there are substantial defects in the Initial Study, as well as areas of concern that are currently not scheduled to be addressed in the EIR.

The size of the proposed store is at the core of the problem. The initial study observes that the overall building size of over 64,000 sq. ft. is more than two and a half times bigger than the current store, and parking spaces will be increased by more than one a half times for a total of 173 spaces. Furthermore, the study predicts that the "larger Safeway store is expected to employ approximately 77 more people than the existing store", but erroneously and completely without evidence also claims, " the jobs generated by the project are likely to be taken by workers living in the area." The quaint and successful Rockridge shopping district along College can not withstand this increased congestion and traffic.

A much larger store with more parking spaces and customers, more employees, and more deliveries will certainly have a potentially significant impact on the neighborhood. The C-31 zoning which was established to protect "important shopping streets having a special or particularly pleasant character" envisioned 7500 sq. ft. of retail per establishment, not almost ten times that amount. A large retail center with more employees (most of whom will commute by car), more deliveries (keeping 50,000 sq. ft. stocked takes more goods), and attracting customers from farther away (why build a bigger store if you don't plan to get substantial revenue out of it) must be thoroughly examined in the EIR for its potentially significant impact on Land Use and Planning, IX, c).

Jan Klingelhofer
410 McAuley St.

Vollman, Peterson

From: Don Kinkead [donkinkead@mindspring.com]
Sent: Monday, November 30, 2009 11:27 PM
To: Brunner, Jane; Vollman, Peterson
Subject: EIR for College Avenue Safeway Project Should Include These Specific Items

Dear Mr. Vollman and Ms. Brunner:

It is unfortunate that planning staff limited the EIR study area to such a scant list of topics to be considered in the EIR. At its November 18 Scoping hearing, the Planning Commission should have directed Mr. Vollmer and staff to look at a wider range of potential, deleterious effects that this project would have on College Avenue and Rockridge if it were constructed as currently proposed.

Areas that must also be included for study are:

1. Impacts of increased traffic and parking on neighborhood streets (see # 3)
2. Pedestrian safety
3. An increase in traffic and shortcutting to College Ave. on adjacent residential streets because of the major Safeway garage entry proposed for College and 63rd Street.
4. Measures to improve bicycle safety in the added traffic congestion
5. Pedestrian and bicycle safety at the Claremont/college intersection
6. The general increase in automobile traffic and resulting increased effect on air quality
7. Worsened parking problems with the increase of automobiles driving to the store.

ALSO: Not discussed at the Planning Commission scoping hearing was consideration of a smaller store/project. This project option should be included in the study.

Thank you,

Don Kinkead
5626 Oak Grove Avenue
Oakland

EAST BAY
MUNICIPAL UTILITY DISTRICT

November 23, 2009

Peterson Vollmann, Planner III
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

Re: Notice of Preparation of a Draft Environmental Impact Report – College Avenue Safeway Project, Oakland

Dear Mr. Vollmann:

East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report for the College Avenue Safeway Project located in the City of Oakland (City). EBMUD has the following comments.

GENERAL

On page 65, under Discussion a) and b), the second and the third sentences should be revised to read: "The wastewater treatment plant, near the Bay Bridge anchorage, has an average annual flow of 80 mgd. The treatment plant has a sustainable primary treatment capacity of 320 mgd and a maximum secondary treatment capacity of 168 mgd."

On page 67, the last sentence of the first paragraph shall be revised to be "With the implementation of water conservation and recycling programs that are in place and under development, EBMUD estimates that ~~he~~ the projected 2030 demand will be 232 mgd."

WATER SERVICE

EBMUD's Berryman Pressure Zone, with a service elevation between 200 and 400 feet, will serve the proposed development. Off-site pipeline improvements, at the project sponsor's expense, may be required to meet domestic demands and fire flow requirements set by the local fire department. Off-site pipeline improvements include, but are not limited to, replacement of existing water mains to the project site. When the development plans are finalized, the project sponsor should contact EBMUD's New Business Office and request a water service estimate to determine costs and conditions for providing water service to the proposed development. Engineering and installation of off-site pipeline improvements and services requires substantial lead-time, which should be provided for in the project sponsor's development schedule.

WASTEWATER

EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to treat the wastewater flow from this project, provided that the wastewater meets the requirements of the current EBMUD Wastewater Control Ordinance. However, wet weather flows are a concern. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to Environmental Protection Agency (EPA) and State Water Resources Control Board's (SQRCB) re-interpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. Additionally, on July 22, 2009 a Stipulated Order for Preliminary Relief issued by EPA, the SWRCB, and RWQCB became effective. This order requires EBMUD to begin work that will identify problem inflow and infiltration (I/I) areas, begin to reduce I/I through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system, including the subbasin in which the proposed project is located. As required by the Stipulated Order, EBMUD is conducting extensive flow monitoring and hydraulic modeling to determine the level of flow reductions that will be needed in order to comply with the new zero-discharge requirement at the WWFs. It is reasonable to assume that a new regional wet weather flow allocation process may occur in the East Bay, but the schedule for implementation of any new flow allocations has not yet been determined.

The City should require the project sponsor to incorporate the following measures into the proposed project: (1) replace or rehabilitate any existing sanitary sewer collection systems to reduce I/I, and (2) ensure any new wastewater collection systems for the project are constructed to prevent I/I to the maximum extent feasible. Please include such provisions in the environmental documentation for this project.

If you have any questions concerning this response, please contact David J. Rehnstrom, Senior Civil Engineer, Water Service Planning at (510) 287-1365.

Sincerely,

William R. Kirkpatrick
Manager of Water Distribution Planning

WRK:AMW:sb
sb09_241.doc

cc: Todd Paradis, Safeway, Inc.
5918 Stoneridge Mall Road
Pleasanton, CA 94588-3229

Vollman, Peterson

From: Thomas A. Koster [tkoster@berkeley.edu]

Sent: Sunday, November 29, 2009 9:45 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: Vollman, Peterson; Brunner, Jane; Wald, Zachary

Subject: Case Number ER09-0006

To Oakland City Planning Commissioners:

I would like to comment on Safeway's proposed expansion of its store at College and Claremont avenues in Rockridge. I am opposed to the project as currently proposed. Basically, it is too large.

I am a Rockridge resident who has lived within two blocks of the Safeway store for nearly 25 years. While I have no objections to rebuilding, improving, and modestly expanding the Safeway store, and in fact would welcome an improved streetscape to replace a rather ugly store, gas station, and parking lot, I believe the scale of what Safeway has proposed--the doubling of the size of the store, with 77 more employees and a very large increase in parking spaces--is significantly larger than what is appropriate for this neighborhood.

I am most concerned with the impact of increased traffic on our neighborhood, as parking and traffic congestion are already very serious problems in this area. Instead of planning a magnet that will draw in people from outside the area, Safeway should be seeking to improve its service to an existing community that lives in the vicinity of its store. Other development projects already proposed by Safeway (such as at Pleasant Valley/51st Street/Broadway) are more appropriate to a regional shopping center. I am pleased that an EIR is being required and I realize that transportation and traffic impacts will be examined. However, I was very concerned when I read in the section of the Initial Study Checklist on air quality that "Since the project would replace an existing supermarket and gas station, the net increase in retail space (of the proposed project), and the associated traffic generation, would be much lower." This statement is ludicrous. The small corner gas station generated relatively little traffic compared with the Safeway store or other retail shopping activity in the neighborhood. The large increase in parking spaces from 96 (or 106?) to 173 hardly reflects a decrease in traffic generation, nor does the doubling of Safeway's size or the addition of ca. eight retail shops.

Also, in the discussion of land use and planning impacts, it is stated that the project would add more commercial storefronts to a predominantly small-scale commercial street. However, the selection of eight tenants to occupy these spaces would be at the discretion of Safeway and it cannot be assumed that this would not have significant impact on the character of the neighborhood. The potential for conflict and a change in the character of the neighborhood should be obvious.

I hope you will take these considerations into account.

Sincerely,

Thomas A. Koster
6298 Colby Street
Oakland California 94618

Vollman, Peterson

From: Tad Laird [tad@elmwoodlock.com]

Sent: Sunday, November 29, 2009 8:19 PM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: Brunner, Jane; Vollman, Peterson

Subject: Case Number ER09-0006 - In Favor of College Ave Safeway

To the parties involved in the approving the College Ave. Safeway Project -

I want to advise you that I am IN FAVOR of the proposed project. Everything designed and proposed is well within the scale and use of the area, and will offer all surrounding neighborhoods and many neighborhoods even further north and east of this store an even greater selection of reasonably priced commodity goods, which are in tremendously short supply in our area. This Safeway serves not only alot of families, but also an extremely large community of seniors and disabled people, as well as a tremendous number of students and people on fixed or limited incomes. It is ideally served by bus, easily accessible by bike or walking, and this is probably the last location on College where this kind of reasonable neighborhood retail development can occur.

This project will dramatically improve the appearance of this area. It will restore a sense of balance in the massing along College Ave, and greatly increase the value of residential properties all around it. New facilities will allow Safeway to build a design that is far better suited to current and future needs for both itself, and the new businesses that will be able to open in our neighborhood. These include delivery service, garbage service, recycling, and other many quality of life improvements. Improving the parking lot will also benefit all surrounding local businesses, and the additional customer base from a larger Safeway will be a tremendous benefit for them all as well. This is local jobs, local service, and local shopping at its best.

There are alot of challenges for College Ave., including the badly designed BRT project proposed for Telegraph, the lack of signal coordination and turn opportunities on College, and the high traffic count that has existed for years and will only get worse no matter what Safeway does. By orienting the primary auto access to Claremont, this project actually could do more to improve College Ave traffic than any traffic project. Berkeley has done nothing to fix the major zoning problems that have caused the loss of most locally-oriented retail in the Elmwood - please show Oakland has better sense and allow Safeway to remodel and provide spaces for good, local retail - I even hope that I might be able to reopen my old hardware store at this location, since Berkeley didn't want to keep it in the Elmwood.

Tad Laird

Vollman, Peterson

From: burkenli@sonic.net
Sent: Monday, November 30, 2009 12:38 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com
Cc: Brunner, Jane; Vollman, Peterson; susan@fansco.org
Subject: Case Number ER09-0006

We believe the two major areas overlooked in the I.S. are the Aesthetics and Land Use/Planning categories. Each of these areas will have a **"Potentially Significant Impact"** on our environment.

We **OPPOSE** the project as currently proposed.

Building the Safeway as proposed will have significant impact on the environment and the general atmosphere of Rockridge. It will have a substantial adverse effect on the scenic vista.It will substantially degrade the existing visual character or quality of the site.

It will require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code addressing the Provision of adequate light related appropriate uses which might result in a fundamental conflict between adjacent or nearby land uses.

The proposed Safeway project will also fundamentally conflict with any applicable land use plan (Oakland's General Plan), policy ("Maintain and Enhance"), or regulation (C-31 Zone designation), of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment.

In addition, under Air Quality (Section III(g)) there is a discussion that also impacts traffic and transportation. In the discussion section the I.S. makes an outrageous claim, to wit "Since the project would replace an existing supermarket and gas station, the net increase in retail space (of the proposed project), and the associated traffic generation, would be much lower." We feel that is TOTALLY UNTRUE. The corner of Claremont and College is already always congested. The proposed enlargement project would certain bring in MORE traffic to that area, not LESS!!!!

Please please please reconsider the intention to build the new Safeway. It will have SIGNIFICANT IMPACT on our Rockridge neighborhood!!!!

Paula Li

David Burke

5957 Chabolyn Terr, Oakland CA 94618

Vollman, Peterson

From: Star Lightner [starlightner@gmail.com]
Sent: Wednesday, November 18, 2009 2:49 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; mzayasmart@sf.wrtdesign.com; michaelcolbruno@clearchannel.com; VienV.Truong@gmail.com; Vincegibbs.opc@gmail.com; Vollman, Peterson
Subject: Case Number ER09-0006 - In SUPPORT of Safeway Remodel, College Ave. location

Dear Planning Commissioners,

I am a Rockridge resident, I have lived here most of my life, having been born here and now raising my kids here. Honestly, the Safeway on College Ave. has always been a nightmare - I remember my mom hating that store when I was a kid because it was totally cramped and the parking lot was always full. Needless to say, it's even worse 30 years later.

My family totally supports a new, modern, larger store, especially with a design that includes street-level storefronts, walkstreet, roof garden, and underground parking.

We were not 100% happy with the aesthetics of the most recent design (it reminded me of Danville), but I am confident that these architects, having done such a beautiful job with the Whole Foods in the old Cadillac dealership on Harrison, could make adjustments that made it better fit into this Craftsman bungalow neighborhood.

Regarding the Initial Study and Environmental Review, it's true that there may be some impacts on air quality, noise, and traffic in the area, and I'm glad you are looking at those issues. Considering that this is a commercial/retail area, I hope you find that any adverse effects can be mitigated.

There are neighbors who oppose this project, whom I believe have a "bigger is inevitably worse" perspective. I know of many neighbors who welcome Safeway's proposed improvements. I hope you hear our voices despite my not being able to attend tonight's meeting.

Thanks for your consideration.

Regards,

Star Lightner and Ben Riddell
416 61st St.
Oakland 94609

Helen Lightner-Smith
57 Clarewood Lane
Oakland 94618

NORMAN MACLEOD
340 SIXTY SECOND STREET,
OAKLAND,
CALIFORNIA 94618

Tel: 510-655-0649
Fax: 510-428-0695
Cell Phone: 415-290-9995
e-mail: macleodesq@aol.com

Ladies and Gentlemen of the Oakland Planning Commission.

AN ELEPHANT CANNOT FIT IN A BATH TUB

My wife, Dianne, and I emphatically oppose the present plans of **Safeway** for the **College and Claremont intersection.** We live a block from the proposed development. We have lived in our house for nearly 34 years, and are proud of our neighborhood and enjoy its distinctive and vibrant ambiance. We are most concerned, along with all our neighbors, at Safeway's plans to irretrievably change our neighborhood.

We ask that you consider the many points raised by concerned citizens of Oakland and Berkeley in opposition to this development. We address three of the many issues:

1. **The development will have a Potentially Significant Impact on this part of Rockridge.**

- It is a strip mall type of development. It may well be appropriate for communities such as Pleasanton/Walnut Creek with available open spaces. Rockridge is not suburbia.
- The bulk and height of the design, together with that of the existing Blood Bank, will turn Claremont, as it joins College from the North East, into a shadowy gulch, similar to parts of downtown Walnut Creek. This is a significant change from the open and sunny vista presently existing, which Safeway plans to destroy. No longer with the open spaces of the Berkeley Hills be visible from west of College.
- The Development's design is "ersatzes Mediterranean", if not "Disneyland". It will be totally out of keeping with the indigenous Rockridge laid back neighborhood, which people visit to shop and dine at lively boutique establishments.
- We are amazed to see that the plans call for roof top parking! Besides obvious issues of unsightliness, auto pollution and invasion of neighborhood privacy, we wonder how the shoppers will return to their cars with laden shopping carts? By stairs? By elevator? If so, how many elevators and how big?

2. **The Initial Study (IS) is Fatally Flawed. It is Deficient and Grossly Misleading. It will have a Potentially Significant Impact on Traffic.**

- It took our breath away to read that the producers of the IS considered that the planned expansion of the supermarket development over the existing Safeway parking lot plus the closed gas station would result only in minimal additional traffic on surrounding streets!

Initially we question the competence of the producers of the IS. Was there a site check on traffic in the neighborhood? Were the widths of streets, parking availability and the traffic flow on them at different times of day determined in any detail? A simple investigation of existing traffic patterns would clearly show that the planned development would have a potentially significant impact on traffic.

- College and Claremont is a major intersection with five streets flowing into it with traffic lights. Presently traffic in both directions on College and Claremont is backed up for at least a block on each street. Further, there is another traffic light at the intersection of College and Alcatraz, which produces further backups stretching as far as Ashby in Berkeley. A major AC Transit bus line runs along College.
- Claremont has two lanes each way. All other neighborhood streets, including College, Alcatraz, 63rd, 62nd, 61st, 60th, Hillegass and Colby have one lane each way. All these streets, except College, are residential. Because of the turmoil caused by the heavy traffic on College and Claremont these residential streets now have substantial vehicular traffic (including commercial delivery vehicles) taking short cuts to avoid the delays caused at the College/Claremont and College/Alcatraz intersections.
- Parking during the daytime on the surrounding residential streets, particularly 62nd, 63rd and Hillegass, is well nigh impossible. This is because commuters to San Francisco in the morning park on these streets to take the casual car pool on Claremont, the Claremont Express bus or BART. In addition parking on Claremont approaching the College intersection is taken up with the casual car pool in the early morning and then, on both side, by employees and visitors to the Blood Bank.
- Safeway wants, presumably, to rebuild the Safeway store in such large dimensions so that it will attract large numbers of customers from the East Bay and beyond. This will at least double the number of customers travelling to and through the College/Claremont neighborhood. Can the existing streets handle this? Where will they all park, if the roof parking proves inadequate or inappropriate?

3. Land Use and Planning

- The development will result in a fundamental conflict with the neighborhood land uses.
- The development will conflict with the existing Oakland General Plan.

Finally, we and our neighbors have questions that at some stage of this proceeding need answering.

Why does Safeway need two substantial "flagship" stores in close proximity to each other? The one at 51st and Broadway has enough space and parking to satisfy all its North Oakland commercial needs, with the College site acting as a satellite store.

Why is Safeway putting us all through this? Why is it spending so much money on this exercise which is generating for itself so much adverse publicity?

Why does Safeway persist in trying to cram an elephant into a bathtub?

Very truly yours
Norman Macleod

Vollman, Peterson

From: Howard Matis [matis@comcast.net]
Sent: Tuesday, November 17, 2009 7:19 PM
To: Vollman, Peterson
Subject: Proposed Safeway Expansion

Dear Planning Commission,

My wife and I live in the Oakland Hills. We support the expansion plans of Safeway. We shop at Safeway frequently. The upgraded store will provide a better shopping experience. The old one is a little dated. We will be able to use local shops more so we will travel less. Having a good local store fights global warming because we do not have to drive out cars farther. It will also provide more Oakland jobs. Therefore, please support this expansion.

Howard and Mary Matis

Peterson Vollmann, Planner III
City of Oakland
Planning Department
pvollman@oakland.com
510-238-6167

Nov. 24, 2009

Subject: Comments on the ER09-0006 – Safeway at College project

Dear Peter,

Please include the following comments to the referenced initial study and environment review checklist. These items need to be included in the EIR for this project.

I. AESTHETICS

a). Move this to "Potentially Significant Impact". The height of the project will block views of the hills, cast long shadows, and make a dark corridor out of College Avenue during the winter.
b). Move this to "Potentially Significant Impact". It will degrade the existing visual character and quality of the site and its surroundings due to its mass.
d). Move this to "Potentially Significant Impact". With the Safeway store on the second floor and open 24 hours a day, the interior lighting as well as the parking lot lights will light up the residential homes nearby thought-out the night. This can cause serious problems for some people.

III. Air Quality

e). Move to this to "Potentially Significant Impact". The potential for odors from this project are significant if the trash generated by Safeway is not properly deposited of. To date Safeway has not done a very good job of doing so. Another potential source of odors is the small retail spaces planned for this project. If they become fast-food out lets or restaurants, how are to be controlled? This should be studied to ensure the project does not create the problem.
f). Move this to "Potentially Significant Impact". A base line needs to be established to determine the existing conditions. Local monitoring needs to be done while the existing store is in operation to establish that base line. The City needs to implement this now and add the data to the DEIR. The Bay Area standards do give us the prevailing conditions existing at the project site now.

V. Culture Resources

This section leaves out the significant of the historic nature of the surrounding neighborhoods, business districts, and charm of the area. The project has the potential of causing small businesses to close. This will result in vacant store space, blight, and change the livability of this district. This needs to be added as a study subject.

IX. Land use and Planning

a). Move this to "Potentially Significant Impact". This project as designed will put up a barrier between those businesses on the West side of College Avenue and the residential neighborhood to the East of the property. It needs to be studied to prevent this from happening.

b). Move this to "Potentially Significant Impact". The conflict will be great. Some of the small businesses in the area are unlikely to be able to compete/exist when this project is completed. It needs to be studied and considered a major problem.

XV. Transportation/Traffic

vii). Study the effects of increased traffic volume on College Avenue caused by implementing BRT (Bus Rapid Transit) on Telegraph Avenue. A 17% increase of traffic in projected on College Avenue.

Dean Metzger
President Of CENA (Claremont Elmwood Neighborhood Association)
1 Hazel Rd.
Berkeley CA 94705

Vollman, Peterson

From: Kathleen Mohn [kathleen@speakandwrite.com]
Sent: Tuesday, November 17, 2009 2:17 PM
To: Vollman, Peterson
Subject: Let's get this Safeway project going

I do my grocery shopping at VerBrugge, Yasai Market, La Farine, and Safeway on College Ave. The first three benefit from customers being able to park at Safeway, but this store needs to expand and soon. Don't let nay-sayers stop this project. The design is a good one and will benefit this popular area of Rockridge.

Thanks for listening,
Kathleen Mohn
510-654-4062

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

RECEIVED
NOV 06 2009
City of Oakland
Planning & Zoning Division

Notice of Preparation

November 3, 2009

To: Reviewing Agencies

Re: College Avenue Safeway
SCH# 2009112008

Attached for your review and comment is the Notice of Preparation (NOP) for the College Avenue Safeway draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Pete Vollman
City of Oakland
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Acting Director

Attachments
cc: Lead Agency

Vollman, Peterson

From: aceble@berkeley.edu
Sent: Tuesday, December 01, 2009 3:56 PM
To: Vollman, Peterson
Subject: Safeway Rebuild at College and Claremont Avenues

Importance: High

Two letters follow:

To Whom It May Concern:

I oppose the Safeway Rebuild Plan in its current form. I am concerned about the POTENTIALLY SIGNIFICANT IMPACT on the aesthetics of our neighborhood, i.e., the adverse effect of this oversized building on a neighborhood of small, individually owned shops. These shops are what make our neighborhood unique.

Eleanor Moscow
33 Oakvale Avenue
Berkeley, CA 94705

To Whom It May Concern:

I am opposed to the proposed Safeway Rebuild Project because of the potentially significant impact it would have on our neighborhood.

In my judgment, the environmental impact report demonstrates the total lack of understanding of the possible results of the project. The size is such that it is tantamount to being a "shopping mall." The result would be that our streets would be clogged with traffic and our air would be unbreatheable. I exhort you to re-assess your plans and reduce the size and scope of this project.

Anita C. Eblé
19 Oakvale Avenue
Berkeley, CA 94705

Anita

From: Vollman, Peterson [PVollman@oaklandnet.com]
Sent: Monday, November 16, 2009 11:15 AM
To: Rena Rickles
Subject: FW: Collage Avenue Safeway ER-09-0006

Follow Up Flag: Follow up
Flag Status: Completed

Peterson Z. Vollmann
Planner III
CEDA - Planning & Zoning
250 Frank H. Ogawa Plaza, Suite 2114

Oakland, CA 94612

Phone: (510) 238-6167
e-mail: pvollman@oaklandnet.com

-----Original Message-----
From: Robert Mueller [mailto:rmueller@pacbell.net]
Sent: Monday, November 16, 2009 9:31 AM
To: Vollman, Peterson; Concerned Neighbors
Subject: Collage Avenue Safeway ER-09-0006

We are opposed to the expansion of the Safeway at the corner of College and Claremont and make the following points in support of the opposition:

1) We do not need another conduit for industrially produced food into the community.
2) The East Bay is the center of the movement to create a better, healthier, more sustainable way to produce food. We can do better than expand the local Safeway.
3) Safeway wants to expand the store to increase their business. This will be done by taking business away from the existing shops in the area. This is a bad. Or it will be done by bringing in business from other areas. This will increase traffic. It is also bad.
4) We never go to the Safeway so if it were to leave the area it would not matter to us. We do most of our shopping at Star Market, Ver Brugge's Meats, the farmer's markets and we belong to a CSA farm. Good things can happen when a Safeway leaves a location. The current Berkeley

Bowl is in an old Safeway store and so is Fenton's Creamery. Star Market

is about one fifth the size of the Safeway and they have everything one needs. So Super Size is not necessary or, as the movie pointed out, good

for you.
5) There are all sorts of architectural/urban design reasons why a large

store on this site is not a good idea. The symbolic importance of the site as a major intersection in the street grid is an important consideration. Something better than a gas station would be nice to be sure but a Safeway megastore that snarls the local traffic and damages small local businesses would not be better.
6) Even if the design was modified to be more fine grained at the street

level who would own the spaces and who would the tenants be? I would not

like to see a Jamba Juice, a Chipotle Tacos, several Starbucks and a lot of other chain stores take up residence in the neighborhood.

Robert and Nancy Mueller
790 Alvarado Road
Berkeley, CA
94705
510.549.0254

From: Tim & Kathy Murphy [tsmurphy@pacbell.net]
Sent: Wednesday, November 18, 2009 11:27 AM
To: Vincegibbs.opc@gmail.com; VienV.Truong@gmail.com; michaelcolbruno@clearchannel.com; mzayasmart@sf.wrtdesign.com; sgalvez@phi.org; dboxer@gmail.com; Blake.Huntsman@seiu1021.org
Cc: Vollman, Peterson
Subject: Safeway on College, Let them build!

I live on Brookside Avenue at Claremont, about 200 yards from the Safeway.

I think it is great that the folks at Safeway think enough of our community to propose spending a bajillion dollars to reinvent their store.

In my experience the people at the Safeway store have been terrific neighbors. If not for their largess in allowing us to park in their lot while we shop across the street, I believe a lot of the other local merchants would not survive. If I had to find street parking to go to the butcher shop, I probably would shop somewhere else.

I suppose if the store were over my back fence I might try to stop any progress, but hey, the store has been there long before any of the current residents moved in. They had to know there was a big store there!

I am not usually a letter writer, but in this case I wanted to let you all know that a lot of neighbors quietly want to see our neighborhood renewed in a tasteful and appropriate manner.

Thanks for your attention.

Tim Murphy

Vollman, Peterson

From: t n [tadashin@yahoo.com]
Sent: Monday, November 16, 2009 9:18 PM
To: Vollman, Peterson
Cc: chair@rockridge.org
Subject: College Avenue Safeway site - Proposed development

Dear Mr. Vollman:

I live two blocks from this Safeway and I shop there at least once a week. I am writing to state my strongest objection to the plans to increase the density of development at this site. Safeway already has a large 'superstore' at the 51st & Broadway location. We do not need anything larger on College. The increase in size of the Safeway on College along with the proposed additional commercial storefronts will overload an already congested stretch of College. The impact will further extend to neighboring streets as people search for ways to drive around the blockage. Already the number and speed of vehicles using Hillegas and Colby as cut throughs makes for unsafe streets. I will consider the EIR to be defecient if it does not adequately study these impacts and provide for reasonable mitigation.

Thank you,

Tadashi Nakadegawa
6100 block of Colby

Vollman, Peterson

From: Gerald Niesar [gniesar@nvlawllp.com]
Sent: Thursday, November 26, 2009 10:41 AM
To: Vollman, Peterson
Cc: safewayneighbors@sbcglobal.net; chair@rockridge.org
Subject: Safeway Project/College Claremont/Ref. ER09-0006--Strongest Possible Objection

Dear Commissioner Vollman:

We live at the corner of Manoa and Florio streets, about one and a half blocks from the proposed Safeway expansion. We have lived in this house for over 40 years and were early participants in the development of the C-31 Zoning that is applicable to the Project Site.

I am personally astounded that this massive and destructive expansion is being seriously considered by the Planning Commission. It is so utterly out of scale with the neighborhood, out of keeping with the existing land use Zoning (C-31), unnecessary, and out of character with respect to both the shopping district along College avenue and, even more importantly, the predominantly single family home residential neighborhood by which that shopping district is surrounded.

It is my understanding that, in addition to the well thought out restrictions of the C-31 Zoning, the Project Site is located squarely in what has been designated by the City Master Plan as a "Maintain and Enhance" area. This last is a counterpoint to the areas such as Telegraph which are designated for Expansion and Enhance. It is inconceivable that any thinking person would believe that this massive expansion, almost a tripling of the size of what is already the largest single store in the entire shopping district, could be considered "maintaining" much less "enhancing" this area. Or are we all living in some modern day version of "The Emperor's New Clothes"???

Some of the comments submitted suggest that the commentators (some of whom don't live anywhere near the store) cannot find everything they need in the current Safeway. Having shopped there for 40 years I am at a loss to figure what it is they are looking for that is not available in the Safeway now, or in one or more of the stores in the immediate neighborhood. Indeed, if there is truly an item that is not available at this Safeway and can only be found in a massive Safeway, three minutes away there is a huge Safeway at the Broadway center. These comments only demonstrate what Safeway is really about: drive out the small, locally owned, and zoning and use compliant stores that provide competition to Safeway through better service, higher quality and locally produced products.

I urgently request that the City of Oakland Planning Commission not be swayed by specious and self-serving protestations by Safeway that this project respects even one iota of the character of the neighborhood, the legitimate land use, noise, air quality and traffic concerns of our neighbors, or any attempt to match and conform with the esthetics of this historical area. I am confident that the Commissioners will be able to discern just what kind of clothing Emperor Safeway is wearing.

Thank you for your attention to and concern for our neighborhood and the need to stand up to blatant attempts to override the zoning and land use restrictions designed to preserve it. We are counting on all of the Commissioners to respect their oath of office and save this vibrant area of Oakland from suburban blight.

Very truly yours,

Gerald and Ortrun Niesar
6200 Manoa Street
Oakland, California 94618

Vollman, Peterson

From: Gerald Niesar [gniesar@nvlawllp.com]

Sent: Friday, November 27, 2009 4:42 PM

To: Vollman, Peterson

Subject: FW: Safeway Project/College Claremont/Rer ER09-0006; TRAFFIC CONCERNS

Dear Sir: It appears that my address for you was incorrect. Please see email comment below. Thank you. Gerald V. Niesar

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From: Gerald Niesar
Sent: Friday, November 27, 2009 1:01 PM
To: Gerald Niesar; 'Pvolllman@oaklandnet.com'
Cc: safewayneighbors@sbcglobal.net; 'Susan Shawl'; chair@rockridge.org; Ortrun Niesar
Subject: RE: Safeway Project/College Claremont/Rer ER09-0006; TRAFFIC CONCERNS

Dear Commissioner Vollman:

I mistakenly pushed send on the message below before adding a signature block. This comment below is from:

Gerald and Ortrun Niesar
6200 Manoa Street
Oakland, California 94618

From: Gerald Niesar
Sent: Friday, November 27, 2009 12:55 PM
To: Pvolllman@oaklandnet.com
Cc: safewayneighbors@sbcglobql.net; chair@rockridge.ort; Susan Shawl
Subject: Safeway Project/College Claremont/Rer ER09-0006; TRAFFIC CONCERNS

Dear Commissioner Vollman:

We live at the corner of Manoa and Florio streets, about a two minute walk from the proposed massive Safeway expansion project. As neighbors who would be directly and negatively impacted by the increased traffic and parking problems this project would create if allowed to proceed. Therefore, we are writing to share our experiences during the past 40 years as neighbors to the Project Site.

We raised our three children in our house at 6200 Manoa Street. One of the main attractions for us, and we believe the vast majority of our neighbors when choosing their houses, was that the Rockridge Area is one where parents can feel safe allowing their older children to walk to stores, dance and piano lessons, schools, etc. As a long time real estate agent selling and buying properties in Rockridge, it has been my (Ortrun Niesar) experience that the pedestrian orientation of the small scale commercial strip along College is a major attraction of the area. Even with the current pedestrian orientation, however, traffic is often stalled along College Avenue.

We are aware of two very serious accidents in the cross walk at the upper end of the Safeway parking lot, the walk from the corner of Mystic/Auburn across to the Safeway side of the street. One of these was our daughter, when she was thirteen, as a result of which she spent ten days in the hospital; the other happened just two years ago when an elderly couple were hit and both almost fatally injured. The point is that these accidents occur even at the current traffic levels. Making the Safeway at this location an automobile-oriented store, which is what the almost tripling of its size would do, will greatly increase the risks to our children and elders as they walk to the local businesses and other activities.

In considering the wisdom of bringing more traffic to this location, the Commission must understand that it is bordered by two very complex intersections. First there is the nightmare intersection of College/Claremont/Florio/62nd Streets; this is already a confusing and sometimes dangerous intersection with its current level of traffic. The other difficult intersection is Claremont/Mystic/Auburn. In addition to the accidents noted above at that cross walk, I (Gerald Niesar) should point out that several years ago a bicyclist hit my car as I pulled out onto Claremont from that intersection. The problem is that looking UP Claremont is very difficult until one can get out on to the street. It is necessary to be watch carefully for traffic coming up Claremont from College because the wide street encourages high rates of speed. What happens is that bicycles, and sometimes cars, coming down Claremont making a left turn into Mystic or Auburn will cut the corner causing a significant risk that a car coming out onto Claremont, whose driver is concentrated looking for the fast traveling cars coming from College, will pull out right in front of a fast moving bicycle making the turn. While the bicycle rider would be at fault for being on the wrong side of the street, we cannot assume people will not be careless. We must be concerned with not increasing the risk that such carelessness will result in an accident. Further complicating the traffic at that intersection will inevitably lead to more accidents of this sort.

The Commission should also consider the following anomaly in the proposed project. The current parking lot is designed for exactly 100 marked parking spaces. Safeway proposes a garage to accommodate 174 automobiles. However, it plans to have its store almost three times the current square footage. In addition, it proposes eight other store spaces on the site. Of course, the massive expansion of Safeway will make it more automobile oriented than the current store which is more designed to service the immediate neighborhood. Thus, we could expect that the store's need to rely on automobile driving customers will increase more than proportionately to the increase in square feet of store space. Even if the more than double size of the store would only double the needed automobile parking requirements, there would be a need for 200 spaces, not 174. But we know that the store is proposed to more than double to at least 2.5 times the current squarefootage. Therefore, the requirement would be 250 spaces, almost 100 more than planned. Moreover, Safeway proposes eight additional retail stores on this site, with total square feet of new retail space being 11,572, over half the size of the existing Safeway store. Add half of the existing 100 spaces to the 250 required to match the Safeway needs in the expanded store to the current ratio of square feet to parking spaces—TO PROVIDE ADEQUATE PARKING WITHIN THE SITE THIS ADDS UP TO 300 PARKING SPACES; almost double the proposed 174. Those of us who live in the neighborhood know that existing on-street parking is virtually 100% utilized every day. Where would the extra cars that would be attracted to this huge Safeway and eight additional new stores park? A fundamental reason why the C-31, pedestrian-oriented zoning was put in place thirty years ago was to make impossible this type of automobile oriented real estate development. This must be respected, and if respected, it is impossible to mesh the Zoning with the expansion proposed.

Finally, we wish to point out that today, as opposed to 40 years ago when we moved here, and even 30 years ago when the C-31 Zoning was adopted, the use of bicycles by adults, and older children is many times what it was before. Indeed, even we in our (early) 70s use bicycles for many of our shorter shopping trips and for pleasure riding in the neighborhood. Spending just a few minutes at the College-Claremont-Florio-62nd intersection will reveal how many bicyclists use College Avenue and Claremont Avenue in particular. Bringing more automobile traffic into this area is just the opposite of what should be encouraged; more automobile traffic will increase the risk of bicycle-auto accidents in this already congested area, as well as increase risks of pedestrian accidents involving both automobiles and bicycles.

The Rockridge neighborhood deserves the right to have its C-31 zoning respected in all new developments. It is not possible to conform a 60,000 square foot mega store with the C-31 Zoning that mandates the largest store have no more than 7,500 square feet. While Safeway should probably be permitted to continue with its present size as having "grandfather" rights, there can be no justification for allowing it to expand beyond that with the insult to the neighborhood and C-31 Zoning that such expansion entails. If fairness and equity were the only criteria applied, such expansion should not be permitted. But in addition to such concerns, we are dealing with creating a vastly more dangerous traffic situation than currently exists, in the heart of a single family residential neighborhood with hundreds of children, and hundreds of elderly persons who depend on their ability to walk to stores, shops, entertainment, churches and restaurants and, in the case of children, schools and other lessons.

Thank you for supporting this neighborhood's efforts to protect its citizens from dramatically increased traffic congestion and the risks created by that increased traffic.

Vollman, Peterson

From: Ortrun Niesar [oniesar@sbcglobal.net]
Sent: Tuesday, December 01, 2009 9:54 AM
To: Vollman, Peterson; Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; Brunner, Jane
Subject: Case Number ER09-006 Safeway Expansion

Subject: Case Number ER09-0006

Dear Commissioner Vollman:

I am a long-time resident of Rockridge. I am also a Realtor Associate with Prudential California, Claremont Office, and formerly a College Avenue merchant , albeit in the Elmwood district on the Berkeley end of things. I also have been the Muse persona for the Rockridge News for the past twelve years. As each one of these personages in this community I submit to you that you are very wrong if you maintain that Aesthetics and Local Land Use and Planning Issues have "no significant impact" or "no impact" on our community. In fact, they mean everything to any well functioning community.

As Resident
My husband and I moved here as a young family in 1969, a time when a disrupted Rockridge neighborhood hung in the balance between bad and worse urban blight brought on by the construction of the freeway and BART. **Rockridge was a mess.** Just check your tax revenues from those years. We, like many other young families, saw the pain as well as the opportunities and moved here with the resolve to create a new community. We raised our three children here. In the process we invested thousands of hours of time and energy in making Rockridge the vibrant, economically viable and livable neighborhood it is today. It is good for old and young—a great place for families to raise their children and for the elderly to stay independent. Rockridgians can and do take pride in what they have accomplished. Against all odds they, together with the guidelines hammered out by RCPC, have built a library, improved the local schools, fought inappropriate business expansion, created a playground and park out of nothing and set the standard for local business districts. We have been recognized for our achievements as an exemplary urban neighborhood. **Instead of a mega store complex we need more parks, senior housing and a decent community center** to round out that image. It is those issues that should receive attention in land use and planning committee meetings.

As a Resident, I OPPOSE a project that is inappropriate for a vibrant, clearly defined, interactive residential neighborhood. Land use and local design regulations must be considered as they have Potentially Significant Impact.

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As Realtor
I have sold homes in Rockridge over the past 15 years. I also write the local real estate columns. I can tell you that **people who move to Rockridge stay put. This is not a transient community.** As a result, Rockridge home prices have remained uncommonly stable despite all the real estate havoc we have seen even in upscale communities like Montclair. Please check your tax records for verification. The reasons why they come here include quiet, attractive, stable neighborhoods, historic homes, walkable streets, good transportation, good local services, restaurants and cultural amenities and ever improving elementary and middle schools. **And they work hard to maintain this status.** For people who decide to leave this area the key motivators are increased levels of serious crime, particularly along College Avenue and the peripheral streets, increased traffic disturbances (please note

the freeway noise, speed bumps everywhere, the potholes, high accident and injury rate, the lack of parking around BART) and general frustration with Oakland City government and the Unified School District. **All of these existing conditions will only be exacerbated if Safeway is allowed the proposed expansion.** The days of the Rockridge Renaissance could well be numbered.

As Realtor I strongly OPPOSE the intrusion of a mega complex in the heart of a cohesive local neighborhood culture. It will have a POTENTIALLY SIGNIFICANT IMPACT on the entire Rockridge residential and thus commercial community.

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As (formerly) Neighborhood Merchant

Rockridge has been blessed with the work RCPC has done over the years to ensure that we have a walking neighborhood business district, distributing the customer base easily over about a half mile stretch on College Avenue. Height and space restrictions plus concern over retail oriented businesses at ground level created a wonderful business atmosphere that is economically sound and appropriate for a residential neighborhood. Again, I refer you to your tax records as a measure of the success of the Rockridge shopping district. The district, as it is presently configured, even accommodates the BART transit hub well, with Market Hall and Trader Joe's (space grandfathered in) as anchors. Any additional large scale project will by its nature force the rest of the area to change. If Safeway is allowed to build as they wish, that will clearly set a precedent for other businesses to come in and challenge further the C-31 zoning that is the rock this neighborhood district is built on.

As(formerly) Neighborhood Merchant I OPPOSE the Safeway Expansion plans as they will have a POTENTIALLY SIGNIFICANT IMPACT on the C-31 zoning plan and structure of the existing Rockridge business district.

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As the Rockridge News Staff Writer and MUSE

As staff writer and MUSE columnist for the Rockridge News I know a lot about how our residents feel and about their commitment to preserving our livable neighborhood in this stressful world.

I have written the "Muse" column for over 12 years now. My focus has always been issues that affect the quality of life here from a cultural point of view. **Aesthetics is the philosophy behind culture; it is the essence of creativity, art and spiritual well being that manifests itself in a healthy community culture.** Attached please find an article that appeared in the March 2009 issue of the Rockridge News addressing some of the concerns we have about the potential impact of inappropriate design and use of space. I hope that you will take the time to read it. Better yet, I invite you to come to Rockridge to see and talk to people here yourself. And while here, take a look at the Dreyer's building that was literally forced on this neighborhood by the Lionel Wilson regime on the pretext that this was good business for Oakland. Dreyer's then promptly took its business to Fremont, leaving Oakland high and dry. The existing building is sterile, impersonal, has no aesthetic or cultural connection to this neighborhood. Concrete on concrete. Its retail spaces, which the developers were required to incorporate, are often empty and a blight on College Avenue.

I OPPOSE the promotion of this project without careful consideration of the visual, psychological and emotional impact it will have on this residential neighborhood. Size, Design, Aesthetics matter deeply.

-

Thank you for your kind consideration.

Very truly yours,

Ortrun K. Niesar

Ortrun K. Niesar
Senior Marketing Consultant
CAlifornia DRE License #01161032
Prudential California Real Estate
2 Tunnel Road
Berkeley, CA 94705
(510)986-9560 direct (510)326-2161 cell

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Berkeley, CA 94705
(510)986-9560 direct (510)326-2161 cell

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OAKLAND BUILDERS' ALLIANCE
SUPPORT OF
SAFEWAY AT COLLEGE and CLAREMONT

The Oakland Builders' Alliance, as in their Mission Statement, advocates Smart Growth and a healthy Oakland economy. Smart Growth means, among other things: mixed use, compact, walkable neighborhoods with a strong sense of place, and development focused along transit corridors and at transportation nodes.

The design for the proposed redevelopment of the Safeway at College and Claremont is appropriate for its site:

1. It creates individual storefronts for small businesses along the currently "barren" southern half of the eastern side of the block, filling in the block.
2. It fills in the corner of College and Claremont, where the 76 station now sits, with a building designed for public use, with a public outdoor space above.
3. The enlarged Safeway will act as an anchor for the smaller local businesses.
4. The enlarged Safeway allows clients a better and broadened grocery shopping experience.
5. The Safeway, storefronts, and public space present an attractive face to, and entrances from, College Avenue.
6. The under-store parking, which is largely concealed, receives natural light.

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3. The enlarged Safeway will act as an anchor for the smaller local businesses.
4. The enlarged Safeway allows clients a better and broadened grocery shopping experience.
5. The Safeway, storefronts, and public space present an attractive face to, and entrances from, College Avenue.
6. The under-store parking, which is largely concealed, receives natural light.
7. The height of the Safeway is within allowable zoning limits and is not out of scale with its neighbors.
8. The proposed density of the project has a Floor Area Ration (FAR) of only .74, versus the allowable FAR of 4. This is less than 20% of the allowable area allowed.
9. The enlarged Safeway creates over 100 new permanent jobs, plus construction jobs. The redevelopment will, initially, increase Oakland and Alameda County tax revenues by over $420,000 per year.
10. The new Safeway is a "building block" towards the realization of the Oakland General Plan vision for a more urban College Avenue.

The NOTICE OF PREPARATION (NOP) of a draft EIR calls for the following to be studied:

1. Air Quality
2. Noise
3. Transportation and Traffic

The NOP is correct in identifying these three issues as needing further environmental evaluation. Other issues are adequately addressed by the NOP and their inclusion in the EIR would unreasonably delay the approval process.

The Oakland Builders Alliance feels that the redevelopment of Safeway is consistent with the Oakland Zoning Code and General Plan, and that it supports many of the tenets of Smart Growth.

We therefore urge the Oakland Planning Commission to move the approval process forward for the Safeway to be redeveloped at College and Claremont, and to accept the NOP as presented.

We further request that any design issues be addressed after the results of the EIR are known, and during the normal planning approval vetting process.

Respectfully submitted to the Oakland Planning Commission by the Oakland Builders' Alliance.
November 18, 2009

From: Vollman, Peterson [PVollman@oaklandnet.com]
Sent: Monday, November 16, 2009 11:16 AM
To: Rena Rickles
Subject: FW: ER09-0006 NOP

Follow Up Flag: Follow up
Flag Status: Completed

Peterson Z. Vollmann
Planner III
CEDA – Planning & Zoning
250 Frank H. Ogawa Plaza, Suite 2114

Oakland, CA 94612

Phone: (510) 238-6167
e-mail: pvollman@oaklandnet.com

-----Original Message-----
From: norm ozaki [mailto:nozaki4472@gmail.com]
Sent: Thursday, November 12, 2009 9:32 AM
To: Vollman, Peterson
Subject: Re: ER09-0006 NOP

Mr. Vollmann,

Thank you for the clarification.

Best Regards,

Norm Ozaki

On Thu, Nov 12, 2009 at 8:13 AM, Vollman, Peterson <PVollman@oaklandnet.com> wrote:
Mr. Ozaki-

My apologies for the confusion, Air Quality is one of the areas that the Initial Study identified as needing further study in the EIR and it will not be screened out.

Peterson Z. Vollmann
Planner III
CEDA – Planning & Zoning
250 Frank H. Ogawa Plaza, Suite 2114

Oakland, CA 94612

Phone: (510) 238-6167
e-mail: pvollman@oaklandnet.com

-----Original Message-----
From: norm ozaki [mailto:nozaki4472@gmail.com]
Sent: Tuesday, November 10, 2009 9:36 PM
To: Vollman, Peterson
Cc: Larry Henry
Subject: ER09-0006 NOP

In the NOP you state, "The Initial Study screened out environmental factors that will not be further studied in the Draft EIR. These factors include: agricultural resources, air quality, cultural resources, land use, mineral resources, noise, population and housing, recreation, and utilities and service systems. The Draft EIR will address the potential environmental affects **only** for noise, air quality,nd transportation and traffic. All other impacts would be less than significant and not studied further in the Draft EIR."

I am interested in air quality related impacts, and the two statements made in the NOP that the Initial Study screened out environmental factors including air quality, and the Draft EIR will address the potentil environmental affects only for air quality do not seem to be consistent with each other. Please explain what is meant in the two statements.

My name is Dr. Norm Ozaki, toxicologist; my email address is nozaki4472@gmail.com

Best Regards,

Norm Ozaki

Vollman, Peterson

From: audiofrq@aol.com

Sent: Tuesday, December 01, 2009 9:13 AM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; Brunner, Jane; Vollman, Peterson; jharrison@cityofberkeley.info; transportation@cityofberkeley.info; attorney@cityofberkeley.info; gwozniak@ci.berkeley.ca.us

Subject: Oakland Planning Commission Case Number ER09-0006 - Safeway/Collage

Oakland Planning Commissioners and Staff
November 30, 2009

John A. Ravenscroft
2712 Alcatraz Avenue
Berkeley, CA 94705-2706

November 30, 2009

Oakland Planning Commissioners and staff
Oakland, California

Re: Case Number ER09-0006

Dear Commissioners:

Please include the following comments to the referenced Initial Study and environment review checklist. These items need to be included in the EIR for this project.

I am opposed to the Safeway on College project as currently proposed. I also believe that the Initial Study does not cover all the areas needed for the Environmental Impact Report; specifically it is deficient in both Aesthetics and Land Use.

Aesthetics

Please move to Potentially Significant Impact the following questions:

Questions a, c, d, e and i.

The proposed building

- will have significant impact on the scenic vista,
- will be out of scale with the balance of the neighborhood (including Berkeley and Oakland),
- cast more artificial light into our backyards and along the back of our houses at night now that the building will be two stories tall,
- potentially reduce or impede the efficiency of our photovoltaic system I recently installed (solar power) and
- does not fit with the C-31 zoning requirements or even the new CN-1 zone proposed (which limits retail to 5,000 sq. ft. with a maximum variance of 30,000 sq ft).

Land Use And Planning

Please move to Potentially Significant the following questions:

Questions b and c.

- The discussion says "The greatest potential for land use conflicts occurs along the site's northern boundary, which abuts the back of a street of single-family residential homes. However, the project design is intended to reduce that conflict potential by adding a 10-foot-wide landscape buffer between the Safeway store and parking area, where there is currently no buffer other than property line fencing." There is also no store or building presently along the property line. The proposed project will add a building and elevated parking along our common border. This is a great conflict with the land use presently.
- Question c discussion indicates that this proposed project will be in the C31 zoning. See the discussion above about C31 and CN-1 zoning under Aesthetics. If this project wouldn't be allowed under the proposed CN-1 zoning, why is it being considered now?

The **Travel and Transportation** section needs to be expanded to include not only College and Claremont Avenues in Oakland, but also College, Claremont and Alcatraz Avenues in Berkeley. The proposed project will undoubtedly increase traffic on Alcatraz Avenue in Berkeley as drivers get frustrated (as they do now) waiting to turn left into the Safeway parking lot while waiting in incredibly long lines just to get to Claremont Avenue in Oakland.

The **Air Quality** section needs to include air quality data from the present site. The increase in idling cars and the doubling of the loading dock will degrade further the air quality (unless Safeway is planning to park a trailer in the second loading dock as they have done with the present site – see below).

I am also skeptical about the 10 foot buffer. Is Safeway planning on maintaining this? I don't want this to become another trouble spot in Rockridge/Elmwood (and along our property line), filled with the homeless, the druggies and assorted other undesirables. If you are relying on Safeway to patrol and maintain this, their track record, in my opinion, is less than stellar when it comes to the existing store.

And I remember well, in the '80's, that a dumpster used to be between the current loading dock and the fence along the property line. Yes, not a closed compactor – which still has an odor and chemical problem – but an open dumpster with food exposed. Rats of course abounded. The City of Berkeley (Vector Control people) noticed the food in the dumpster and contacted the City of Oakland and got the dumpster removed. That is how the trash was moved to where it is now and a compactor installed. The point is that Safeway had no problem with the environmental hazard they had created, AND it took another municipality to make them fix it. Through this, Safeway had paid no attention to the neighbors, who by the way, had complained about the dumpster and rat problems to no avail.

There is a trailer that has been parked at their loading dock for 15 years. We gave up trying to get it moved. The refrigeration used to run all day until we called them at 10:00 pm every night to turn it off. There is mold growing on the side of this trailer (upper left corner of the trailer) as well. They cleaned it once in 15 years and only after they started their hard sell on the new proposed Safeway shopping center.

We had to cut back the ivy that Safeway allowed to overtake the fence they put up in order to reduce their vector and vermin problems. This actually added to the problem as became a habitat. In addition, my neighbors and I have continually complained about their trash (and the related smells that emanate from their compactor), vermin, recycling, trash in our yards and general noise level from the trucks that are idling or backing into and hitting the loading dock. There seems to be no barrier between the parking garage and the strip, just a row of bamboo. That will not keep the homeless and druggies out—just hide them. I just don't believe that they will be good stewards of this strip of land.

In closing I ask that we contiguous neighbors be given the same level of recognition under C31 as any Oakland resident would. As I have stated, I am not opposed to a new Safeway, just a 60,000 sq ft plus version without regard to the environmental and health issues we continually bring up and that Safeway has continually ignored.

Respectfully submitted,
John Ravenscroft
2712 Alcatraz Ave
Berkeley, CA 94705

12/16/2009

The Delicate Art of Size and Space

I suppose all of you have gotten the latest communiqué from the Safeway public relations department announcing to us how happy we will be with their latest version of corporate benevolent blight to be foisted upon this little spot on Earth we call our community, our neighborhood, our home. There have been several meetings on the matter in past months. We've attended those. We might even think that the stake holders, RCPC, God or at least your neighbor is looking to see that all will go well. But the truth is, there is much for each and everyone to ponder and act upon now before it is too late. You see, there is a monster in our midst and its name is Bigness.

Our Unique Space

One of the principles Rockridge residents have consistently espoused is a desire for harmonious coexistence between residents, our natural environment and the business community, based upon and guided by mutual respect for the space we share. That space is vast when it comes to ideas, thanks to the many people who live here, but physically it is rather small. It can be traversed on foot in little more than one-half hour in any direction. It is this space that has given Rockridge its unique character, a happily human one that does not take well to big commercial enterprises.

Almost everything we do here corresponds to a sense of neighborhood

and sustainable community. Think about what we have achieved over the past decades that makes this place so livable. We have quiet neighborhoods where people can walk their dogs, jog and bike. We've built a library and a community park. We've kept out fast food franchises and mega stores and have encouraged local merchants, restaurants, professionals and artists to thrive here. We meet and greet each other while dropping off our children at school, picking up a loaf of fresh-baked bread or catching a ride into the City in the morning. We form school and earthquake safety committees. We know each other's names. We talk to each other.

When Mistakes Are Made

We all know it takes a lot longer and much more effort to undo mistakes than not making blunders in the first place. Walking down College Avenue — about 120 paces per block if you'd like to know — I take in a collection of small shops and restaurants, each distinct, like the many varieties of flowers growing in our gardens. The buildings are not large, often not architectural gems, but they all are rather delicate in proportion and design, recalling an earlier life style on a more intimate, human scale. And then I look with sadness at the elephant footprint in the butter—the Dreyer's building. I remember the bitter fight over the size, impersonality and intrusiveness of this building. Nothing has changed. It is still exactly what we feared it would be. Somehow it has little to offer to our organic neighborhood. And then there is the Alameda County Blood Bank, looking like the QE II in dry dock on Claremont Avenue. The shadows on Auburn Avenue have become a permanent reminder of things gone wrong. These were mistakes we might have been able to avoid. Now we have to live with them.

A Plea

Please let's be careful about allowing big business to overtake our community. There is nothing they can add that would be beneficial. Bigger is not better. Bigness by its very nature destroys smallness. We don't need Bigness and more stuff. We need less traffic noise and air pollution, more senior housing and more open space. And we need a community center. We dream about such things as we sip a cup at Cole Coffee and drink in a spectacular open view of the East Bay Hills, perhaps beginning to realize that this view is one of the irreplaceable pleasures we could lose to Bigness.

We are blessed with having great neighborhoods and neighbors within a fairly well-defined, well-functioning community; not too little, not too big, but just right. It has been the work of so many that has allowed this phenomenon of sane living to happen here in our lifetime. We ought to be able to let it thrive and flourish.

Vollman, Peterson

From: Alan Reinke [Alan.Reinke@macquarie.aero]
Sent: Monday, November 16, 2009 1:43 PM
To: Brunner, Jane
Cc: info@claremontelmwood.org; Vollman, Peterson; info@rockridge.org
Subject: Safeway Expansion on College Avenue

Dear Ms. Brunner,

I am writing to express my continued opposition to Safeway's plans for a massive new structure at Claremont and College. The new design is better than the old one, but it is still completely out of proportion to the neighborhood. They claim the space is needed to add all the planned specialty shops within Safeway (flowers, bakery, etc.). All these services are currently supplied by small merchants on College Avenue. Safeway simply wants to drive the small merchants out of business. Or they just don't care. They certainly are not listening to the residents of the neighborhood.

The increased traffic will ruin a quiet, charming neighborhood. The garage entrance/exit on College will paralyze an already congested street. The current plan envisions removal of an entire block of on-street parking. Unless Safeway allows unlimited parking in their new underground lot, the loss of on-street parking will harm the local merchants.

Please ask Safeway to scale back their plans. They have many enjoyable small stores. They do not need to put a mall-size Safeway in our neighborhood. We want Safeway, but we want an appropriately sized Safeway.

Yours truly,

Alan M. Reinke
334 63rd Street, Unit A
Oakland, CA 94618
Tel: +1 415 829 6685
Mobile: +1 415 601 6880
Fax: +1 415 704 3048

Please consider the environment – do you need to print this email?

Vollman, Peterson

From: Ethel Ruymaker [eruymaker@yahoo.com]
Sent: Friday, November 27, 2009 5:17 PM
To: Vollman, Peterson
Cc: Brunner, Jane; Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org.michaelcolbruno; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; Eruymaker@yahoo.com
Subject: ER09-006

November 28, 2009

Planning Commission:

As a long time resident of Rockridge (over 50 years) , who lives around the corner from Safeway, I have seen that store renovated more than once and I strongly oppose their latest proposal.

I do agree that the latest architectural design is preferable to the previous ones but it is not one that is appropriate for an urban setting and would be better in suburbia where Safeway headquarters is located. Moreoever if you study the plan carefully you will note that if this project goes through we will no longer be able to see the hills and the distinctive defining characteristics of our neighborhood will be lost. This project most definitely will not maintain and enhance our neighborhood but will compromise it.

At the meeting on the 18th the Safeway representative mentioned more than once of the meetings that were held with our more than 700 neighborhood residents in an effort to resolve the dispute in an amicable way. However Safeway never addressed our major concern, that of size, and ignored our concessions and willingness to negotiate. At these meetings those who opposed the plan were people who live and work in the neighborhood and the distinct minority were students, people who live here temporarily and who have no long term commitment to the neighborhood.

As was pointed out this neighborhood does not need or want a store of this size, a store that is only one mile away from their other huge store. Their proposed store would block out light, would increase the already congested street traffic, seriously affect air quality, and would destroy the very characteristics that made this neighborhood one of the most profitable in the city. With careful thought and planning Safeway could renovate its present building so that it would not only be more attractive but could offer the same amount of or more of its products.

At the meeting on the 18th it was clear that members of the Commission visit the areas that are being considered. I suggest that you come to 63rd and College, have a coffee or two at the neighborhood coffee house directly across the street from Safeway and note the traffic on College Avenue. I use the buses and the other day, NOT a football day, the #51 bus driver had to wait at Woolsey and College during two red light changes before she could reach Alcatraz and College Avenue. I suggest that you interview drivers on that line to learn more about the traffic congestion on College Avenue and the impact the proposed store would have on the infrastructure. In the 50+ years that I have lived here I have seen a dramatic increase of trucks on residential streetsin order to accommodate Safeway thus further impacting air quality and safety.

I urge you to consider the economic, environmental, intangible and irreversible effects that a store of this size would have on both our neighborhood and the city as a whole. I sm confident that you as well as the Rockridge community want what is best for our neighborhood and our city and will give a fair hearing to our concerns.

Thank you.

Sincerely yours

Ethel S. Ruymaker
6385 Hillegass Avenue
Oakland, California 94618

Vollman, Peterson

From: Belladella03@aol.com
Sent: Tuesday, November 17, 2009 8:38 PM
To: Vollman, Peterson
Cc: Safewayneighbors@sbcglobal.net; Brunner, Jane; Wald, Zachary
Subject: ER09-0006 Safeway at College and Claremont Avenues

Hello Mr. Vollman,

As a resident of Rockridge for almost 15 years now, I want to go on record as saying that this proposed redevelopment of the Safeway at Claremont and College Avenues is completely out of scale for the area and will ruin the overall feel of the neighborhood as intended it it's original zoning. It will bring far too much traffic to already congested streets, further degrading the air quality for the surrounding homes and schools.

Personally,I think Safeway is wasting their money on this project. They are already remodeling the Safeway at 51st and Broadway, which makes sense for that location - there are large boulevards and good traffic flow already in place; on College Avenue the traffic between Claremont and Alcatraz is already bumper to bumper most of the time. We simply do not need another large scale store in the area.

One of the first things that I was taught in my business classes was to look into the community and see what is needed and wanted...The Claremont Safeway store certainly could use an updated look, but does it really need to be bigger? The majority of the residents that I have spoken to think not.

Please do not let this proposed project go through.

Regards,

DeLicia Sampson
5261 Manila Avenue
Oakland, CA 94618
510-658-0749

Vollman, Peterson

From: Lawrence W. Schonbrun [lwschonbrun@inreach.com]

Sent: Friday, November 13, 2009 2:14 PM

To: Vollman, Peterson

Cc: Brunner, Jane

Dear Mr. Vollman,

I am opposed to the Safeway expansion on College and Claremont. It's too big for the area and will blemish rather than improve our local neighborhood.

Very truly yours,
Lawrence W. Schonbrun

Vollman, Peterson

From: Murray Silverstein [mosilverstein@gmail.com]

Sent: Wednesday, November 18, 2009 2:54 PM

To: Vollman, Peterson; Brunner, Jane

Subject: Re: Case # ER09-0006

RE: Project # ER09-0006, College Ave Safeway

Dear Mr. Vollman

I cannot attend the meeting this week, on the 18th, but have studied the plans of Safeway's new project. It's still too big, way too big for the neighborhood, and for its C-31 zoning ordinance, an ordinance by the way that the neighborhood fought hard to establish.

As a resident and shopper in the district my concerns are traffic, size (especially in relationship to the existing pattern of the neighborhood), congestion and noise. I could support a well-designed remodel adding 5 -10,000 sf max. But this store is much too big for the area!

Thanks for your attention and foe keeping me posted on this project.

Murray Silverstein
6126 Harwood Ave
Oakland, CA 94618

Vollman, Peterson

From: Anne Simon [aesimon@netwizards.net]

Sent: Sunday, November 29, 2009 4:54 PM

To: Vollman, Peterson

Subject: Case number ER09-0006 Comments on NOP for College Avenue Safeway

Dear Mr. Vollman,

I am writing to urge that you expand the focus of the Draft EIR for this project beyond what is identified in the NOP in order to capture the full range of potentially significant impacts of the College Avenue Safeway project.

1. **Land use must be studied**. The ground floor level of College Ave. from Broadway to north of Alcatraz consists almost exclusively of small locally owned shops, restaurants, and service establishments. As you know, this is the result of an explicit plan for pedestrian friendly, locally useful retail in this residential area. This plan is expressed in the zoning designation for this area.

The Safeway project would undermine this long-standing design for the neighborhood. Looking just at the streets immediately across from the site, the project threatens the survival of: a greengrocer; a florist; a butcher; a pharmacy (in business in the Rockridge area for 100 years); a specialty wine shop; a bakery; and a general liquor store. If these shops--all locally owned--are driven out, they will never be replaced, because of the competition from Safeway. Other retail uses that might be affected by the Safeway complex will undoubtedly never locate in this immediate area. This potential negative impact on the land use pattern should be studied.

In addition, I note that the closure of the 76 gas station removed the only general-purpose gas station in the neighborhood that sold and installed tires on the spot, did small repairs with no appointments or small waiting times, and was open long hours with such services. Increased car trips to find those services are likely to result.

2. **The traffic and transportation study must include careful study of impacts on the safety of pedestrians, bicyclists, and children**. The deleterious effects of the project on the already jammed traffic on College Ave. (one lane in each direction) will be readily apparent. But there are other important impacts that must be looked at.

Many people in this neighborhood walk and ride bicycles. They walk and bike to and from BART, to and from the many retail shops and restaurants, and to and from the University of California campus. More cars on the streets, and particularly more cars driven by people looking for parking, or waiting to get into the Safeway parking lot, or hurrying away from Safeway, will inevitably make it more dangerous for pedestrians and bicyclists. We already see very little regard for pedestrian right-of-way at the 63rd and College entrance to Safeway. College Ave. between Claremont and Alcatraz is a scrum at the best of times. It is simply not safe for bicyclists, who use other streets.

But will happen to those other streets? Frustrated motorists in search of short-cuts will surely start to drive along the small poorly lit side streets in an effort to beat the traffic. The safety of pedestrians and bicyclists who use the side streets regularly could well be compromised. This potential impact of increased traffic from the project should be studied.

There are many young children in this neighborhood. It is already difficult enough to protect them from impatient drivers who crowd into crosswalks or turn left without looking. More shopping-related traffic will make that situation much worse.

These foreseeable problems should be studied and the potential impacts should be spelled out in detail in the Draft EIR.

3. **The project's potential to facilitate street crime must be studied.** The physical changes to the Safeway site and the adjacent streets could also increase the risk of criminal activity. The current site, including the gas station (before it was fenced off) is relatively open. The Safeway parking lot does not have any structures. The gas station had no hidden crannies, and the area in front and to the sides of the gas station building was visible from the street.

By contrast, the proposed design for the Safeway project provides numerous opportunities for people to hide, ready to mug shoppers and pedestrians. My very limited knowledge of the design suggests that:

- The second-floor walkway is a disaster waiting to happen. It provides an overlook on the street below, and a not very dangerous drop down. It also may provide an area essentially hidden from pedestrians and drivers (who do not usually look up onto roofs) that can shelter criminal activities and drug use.

- The semi-enclosed parking lot with elevator to the store is also not sensible for an urban site that is right on the street. Shoppers are easily trapped in an elevator, particularly when they have bags of groceries they just purchased. Enclosed parking lots are notoriously dangerous, especially for women.

- The blind alley between the new building where the gas station is and the main site could become a significant problem. People walk in this neighborhood well into the night. Especially in the fall and winter, people come home from work on BART in the dark, and go shopping in the dark. Creating a useless passageway between a building that will not be occupied at night and the main Safeway site that will not have any open parking is an invitation to mischief.

- This concern is not hypothetical. The ATM at the Bank of America across the street from Safeway draws people at all hours, and they are taking cash out of it. Robberies have occurred. Having a place right across the street for potential robbers to wait and watch for a good target could make this situation much worse.

Because the physical alterations to the site proposed in the current design could change the exposure to criminal activity for people who live, work, and walk in the area, the Draft EIR should study this issue.

Thank you for your attention to these comments.

Please put me on any e-mail list for official communications about the Draft EIR or other planning documents for the College Avenue Safeway project.

Thank you.

Anne E. Simon
328 62nd St.
Oakland

AC TRANSIT
1600 Franklin Street, Oakland, CA 94612 - Ph. 510/891-4716 - Fax. 510/891-7157
Nancy Skowbo
Deputy General Manager - Service Development

November 30, 2009

RECEIVED
DEC 0 3 2009
City of Oakland
Planning & Zoning Division

Pete Vollman
Planner III
City of Oakland
Community and Economic Development Agency
250 Frank Ogawa Plaza, Suite 3315
Oakland, Ca. 94612

Subject: Notice of Preparation of a Draft Environmental Report for the College Avenue Safeway

Dear Mr. Vollman:

Thank you for the opportunity to comment on the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the College Avenue Safeway Redevelopment Project at College and Claremont Avenues in Rockridge. AC Transit believes that this project application provides an opportunity to improve both traffic circulation and the urban environment at this location.

Project Description: The College and Claremont Safeway property is a 2.1 acre, roughly triangular site (including the adjacent Union 76 gas station). It occupies most of the large block bounded by College, Claremont, and Alcatraz Avenues. The site is immediately south of the Oakland/Berkeley border. Most of the site is taken up by surface parking; the existing Safeway store occupies some 25,000 square feet.

Safeway proposes demolition of the existing store and gas station, to be replaced by a two story, 65,000 square foot retail building. Approximately 50,000 square feet would be used by Safeway, with the remainder planned for use by other retail stores. There would be 173 parking spaces in a partially below grade garage.

Uses on the Site: Early in the review process for this site, Safeway proposed a mixed-use project with housing above the retail store. AC Transit supported that concept, and is disappointed that the project is now limited to retail uses. We believe that this site represents a prime opportunity to develop housing which would have excellent access to both bus transit and BART. Such housing would also provide customers for Safeway and other area stores who could shop without using a car. It is particularly disappointing given the successful mixed use projects in San Francisco, Portland, and Seattle that incorporate Safeway stores.

AC Transit Service to the Site: AC Transit provides service to the site on both College and Claremont Avenues. On College Avenue, line 51 operates north to Berkeley and south to Downtown Oakland and Alameda. Line 51 has the most frequent service and highest ridership of any line in the AC Transit system. 24 hour service is provided by Allnighter line 851. On Claremont Avenue, line 7 connects Rockridge BART with the Claremont district, UC campus, North Berkeley, and The Arlington to El Cerrito. There is also weekday peak hour Transbay service to San Francisco along Claremont Avenue via line E.

AC Transit's Service Adjustment Plan (SAP) is currently under consideration. The SAP proposes to split line 51, so that the portion serving this site would operate from Rockridge BART to Berkeley only. The SAP also proposes to split line 7, so that the segment between Rockridge BART and Downtown Berkeley would become part of a new line 49 serving southern Berkeley. These proposals would reduce the number of destinations with direct service from College and Claremont, but would not change the frequency of service there. The AC Transit Board of Directors will consider approving the SAP in mid-December.

AC Transit Stop Location: At present, northbound line 51 buses stop on the southeast corner of College and Claremont, on the near side of the intersection. AC Transit would like to move this stop to the northeast corner, on the far side of the intersection, because far side stops generally reduce delay for buses. Moving this stop would also make it more convenient for Safeway customers to use the bus stop. This change would be consistent with the recommendations of the 51 Service and Reliability Report, which AC Transit conducted in partnership with Oakland, Berkeley, and Alameda. AC Transit has targeted line 51 for improvement, because of its combination of high ridership and serious reliability problems.

The EIR should recommend the stop relocation, and identify appropriate improvements for a northbound far side bus stop. These should include a bus bulb, bus shelter, and other bus stop amenities. If Safeway funded improvements to this bus stop, it would represent both an appropriate feature on the edge of the site and a traffic mitigation. Properly implemented, it would represent a contribution to the pedestrian environment there.

College Avenue Vehicle Access: A key issue for AC Transit and other vehicle operations along College Avenue is vehicle access from College to the Safeway site. The EIR should study this issue and recommend that vehicle access from College Avenue be prohibited. College Avenue between Claremont and Alcatraz Avenues is very congested, slowing travel time for line 51 buses. The driveways from College Avenue into Safeway create numerous vehicle-pedestrian conflicts and potential safety problems.

Expanded retail space would presumably draw additional auto traffic, worsening congestion and conflicts. These vehicle movements also create poor conditions for cyclists. These conflicts degrade the pedestrian environment, contradicting the goals of the pedestrian-oriented C-31 zoning of College Avenue. College Avenue vehicle conflicts would also compromise the new liner retail spaces that are placed along the east side of College Avenue in Safeway's proposal. Vehicle access to Safeway and commercial parking should come from Claremont Avenue, a multi-lane street with much more vehicle capacity and less pedestrian activity than College Avenue.

If vehicle access from College Avenue is retained, there should be no more than one driveway. In addition, use of this driveway should be limited to right turns in and right turns out, with left turns prohibited. A full prohibition of vehicle access would be more effective in reducing conflicts and potential dangers; a right-in right-out requirement would represent an improvement over current conditions. The EIR should analyze whether installation of an additional traffic signal at this location would assist or impede vehicle and pedestrian movement.

Thank you for your interest in AC Transit's comments on this project. We look forward to continuing to work with the City and Safeway on the project. If you have questions about this letter, please contact Nathan Landau, Senior Transportation Planner at 891-4792.

Yours Truly,

Nancy Skowbo
Deputy General Manager for Service Development

Cc:
Tina Spencer
Cory Lavigne
Nathan Landau
Ajay Martin
Puja Sarna

Vollman, Peterson

From: Darin Smith [darinpsmith@yahoo.com]

Sent: Wednesday, November 18, 2009 5:08 PM

To: Vollman, Peterson

Subject: In support of Safeway on College

As residents of 480 63rd Street, my wife and I have attended several community meetings regarding the plans to improve the Safeway store on
College Avenue. We have found Safeway's representatives and consultants to be thoughtful, inclusive, and responsive to the concerns of the community, and we are excited by the design solutions being proposed. We believe the improved store and additional development will be great for our neighborhood.

Darin Smith and Jennifer Ott

Vollman, Peterson

From: jumpnjibe@yahoo.com
Sent: Monday, November 16, 2009 1:25 PM
To: Wald, Zachary
Cc: Vollman, Peterson
Subject: Re: Rockridge Safeway Question

Thank you, Zac.
-----Original Message-----
From: "Wald, Zachary" <ZWald@oaklandnet.com>
Date: Mon, 16 Nov 2009 13:20:51
To: GS<jumpnjibe@yahoo.com>
Cc: Vollman, Peterson<PVollman@oaklandnet.com>
Subject: RE: Rockridge Safeway Question

Gary -

Thank you for your email. Our office has been actively involved in the ongoing Safeway process pushing for the best possible project. There have been many community meetings, one held by our office and others held by Safeway to get citizen input.

I would love to see Safeway make this store a "green" building. That is one of many community concerns that should be addressed in the planning process which is really in its beginning stages.

The plans are under formal review by the City, with the first item of business being Environmental Review including analysis of alternatives. Please make your comments directly to the project planner, Peterson Vollman - pvollman@oaklandnet.com so that they will be incorporated into the public record.

- Zac

Zachary Wald
Chief of Staff
Jane Brunner, City Council President
Oakland, California

(510) 238-7013

-----Original Message-----
From: GS [mailto:jumpnjibe@yahoo.com]
Sent: Monday, November 16, 2009 12:47 PM
To: Brunner, Jane; Wald, Zachary
Subject: Rockridge Safeway Question

Dear Councilwoman Brunner and Mr. Wald:

I live on Harwood Avenue and am a neighbor of the College & Claremont Safeway (Rockridge Safeway). I am happy Safeway plans to update the currrent store. However, why does it seem there has been virtually no effort to incorporate basic "green" initiatives in the new store, such as solar, low-energy lighting; wind; hybrid charging stations, etc.? Moreover, why does it seem there has been virtually no effort to create a Safeway that responds to, interacts with, and invigorates the neighborhood? The current design looks like something straight out of inland Irvine. College Avenue is a vibrant pedestrian thoroughfare, a lively link between wonderfully diverse neighborhoods in Rockridge, Fairview, Elmwood, Claremont, and even UC Berkeley. Yet the design is uninspired to say the least.

This Safeway site is really quite unique, and such a wonderful opportunity for Safeway Corporation - an east bay business - to build something that reaches out to the community, that makes a contribution to the neighborhood. This site is also a place for a Councilperson to make their mark, leave a legacy for generations.

My question is, what has your office done to encourage something remarkable from Safeway, or do you suppose this is as good as it gets?

Regards,
Gary Smith
Harwood Avenue

Vollman, Peterson

From: Richard Smith [arcsmith@gmail.com]
Sent: Friday, November 13, 2009 9:52 AM
To: Vollman, Peterson
Subject: Comments on Initial Study ER09-0006, College Avenue Safeway

11-13-09

Mr Vollman - My comments are as follows:

Comments on the Initial Study of the EIR for the College Avenue Safeway Proposal
ER09-0006
11-12-09

Planning Commission, City of Oakland:

Each of the four Conditional Use Permit (CUP) applications and both Zoning Variance applications for the proposed project, identified in the Initial Study, will require extensive and rigorous Findings. In addition, the Planning Commission will have to make several other Findings (17.134.050) including: 1) that the proposed project will be compatible with, and will not adversely affect the desirable character of abutting properties and the surrounding neighborhood: 2) that the development will enhance the successful operation of the surrounding area; and 3) that the proposed development conforms in all significant aspects to the General Plan. I believe that these Findings will be impossible to make.

The General Plan land use designation for the College Avenue C-31 area is "Neighborhood Center Mixed Use." Given the scale of the project and the inclusion of massive amounts of parking, the proposed development would be a sub-regional rather than a neighborhood oriented project.

The General Plan's operational policy for this area is "Maintain and Enhance." The obvious questions are: Maintain what? Enhance what? The answer to both questions is to maintain the purpose and provisions of the governing zoning, and to enhance it by furthering its desirable effects. The proposed project does neither. Further, it will be retarding rather than maintaining, and destructive rather than enhancing. The proposal, at 61,972 sq. ft., is over 8 times the size of facilities permitted in C-31 and will be more than 12 times larger than what will be permitted in CN-1, the City's proposed zoning that will replace C-31.

The proposed project is in fundamental conflict with the purpose of the governing zone (C-31 17.48.010). A proposed project requiring four CUPs and two Variances begs the question: At what point should a proposed project that is so out of step with the governing zoning and General Plan require a Zone Change application? The Planning Commission should reject the project permit applications. The applicant should be required to submit a Zone Change application, or submit a proposal that is compatible with zoning and conforms to the General Plan.

The EIR Initial Study is based on an inappropriate permit application. This Initial Study should be abandoned and a new one should be prepared based on a proper planning permit application.

--
Richard W. Smith, Ph.D, Architect
371 - 61st Street
Oakland CA 94618
(510) 655-2257
arcsmith@gmail.com

Vollman, Peterson

From: ellen snook [ellensnook@yahoo.com]

Sent: Monday, November 16, 2009 8:14 PM

To: Vollman, Peterson

Subject: Safeway project

I am a Rockridge resident and live just a few blocks from the Safeway at Claremont and College. I would like nothing more than to see that store renovated into a decent supermarket reflective of the upper-middle class neighborhood. It's a shame that I have to drive to Montclair to do the shopping for my family of four so that I can shop at a roomy, well-stocked, safe grocery store with ample parking. While a better grocery store may have a slight impact on traffic in that area, that issue is minor compared to the positive impact a good supermarket will have on the neighborhood – not the least of which is an increase in housing values.

I find it ironic that the small group of people who are so up-in-arms and vocal about the Safeway uttered not a single objection when Trader Joe's moved into the neighborhood a few years ago. I'm a big fan of Trader Joe's, but the store has definitely increased traffic on College Avenue, does not have adequate parking, and is not safe (had my laptop stolen out of my car in that parking lot a month ago.)

I am unable to attend the hearing on Wednesday, but wanted my opinion heard. Please do not let a small group of activists halt progress in this neighborhood.

Regards,
Ellen Snook
5841 Ayala Ave
Oakland, 94609

Vollman, Peterson

From: carla.frank@gmail.com on behalf of Carla Spain [carla.spain@gmail.com]

Sent: Saturday, November 28, 2009 7:02 PM

To: Vollman, Peterson

Subject: Safeway EIR

Dear Pete,

I am a resident of Berkeley and my address is 3121 College Avenue, #3. I live one block from the College Avenue Safeway. I am requesting that the impact of building a semi-underground garage is included in the Draft EIR. Per my calculation there will have to be over 3,000 truck loads of dirt removed from the site during the excavation for the garage. The impact of this large excavation will be significant on our neighborhood and on the landfill sites. The alternate surface parking and smaller project is obvious. I would like to receive the Draft EIR when it becomes available.

Regards,
Carla Spain

Ronnie Spitzer
5515 Kales Ave.
Oakland, CA 94618
rcspitzer@yahoo.com

December 1, 2009

Peter Vollman, Planner III
City of Oakland
Community and Economic Development Agency
250 Frank Ogawa Plaza, Suite 2112
Oakland CA 94612

Re: EIR Scoping for College Avenue Safeway Shopping Center Project (Case #ER-09-0006)

Dear Mr. Vollman:

I appreciate this opportunity to provide scoping comments on the Safeway EIR. I am requesting that the EIR take into account a number of critical issues regarding this project.

Safety Concerns for Pedestrians, Cars and Bikes
I request that the issues of traffic, congestion, and pedestrian, vehicular and bicycle safety be adequately studied. This is a C-31 zoning area, which has "commercial or mixed uses which are pedestrian-oriented and serve nearby neighborhoods".

The area of the current Safeway and nearby shops is already heavily used. It is a very congested area, and it is already difficult and unsafe to walk in this area, particularly in the area of College and other streets near the Safeway site.

I ask that the EIR studies pedestrian safety and crossings, on arterials, collectors, and residential streets within a 10 block radius. For example, children have been hit by vehicles on Colby in the past, and nobody wants a fatality caused by shortcutting traffic for the new Safeway to occur. Residents already are concerned about safety at the Alcatraz crossings, particularly by school-age children attending Peralta Elementary school. Those crossings being enhanced by the Safe Routes to School monies should not be negatively impacted by this project.

A larger store here would clearly put added strain on the traffic capacity of College Avenue. College Ave. is a 2 lane arterial, with a much lower capacity than Claremont Ave. Its 85 percentile speed is much lower than Claremont's, so the two streets should not be treated equivalently in the EIR.

The proposed parking light at College Ave. could have negative impacts and should be justified. As configured, the opportunity for vehicles exiting the garage to shortcut through the neighborhood to avoid College Ave. congestion would be overwhelming. There is a potential that the light would introduce additional shortcutting traffic into an area already shown to have a high volume of shortcutting traffic (City of Oakland study by consultants Dowling & Associates).

Furthermore, light timing is already difficult at the Claremont/College intersection. The EIR must examine this section and the proposed light timing explicitly, as the City has previously refused to consider stop signs along College Ave.

Moreover, there is insufficient off-street parking and removal of some street parking, combined with the insufficient number of parking spaces, would only exacerbate the idling and circling of car, with additional safety, air quality impacts. Parking supply & demand must be studied in the EIR, and mitigations proposed.

This is designed as a destination store, and would have significant and very negative impacts on so-called arterial and other streets in the neighborhood, especially along residential streets such as 63rd, 62nd, Colby, Hillegas and Alcatraz. The Safeway EIR must examine traffic impacts on these streets as well as parking impacts. These nearby residential streets are neither designed nor intended for heavy volumes of through traffic, but would clearly be subject to additional automobile and even truck traffic, as vehicles travel to and from Safeway.

Any traffic study used for this project should use an accurate baseline (including times of day and days of the week since traffic and impacts vary widely in this area), especially since the very recent closure of the gas station on College.

Cumulative Impacts
I request that the EIR includes the potential cumulative impacts of other planned projects in this general area, such as the Rockridge center, AC Transit bus rapid transit on Telegraph, Creekside development in Temescal, Kingfish, Caldecott Improvement Project, and other recently approved projects.

Thank you for your consideration.

Very Truly Yours,

Ronnie Spitzer

Vollman, Peterson

From: Kristine Standley [krsstand@excite.com]
Sent: Tuesday, December 01, 2009 3:20 PM
To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com; jbunner@oaklandnet.com; Vollman, Peterson
Subject: OPPOSITION to College Avenue Safeway expansion
Importance: High

Hello

We are writing to voice our OPPOSITION to the expansion of the Safeway at the corner of College and Claremont.

We feel their will be POTENTIALLY SIGNIFICANT IMPACTS on both the general air quality and scenic vistas.

We believe the expansion will drive considerable additional automobile traffic into the area to the detriment of the health of nearby residents and visitors to the area.

The current feel of the area is light and open, conducive to pedestrians and bicyclists. Additional structures and facilities will block the natural light and create a truncated neighborhood.
We have shopped in the area for over 25 years and don't feel this will enhance the area in any fashion.

In closing, we OPPOSE the expansion of the Safeway at College and Claremont as the risks of this expansion pose a potentially significant impact on the surrounding environment.

Thank you
Kristine & Hal Standley
4803 Webster Street
510.923.1545

ALAMEDA COUNTY
CONGESTION MANAGEMENT AGENCY

1333 BROADWAY, SUITE 220 • OAKLAND, CA 94612 • PHONE: (510) 836-2560 • FAX: (510) 836-2185
E-MAIL: mail@accma.ca.gov • WEB SITE: accma.ca.gov

December 1, 2009

Pete Vollmann
Planner III
City of Oakland
Community and Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612-2032
pvollmann@oaklandnet.

SUBJECT: Comments on the Notice of Preparation of a Draft Environmental Impact Report (DEIR) for the College Avenue Safeway, City of Oakland

Dear Mr. Vollmann:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for College Avenue Safeway, City of Oakland. The project would involve demolishing the existing 25,000 square foot store, parking lot and service station and constructing a two-story, approximately 64,860 square foot bu8ilding that would contain a 50,4000 square foot Safeway supermarket, about 11,500 square feet of ground floor retail spaces (for approximately eight retail shops), and a partially below-grade parking garage with about 173 parking spaces.

The Alameda County Congestion Management Agency (ACCMA) respectfully submits the following comments:

- The City of Oakland adopted Resolution No. 69475 on November 19, 1992 establishing guidelines for reviewing the impacts of local land use decisions consistent with the Alameda County Congestion Management Program (CMP). If the proposed project is expected to generate at least 100 p.m. peak hour trips over existing conditions, the CMP Land Use Analysis Program requires the City to conduct a traffic analysis of the project using the Countywide Transportation Demand Model for projection years 2015 and 2035 conditions. Please note the following paragraph as it discusses the responsibility for modeling.
  - The CMA Board amended the CMP on March 26th, 1998 so that local jurisdictions are responsible for conducting the model runs themselves or through a consultant. The ACCMA has a Countywide model that is available for this purpose. The City of Oakland and the ACCMA signed a Countywide Model Agreement on November 16, 2007. Before the model can be used for this project, a letter must be submitted to the ACCMA requesting use of the model and describing the project. A copy of a sample letter agreement is available upon request.

- Potential impacts of the project on the Metropolitan Transportation System (MTS) need to be addressed. (See 2007 CMP Figures E-2 and E-3 and Figure 2). The DEIR should address all potential impacts of the project on the MTS roadway and transit systems. These include I-880, I-580, I-80, I-980, SR 24, Broadway, San Pablo Avenue, Adeline Street, Telegraph Avenue, Shattuck Avenue, College Avenue and Claremont Avenue, as well as BART and AC Transit. Potential impacts of the project must be addressed for 2015 and 2035 conditions.
    - Please note that the ACCMA does *not* have a policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts (Please see chapter 6 of 2007 CMP for more information).

- The adequacy of any project mitigation measures should be discussed. On February 25, 1993, the CMA Board adopted three criteria for evaluating the adequacy of DEIR project mitigation measures:
    - Project mitigation measures must be adequate to sustain CMP service standards for roadways and transit;
    - Project mitigation measures must be fully funded to be considered adequate;
    - Project mitigation measures that rely on state or federal funds directed by or influenced by the CMA must be consistent with the project funding priorities established in the Capital Improvement Program (CIP) section of the CMP or the Regional Transportation Plan (RTP).

  The DEIR should include a discussion on the adequacy of proposed mitigation measures relative to these criteria. In particular, the DEIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and what would be the effect on LOS if only the funded portions of these projects were assumed to be built prior to project completion.

- Potential impacts of the project on CMP transit levels of service must be analyzed. (See 2007 CMP, Chapter 4). Transit service standards are 15-30 minute headways for bus service and 3.75-15 minute headways for BART during peak hours. The DEIR should address the issue of transit funding as a mitigation measure in the context of the CMA's policies as discussed above.

- The DEIR should also consider demand-related strategies that are designed to reduce the need for new roadway facilities over the long term and to make the most efficient use of existing facilities (see 2007 CMP, Chapter 5). The DEIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Site Design Guidelines Checklist may be useful during the review of the development proposal. A copy of the checklist is enclosed.

- The EIR should consider opportunities to promote countywide bicycle routes identified in the Alameda Countywide Bicycle Plan, which was approved by the ACCMA Board on

October 26, 2006. The approved Countywide Bike Plan is available at http://www.accma.ca.gov/pages/HomeBicyclePlan.aspx

- The Alameda County Pedestrian Plan, developed by ACTIA, was adopted by both the ACTIA and ACCMA Boards in September 2006 and October 2006, respectively. The EIR should consider opportunities to promote pedestrian improvements identified in the Plan through the project development review process. The approved Countywide Pedestrian Plan is available at http://www.acta2002.com/

- For projects adjacent to state roadway facilities, the analysis should address noise impacts of the project. If the analysis finds an impact, then mitigation measures (i.e., soundwalls) should be incorporated as part of the conditions of approval of the proposed project. It should not be assumed that federal or state funding is available.

Thank you for the opportunity to comment on this Notice of Preparation. Please do not hesitate to contact me at 510.836.2560 if you require additional information.

Sincerely,

Diane Stark

Diane Stark
Senior Transportation Planner

Cc: Beth Walukas, Manager of Planning
file: CMP - Environmental Review Opinions - Responses - 2009

Design Strategies Checklist
for the
Transportation Demand Management Element
of the
Alameda County CMP

The Transportation Demand Management Element included in the Congestion Management Program requires each jurisdiction to comply with the "" Required Program". This requirement can be satisfied in three ways: 1) adoption of "Design Strategies for encouraging alternatives to auto use through local development review" prepared by ABAG and the Bay Area Quality Management District; 2) adoption of new design guidelines that meet the individual needs of the local jurisdictions and the intent of the goals of the TDM Element or 3) evidence that existing policies and programs meet the intent of the goals of the TDM Element.

For those jurisdictions who have chosen to satisfy this requirement by Option 2 or 3 the following checklist has been prepared. In order to insure consistency and equity throughout the County, this checklist identifies the components of a design strategy that should be included in a local program to meet the minimum CMP conformity requirements. The required components are highlighted in bold type and are shown at the beginning of each section. A jurisdiction must answer Yes to each of the required components to be considered consistent with the CMP. Each jurisdiction will be asked to annually certify that it is complying with the TDM Element. Local jurisdictions will not be asked to submit the back-up information to the CMA justifying its response; however it should be available at the request of the public or neighboring jurisdictions.

Questions regarding optional program components are also included. You are encouraged but not required to answer these questions. ACTAC and the TDM Task Force felt that it might be useful to include additional strategies that could be considered for implementation by each jurisdiction.

CHECKLIST

Bicycle Facilities

Goal: To develop and implement design strategies that foster the development of a countywide bicycle program that incorporates a wide range of bicycle facilities to reduce vehicle trips and promote bicycle use for commuting, shopping and school activities. (Note: an example of facilities are bike paths, lanes or racks.)

Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.

Local Responsibilities:

1a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

1a.1 provides a system of bicycle facilities that connect residential and/or non-residential development to other major activity centers?

Yes No

1a.2 bicycle facilities that provide access to transit?

Yes No

1a.3 that provide for construction of bicycle facilities needed to fill gaps, (i.e. gap clure), not provided through the development review process?

Yes No

1a.4 that consider bicycle safety such as safe crossing of busy arterials or along bike trails?

Yes No

1a.5 that provide for bicycle storage and bicycle parking for (A) multi-family residential and/or (B) non-residential developments?

Yes No

1b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Pedestrian Facilities

Goal: To develop and implement design strategies that reduce vehicle trips and foster walking for commuting, shopping and school activities.

Local Responsibilities

2a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that incorporate the following:

2a.1 that provides reasonably direct, convenient, accessible and safe pedestrian connections to major activity centers, transit stops or hubs parks/open space and other pedestrian facilities?

Yes No

Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.

2a.2 that provide for construction of pedestrian paths needed to fill gaps, (i.e. gap closure), not provided through the development process?

Yes No

2a.3 that include safety elements such as convenient crossing at arterials?

Yes No

2a.4 that provide for amenities such as lighting, street trees, trash receptacles that promote walking?

Yes No

2a.5 that encourage uses on the first floor that are pedestrian oriented, entrances that are conveniently accessible from the sidewalk or transit stops or other strategies that promote pedestrian activities in commercial areas?

Yes No

2b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review, such as ADA Accessibility Design Standards
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Transit

Goal: To develop and implement design strategies in cooperation with the appropriate transit agencies that reduce vehicle trips and foster the use of transit for commuting, shopping and school activities.

Local Responsibilities

3a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

3a.1 provide for the location of transit stops that minimize access time, facilitate intermodal transfers, and promote reasonably direct, accessible, convenient and safe connections to residential uses and major activity centers?

Yes No

Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.

3a.2 provide for transit stops that have shelters or benches, trash receptacles, street trees or other street furniture that promote transit use?

Yes No

3a.3 that includes a process for including transit operators in development review?

Yes No

3a.4 provide for directional signage for transit stations and/or stops?

Yes No

3a.5 that include specifications for pavement width, bus pads or pavement structure, length of bus stops, and turning radii that accommodates bus transit?

Yes No

3.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Carpools and Vanpools

Goal: To develop and implement design strategies that reduce the overall number of vehicle trips and foster carpool and vanpool use.

Local Responsibilities:

4a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

4a.1 For publicly owned parking garages or lots, are there preferential parking spaces and/or charges for carpools or vanpools?

Yes No

4a.2 that provide for convenient or preferential parking for carpools and vanpools in non-residential developments?

Yes No

Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.

4.b How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Park and Ride

Goal: To develop design strategies that reduce the overall number of vehicle trips and provide park and ride lots at strategic locations.

Local Responsibilities:
5a. In order to achieve the above goal, does your jurisdiction have design strategies or adopted policies that include the following:

5a.1 promote park and ride lots that are located near freeways or major transit hubs?

Yes No

5a.2 a process that provides input to Caltrans to insure HOV by-pass at metered freeway ramps?

Yes No

5b. How does your jurisdiction implement these strategies? Please identify.

Zoning ordinance
Design Review
Standard Conditions of Approval
Capital Improvement Program
Specific Plan
Other

Note: Bold type face indicates those components that must be included the "Required Program" in order to be found in compliance with the Congestion Management Program.

Vollman, Peterson

From: lizbeths@pacbell.net
Sent: Monday, November 30, 2009 8:45 PM

X-YMail-OSG:
uryRaLkVM1kQby91Kk6Y1MeA9cvN9MQlWN3NtHo2H4fGT745rjWIob_RcJOzUCSJkNbGlYz03PJe17cIzs3UR4Z1cu
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Message-ID: <25AFB0B3C3D947B799F8E408545C935B@lizbethhp>
From: "Lizbeth Stevenson" <lizbeths@pacbell.net>
To: <pvollman@oaklandnet.com>
Subject: Fw: [RockridgeTriangleTraffic_SafetyGroup] Safeway EIR
Date: Mon, 30 Nov 2009 20:44:27 -0800
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charset="UTF-8"
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Dear Peter Vollman,

I strongly echo Tegan Hoffman's comments. =20

I too am a homeowner on Colby Street. =20

The cut-through traffic on Colby and Hillegass is currently way too high = and unsafe for these residential streets. Well placed barriers to make = straight-shot navigation impossible would fix the problem; this = technique is done very well in the area from Alcatraz to Ashby.

A larger store is not supported by this residential neighborhood with = its current traffic problems. The street infrastructure maintenance = which is very poor now will only get worse with more traffic. We have = potholes everywhere, poor and unsafe street markings for crosswalks, and = no public tree maintenance which dims street lights and makes the = streets unsafe for pedestrians.

A larger store is also totally unnecessary to support the needs of this = neighborhood, as there are many grocery stores nearby.

Regards,
Lizbeth Stevenson
Colby Street, Oakland

----- Original Message -----=20
From: Tegan Hoffmann=20
To: pvollman@oaklandnet.com=20
Cc: RockridgeTriangleTraffic_SafetyGroup@yahoogroups.com=20
Sent: Sunday, November 29, 2009 10:57 PM
Subject: [RockridgeTriangleTraffic_SafetyGroup] Safeway EIR

=20

=20

Dear Peter Vollman,

I am writing regarding the Safeway EIR. I am deeply concerned that the = Planning Commission is making a grave mistake to not take into account = issues of traffic, pedestrian safety, and bicycle safety on the = neighborhood streets of Safeway. In particular - Colby, Hillegass, and = 63rd street. The Safeway EIR must examine traffic impacts on the = neighborhood arterial streets as well as parking impacts. Nearby = residential streets are neither designed nor intended for heavy volumes = of through traffic, but can be expected to face impacts from additional = automobile and even truck traffic, as vehicles make their way to or from = Safeway, or seek parking. In particular, Colby and to a slightly lesser = extent, Hillegass, are already used, to the exasperation of the = residents, as cut-throughs for traffic between Alcatraz and Claremont, = by drivers trying to avoid College Ave. The larger store will almost = certainly exacerbate these existing problems. Furthermore, pedestrian = safety is at risk if more people use these streets as a cut through. = Colby is the =E2=80=9Cbicycle route=E2=80=9D and safety is a concern too = if the volume and speed continues to increase.

Thank you for your consideration,

Tegan and Pascal Hoffmann

6015 Colby Street

Tegan Churcher Hoffmann PhD

home: 510.655.2201

cell: 510.847.3167

tchurcherhoffmann@yahoo.com

Vollman, Peterson

From: Diane Straus [dianestraus@yahoo.com]
Sent: Monday, November 30, 2009 8:33 AM
To: Vollman, Peterson
Subject: Case Number ER09-0006

Dear Sir,

I live within walking distance of the Safeway store on College Avenue. I often frequent the wonderful small shops along College Avenue which give such rich character to our neighborhood. I drive to the Safeway store on Broadway when I need more items because it is easy to get to and parking is convenient. It is faster for me to do this than to sit in traffic on College Avenue.

The Safeway expansion is a horrible idea. Traffic and noise will become a nightmare for residents nearby. Local shops will go out of business. The wonderful flavor of this special neighbor hood will be lost. We will lose real estate desirability. I can't imagine that more people willing to sit in the clogged traffic to get to this large store when the wonderful Safeway on Broadway is so close. Safeway may find that business does not increase the way they hoped it would.

Please consider the impact on our neighborhood that this plan will have. Don't let it move forward.

Sincerely,

Diane Straus
210 Hillcrest Road
Berkeley, Ca 94705

Dennis V. Swanson
Nancy S. McKay 340 63rd Street Oakland CA 94618

Memo to: Peterson Vollmann, Planner III

cc: Blake Huntsman, Chair Oakland City Planning Commission
Douglas Boxer, Vice-Chair Oakland City Planning Commission
Sandra Galvez, Oakland City Planning Commissioner
Michael Colbruno, Oakland City Planning Commissioner
Madeleine Zayas-Mart, Oakland City Planning Commissioner
Vien Truong, Oakland City Planning Commissioner
Vince Gibbs, Oakland City Planning Commissioner
Jane Brunner, Oakland City Council Person District I
Zac Wald, Chief of Staff to Council Person Jane Brunner

Date: 4 December 2009

Re: Safeway, College and Claremont
EIR09-0006 Initial Study and EIR Checklist

We live 450 feet from the proposed Safeway Shopping Center and purchased our home at 340 63rd St. between College and Hillegass in 1978.

We are OPPOSED to the Project as currently proposed, and believe the Project will have Potentially Significant Impacts on the environment in a number of respects, certain of which are outlined below.

References are to checklist items in the Evaluation of Environmental Effects included as part of the Initial Study and Environmental Review Checklist "ES" for the proposed project.

Significantly, the ES ignores the Potentially Significant Impacts on the 63rd Street environment, a residential street that dead ends on College at the Safeway Project, and on which we live.

I. a) and c): The project will have a Potentially Significant Impact on the scenic vista and visual character looking East from 63rd St. Not one of the included 22 pictures (pages 20-26) include the current or new view East up 63rd Street. Currently, this view is unobstructed across the Safeway parking lot to the Oakland hills. The Proposed Project blocks this view with a high

(35 foot) wall and a parking garage entrance. The ES statement that the project "would not degrade the visual character of the...surrounding area" does not include consideration of the impact on views from 63rd Street.

I. d): The Project will have a Potentially Significant Impact on residential 63rd Street due to the substantial nighttime light and glare from the new looming edifice across the end of 63rd Street. The proposed Standard Condition AES-1 is inadequate to address these impacts, which must be analyzed as part of the EIR.

IX. c): The proposed Project will have a Potentially Significant Impact and conflict with the current C-31 zoning. The ES suggests that 24,000 square feet of retail has no more impact than 64,860 square feet. That is not credible. It is also not credible that an increase from 24,000 square feet to 50,400 square feet for a food store is not an automobile oriented increase. The C-31 zoning is oriented to "pedestrian comparison shopping", and the increase in size is certainly all about car-oriented food sales. The EIR must analyze the impact of and consistency with the existing zone of this super-size store expansion. This proposal is effectively a request for spot zoning. SIZE MATTERS.

XV. a) (vi); b); c); e): The proposed Project will have a Potentially Significant Impact on traffic at the intersection of College and 63rd Street and on 63rd Street from College to Hillegass. Although the ES suggests these issues will be studied in the EIR, it is imperative that the impacts on 63rd Street be specifically analyzed and addressed. For example, 63rd Street, a residential street, only has a curb-to-curb width of 32 feet including space for necessary parking on both sides. This narrow residential street is not suitable for delivery vehicles and cannot accommodate increased vehicular traffic, which will be the likely result from a further clogged College Avenue, which presently is nearly impassable, as vehicles seek to circumvent the traffic jams and divert onto 63rd Street. The EIR must acknowledge College Avenue as a two lane, narrow but substantial traffic artery that carries significant vehicular traffic from Berkeley inasmuch as Berkeley effectively blocks using residential streets for such purposes.

XVII a): For all of the above reasons, the Proposed Project has the potential to degrade the quality of the environment at the level of Potentially Significant Impacts, and all such impacts must be addressed in the EIR.

Respectfully submitted,

Nancy S. McKay
Dennis V. Swanson

From: Vollman, Peterson [PVollman@oaklandnet.com]
Sent: Monday, November 16, 2009 11:16 AM
To: Rena Rickles
Subject: FW: Proposed Safeway Expansions on College and Claremont

Follow Up Flag: Follow up
Flag Status: Completed

Peterson Z. Vollmann
Planner III
CEDA – Planning & Zoning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612
Phone: (510) 238-6167
e-mail: pvollman@oaklandnet.com

-----Original Message-----
From: JoAnne Tillemans [mailto:tillemans@aol.com]
Sent: Thursday, November 12, 2009 9:01 AM
To: Vollman, Peterson
Subject: Proposed Safeway Expansions on College and Claremont

To whom it may concern,
I am aware that the Safeway Expansion project is now in the phase where an environmental impact report is being prepared. I live around the corner from the current Safeway and want to state very strongly that I am very much opposed to the project.

College Avenue is not designed for the amount of traffic that the larger store will bring into the neighborhood. At the moment, it is almost impossible to drive down College from Alcatraz to Claremont due to the quantity of traffic. Please realize that the expanded Safeway store being proposed near Broadway has a road going into it that is TWO lanes per traffic direction. College Avenue is one lane and can't bear the extra traffic load. Claremont Avenue is a larger road, however, Claremont has had a large number of accidents on it per pedestrian crossings being unsafe. I myself had a dear friend who suffered from brain damage due to a hit and run on Claremont Avenue. Furthermore the interesection of College and Claremont has had a large number of accidents as well.

My HOUSE, my HOME, is on Rockwell Street, near the corner of Mystic. Rockwell street is often used by people wanting to bypass the College/Claremont intersection. I know that this expansion will bring further traffic out in front of my home.

I do not understand why a Safeway store the size of what is proposed is being considered in a residential area that is known for heavy pedestrian traffic and can not accomodate more cars.
It seems redundant to put in a large store here, with street access that was designed for horse buggies, not cars, and which is currently VERY strained due to the current traffic load.
Why can't the expanded store on Broadway be enough of an expansion for Safeway?

I have lived in my home since 1991 and am very much opposed to the expansion due to increased traffic load that I know I will experience just in getting to and from my house.

JoAnne Tillemans
6212 Rockwell Street
Oakland, CA 94618

510-654-2684 home
510-918-5644 cell

6725 Manor Crest
Oakland, CA 94618

November 15, 2009

Pete Vollman
Planner III
City of Oakland - CEDA
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Dear Mr. Vollman,

I welcome the opportunity to submit my comments on the Initial Study and Environmental Review Checklist for the Safeway on College Avenue, and I would like to point out glaring omissions in listing of environmental impacts of the proposed project.

Section I /c: AESTHETICS

College Avenue is recognized as one of the most valuable and cherished of Oakland resources for its scale, ambiance, character, and pedestrian friendly and varied character. The subject project does not respect either the scale or the character of College Avenue. Second floor shopping is foreign to College Avenue. The expanded Safeway will duplicate offerings of popular stores across the street and destroy the delicate balance in one of the most successful blocks. The large massive structure will block visual connection from College to Claremont that creates a spatial relief and allows view of Oakland Hills. This project will degrade its surroundings.

Section IX/c: LAND USE AND PLANNING

The proposed project fundamentally conflicts with the General Plan designation of "maintain and enhance" and with the C-31 zoning ordinance. It requires four Conditional Use Permits and two variances and for this alone it should have been rejected up front in this proposed form. The project will have "Significant Impact" and not "Less than Significant Impact" as shown in your document. The Initial Study designates the project as Safeway Shopping Center. This designation itself indicates the inappropriateness of the proposed design design for the College Avenue.

Project Alternatives.

At a public meeting Safeway put forward an option of a remodel of the existing store. This option needs to be included in the EIR, as well as an option of modest expansion to correct deficiencies in storage, loading and garbage disposal facilities.

I would like to conclude with a personal opinion. As an architect, I am sensitive to ease with which we tear down "old" and replace it with not necessary better "new". The existing store is not a great architecture, but it is a fine example of 50s store design and as such it has some nostalgic and sentimental value.

Thank you for your attention and for consideration of these comments.

Sincerely,

Danica Truchlikova, AIA

Vollman, Peterson

From: Danica Truchlikova [danicat05@comcast.net]

Sent: Monday, November 16, 2009 10:27 AM

To: Vollman, Peterson

Subject: Initial Study-Safeway on College

Copy of mailed hard copy letter.

6725 Manor Crest
Oakland, CA 94618

November 15, 2009

Pete Vollman
Planner III
City of Oakland - CEDA
250 Frank H. Ogawa Plaza, Suile 2114
Oakland, CA 94612

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Thank you for your attention and for consideration of these comments.

Sincerely,

Danica Truchlikova, AIA

6725 Manor Crest
Oakland, CA 94618

November 25, 2009

Pete Vollman
Planner III
City of Oakland - CEDA
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

RECEIVED
DEC 0 3 2009
City of Oakland
Planning & Zoning Division

Dear Mr. Vollman,

I appreciate the opportunity to submit my comments on the Planning Commission EIR scoping hearing for the Safeway shopping Center on College Avenue. I do not speak for any organization or group. These comments are my personal opinion based on my professional experience.

I have attended the subject hearing. The bias of the commission was obvious from the beginning as was the disregard for genuine and eloquent community input and concerns. Safeway has a profitable store at the current size, which is the part of shopping experience on College. The community does not object to new Safeway store, but strongly objects to the proposed size that will destroy the scale and character of College Avenue. I strongly feel that two of Safeway's statements need to be clarified to put the record straight:

1. Safeway stated that the project was developed in an exemplary collaboration with the community groups. It is true that there were numerous public hearings held, all well attended, and at all a huge majority of present strongly opposed the size of the project. Eventually Safeway got away with the process when it was obvious that they will not get the community buy-in. For them to make the statement they made is at least disingenuous.

2. The same applies to the statement that the project complies with all requirements of C-31 zoning. To make such a statement about a project that is nine times bigger than the size specified in the code is making a mockery of the zoning laws. The fact that the Planning Department and the Planning Commission have the power so massively override the zoning ordinances is at the core of the extremely contentious approval process in Oakland. Successfully planned communities have much more prescriptive and binding zoning regulations. It is my hope that the zoning update currently underway will set specific caps for CUPs and variances to correct this omission.

Thank you for your attention to my comments.

Sincerely,

Danica Truchlikova, AIA

Copy: Council President Jane Brunner
Planning Commissioners Blake Huntsman, Douglas Boxer, Sandra Galvez, Michael Colbruno, Madeleine Zaya-Mart, Vien Truong, Vince Gibbs

ULTRA : Urbanists for a Livable Temescal Rockridge Area

ULTRA comments regarding Safeway @ College and Claremont
EIR scoping session.

Case File Number: ER09-0006
Location: 6310 College Avenue (APN's: 048A-7070-001-01; & 007-01)

As you know the proposed replacement Safeway at College and Claremont has been very controversial. ULTRA, Urbanists for a Livable Temescal Rockridge Area, agrees that the existing store and gas station must be replaced. These two relics from the auto-centric 1960's have no place in the small scale urban village that Rockridge has become. However we have strong reservations about Safeway's latest proposal.

We think there are three issues that must be studied as part of the EIR for this project –

A. The economic impact on the surrounding specialty retail stores of an expanded Safeway at this site. If these small retailers were to lose business because of Safeway drawing business away from them, there is the very real possibility of blight being caused by the empty storefronts left if these retailers were to close down.

B. One of the project alternatives studied MUST include a housing component. We think it is an excellent location for senior housing. This site has very good transit access and it is in an aging community. Rockridge is built-out. There are very few locations where there is even the possibility of building higher density housing. This site is one of those rare locations. This project is an opportunity to do some strategic planning for the future of the neighborhood. We are sure that now and in the future there will be more and more residents who will want to remain in the neighborhood but no longer want the burden of maintaining a single family house. Senior housing at this site would address this coming need. Furthermore Safeway has *already* partnered with a housing developer at the Mission Bay development in San Francisco. They now have the experience of building a new Safeway with a housing component and they need to bring that experience to this site.

C. The traffic study component must also look at the broader impacts of this project and discuss possible solutions. A few examples of what we think needs studying as potential ways to ameliorate traffic impacts are – enhance car pool waiting area on Claremont, pedestrian "bulb outs" as well as pedestrian "safety islands" at the intersection of Claremont and College, partial closure of 63rd St. to enhance the pedestrian experience but still allow for deliveries to the existing retailers, partial closure of 62nd St. so that Bank of America patrons can still exit left toward College and Claremont, relocate AC Transit bus stops to be by the Safeway to create a public transit plaza, provide ample and secure bicycle parking at the store and dedicated parking spaces for car share vehicles.

Last year ULTRA drafted their own proposal for the site and we think our proposal would better meet the needs of Safeway AND the community. Safeway did a poor job of communicating their goals for this site. What we can determine from their stated goal of building a "lifestyle" center and their statement that they have $1.2 million/year sales "leakage" from the existing store is that they are not so much focused on bringing more shoppers into the store but instead are focused on creating a shopping experience so that in each shopping trip the customer will spend more money and spend their money on higher value items than are available in the existing store.

ULTRA : Urbanists for a Livable Temescal Rockridge Area

Attached to this document is a simple schematic that illustrates what we see as a better use of the site. The salient points are -

1. Instead of a garage entrance on College Avenue like in Safeway's proposal, we have a public plaza. The entrance to Safeway would be at the back of this plaza. What is missing and needed at this end of College Avenue is a civic space, a place for people to gather. This would address that need. We envision this space evolving into a place where small public events such as arts & crafts fairs could be held. This would be to the community's benefit and it would redound to Safeway's benefit too because the more attractive the public space outside the store, the more likely it is people will enter the store.
2. Instead of putting Safeway on the second floor with small storefronts on the first floor like in Safeway's proposal, we have put the supermarket on the first floor BEHIND the small storefronts. This has multiple benefits – It reduces the bulk of the building because the lot slopes up more than a full story in the rear, meaning that the supermarket would be partially below-grade, greatly reducing the visual impact of the store. The storefronts lining College would echo the existing land use, that is, small storefronts close together creating a lively and dense retail experience. These storefronts need maximum flexibility as to their eventual use. Ideally they would be filled with independent businesses and that should remain the goal for these stores. But just because a project has ground floor retail doesn't mean that there are businesses that can be successful in these spaces. A row of empty storefronts does nothing to help the community. Putting Safeway behind the storefronts will make these spaces much more flexible. As part of the Conditional Use Permit and on an interim basis *only*, each of these spaces could be used as retail spaces for Safeway's various departments. Having their various specialty departments with their own entrances on College Avenue could serve as an inducement for customers to enter the main Safeway store. As part of the CUP and on an interim basis *only*, these storefronts could also be permitted to be used by neighborhood-serving community groups.
3. The Claremont side of the supermarket could be all glass, which would allow natural light to spill into the partially below grade supermarket and would also give Safeway a long glass wall to advertise their various specials.
4. We have put office spaces on the second floor because this more closely echoes existing land use on College Avenue. An added benefit is that the entrances to these offices would be from the roof deck parking. The additional foot traffic generated by this would be an added layer of security in the parking lot. As mentioned previously we think that senior housing on the second and possible third floors of any new project at this location would be the highest use of the site but we have been rebuffed by Safeway each time we have brought this up.
5. Parking is on the roof but because of the slope of the site it would appear as ground level parking at the back, again greatly reducing the visual impact of the project. There is even space for below-grade parking and a possible second entrance in the rear of the building.
6. Having roof deck parking opens up the possibility of mounting photovoltaic above the parking spaces, providing power for the building and shade for the parking.
7. We have located the loading dock in the very middle of the site on Claremont to reduce as much as possible the impact on the neighborhood of delivery trucks coming and going.

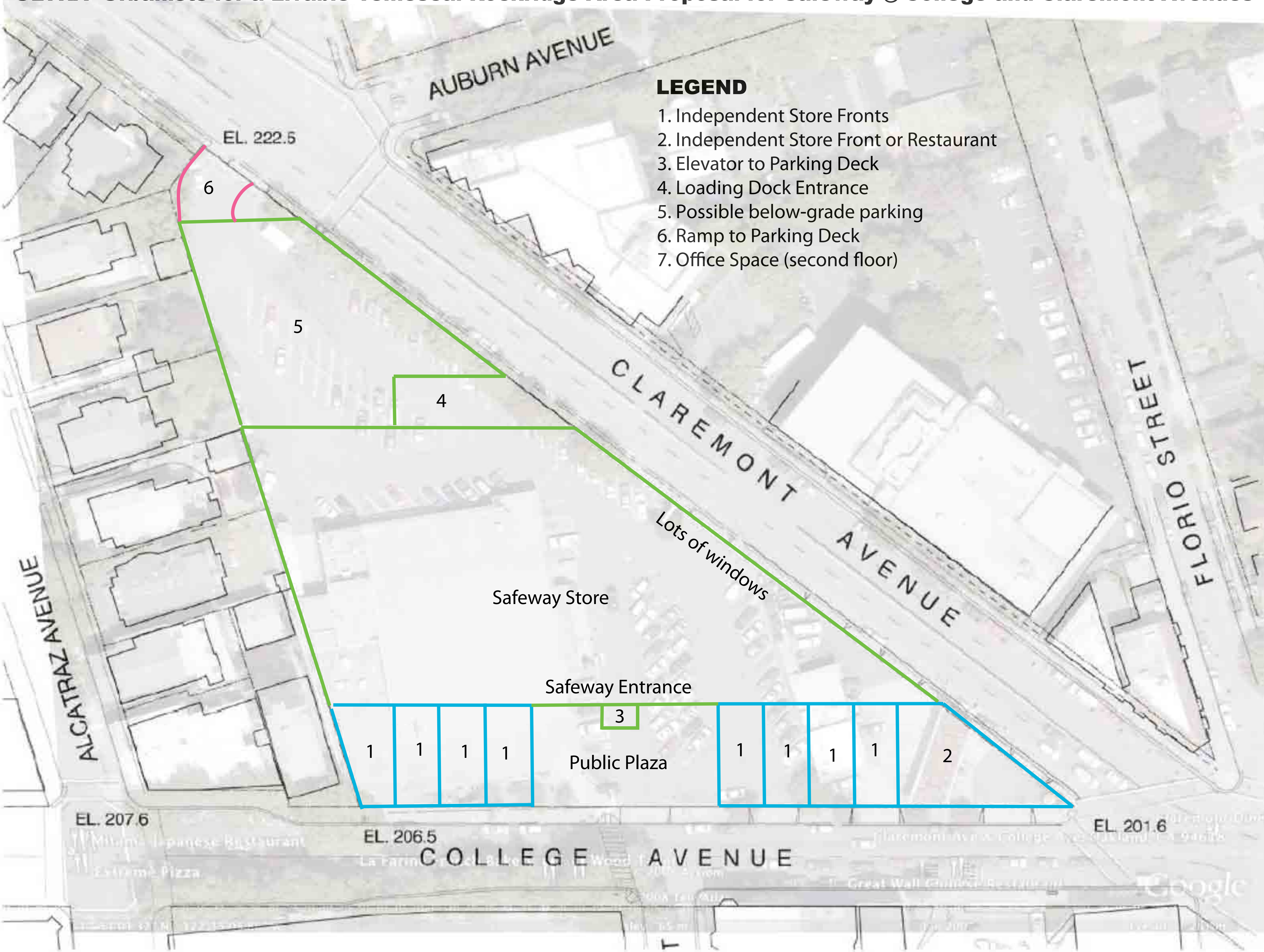
Sincerely,

Co-founders of ULTRA –

ULTRA : Urbanists for a Livable Temescal Rockridge Area

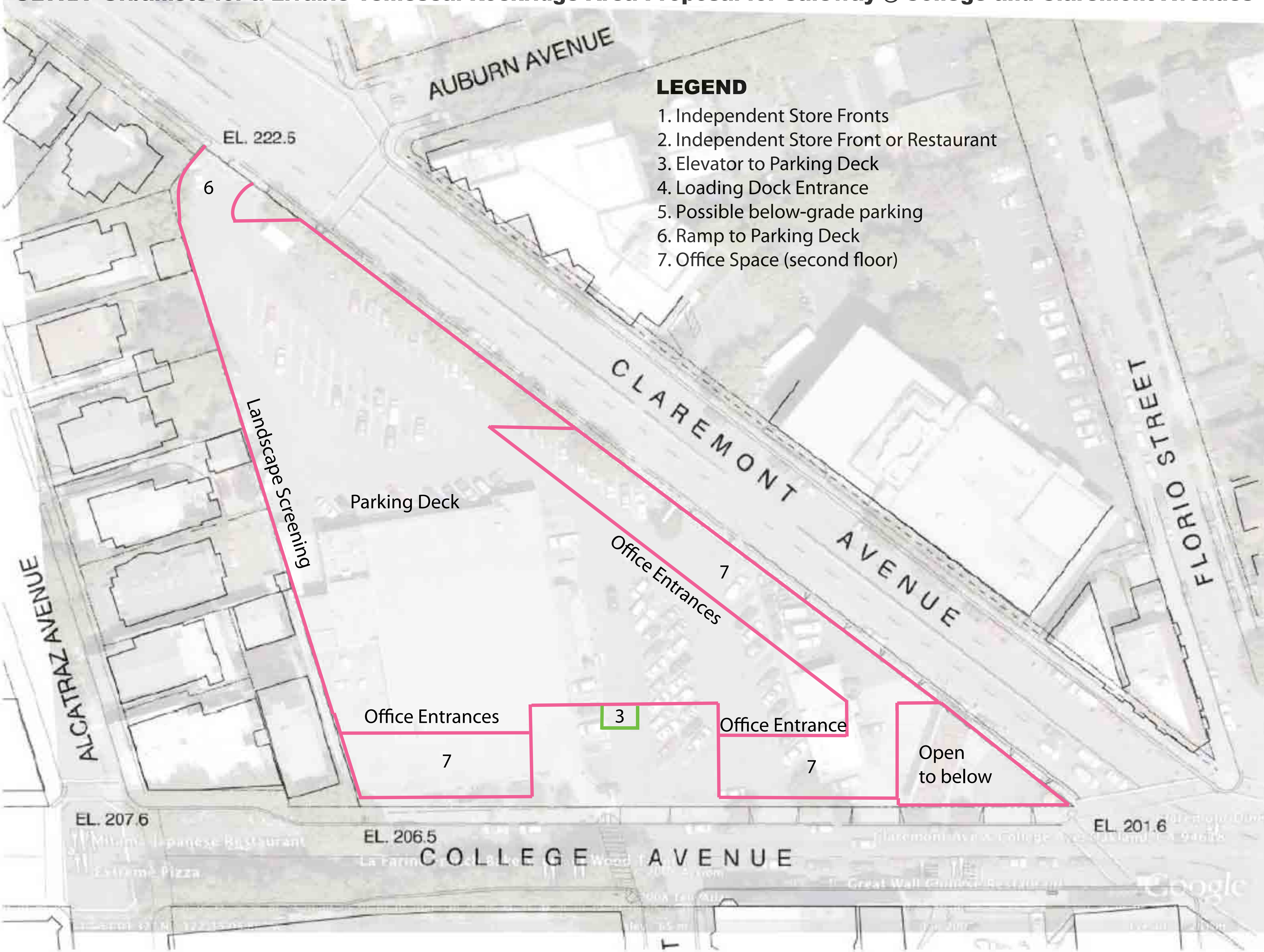
Thomas Dolan
John Gatewood
Karen Hester
Hiroko Kurihara
Joan Lichterman
Larry Mayers
Randy Reed
Joyce Roy
Christopher Waters

ULTRA -Urbanists for a Livable Temescal Rockridge Area Proposal for Safeway @ College and Claremont Avenues



First Floor

ULTRA -Urbanists for a Livable Temescal Rockridge Area Proposal for Safeway @ College and Claremont Avenues



Second Floor

Vollman, Peterson

From: Alan Weinstein [hopfish@gmail.com]

Sent: Sunday, November 29, 2009 5:30 AM

To: Blake.Huntsman@seiu1021.org; %20dboxer@gmail.com; %20sgalvez@phi.org; %20michaelcolbruno@clearchannel.com; %20MzmDesignWorks@gmail.com; %20VienV.Truong@gmail.com; %20VinceGibbs.opc@gmail.com

Cc: Vollman, Peterson; Brunner, Jane

Subject: Rockridge Safeway project

Dear Oakland Planning Commissioners:

We are very much opposed to the Rockridge Safeway expansion as currently proposed.

We moved about two years ago from the Berkeley Hills to the Rockridge neighborhood, attracted by the easily available public transportation and numerous small shops combined with a relatively calm environment.

The proposed Safeway expansion presently under consideration has a Potentially Significant Impact, threatening to disrupt this attractive environment, to the detriment not only of neighborhood residents, but also people who come here to shop and those who must simply drive through.

The only economic rationale for the proposed expansion must be to attract a large number of new shoppers, many of whom will come by automobile. (Indeed, the expansion plan includes expanded parking.) These automobiles will come either on the already crowded College Avenue, or on Claremont Avenue, where many will have to pass through the already frustratingly slow College/Claremont intersection. If facilitating traffic through this intersection can be done, it will have to be at the further expense of pedestrians, who already face very long waits to cross, say, from the Bank of America corner to the southeastern College/Florio corner. The presence of so many vehicles waiting to clear the intersection will also lead to a major increase in air pollution which will will have a Potentially Significant Impact on the health and well-being of transient pedestrians and shoppers as well as on the long-term residents of the neighborhood.

We strongly disagree with the finding in the Initial Study regarding Aesthetics and believe that the project will have a Potentially Significant Effect on the visual (as well as aural and olfactory, from the traffic) environment. The new building, with its frontage on two levels coming up to the sidewalk at the acute angle of College and Claremont, will close off the view of the hills from a large part of that intersection area as well as from the west side of College. Furthermore, the entire project would be completely out of scale with the other buildings in this area and will severely diminish the attractiveness of the built environment itself. We therefore urge that you insist that the area of Aesthetics be considered in the Environmental Impact Report, despite the recommendation otherwise in the Initial Study.

Sincerely yours,

Sincerely yours,

Alan and Margo Weinstein
6020 Auburn Avenue
Oakland, CA 94618

Vollman, Peterson

From: Katherine Westine [kwestine@earthlink.net]

Sent: Monday, November 30, 2009 10:25 AM

To: Blake.Huntsman@seiu1021.org; dboxer@gmail.com; sgalvez@phi.org; michaelcolbruno@clearchannel.com; MzmDesignWorks@gmail.com; VienV.Truong@gmail.com; VinceGibbs.opc@gmail.com

Cc: Brunner, Jane; Vollman, Peterson

Subject: Case Number ER09-0006

November 30, 2009

Dear Planning Commissioners:

I am a resident in the Rockridge neighborhood and am very concerned about the proposal of Safeway's project on College Avenue. Our community is unique in its small building/residential houses/small business/human scale environment. We do not need to turn our beloved and highly desired district into an upscale suburb. The size of Safeway's building is shocking and out of balance with the other shops and houses in the area.

Not only would this large building be out of scale with the existing shops, it would create a larger traffic problem than we already have. More people out of the Rockridge area would use Safeway -- and for the most part they would be driving, not walking or biking. In our area we already have Trader Joe's, a Safeway not too far away on Broadway, Andronico's and Whole Foods on Telegraph.

If Safeway is interested in updating their store so be it, but the size and scope of their project goes against the general plan for our neighborhood. The adverse effect of this grandiose out-of-proportion project on our community will impact us now and in the future.

Please register me as against the existing proposal.

Thank you,

Katherine Westine
6389 Florio Street
Oakland, 94618
510-601-9631
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Vollman, Peterson

From: rrwhitaker@comcast.net

Sent: Tuesday, December 01, 2009 2:36 PM

To: Vollman, Peterson

Subject: Safeway, College/Claremont Shopping Center Case Number ER09-0006

TO: Peterson Vollman
Oakland City Planning Department

FR: Richard Whitaker, Architect, Dean Emeritus
267 Gravatt Drive, Oakland, CA 94705

RE: Safeway, College/Claremont Shopping Center
Case Number ER09-0006

I am strongly opposed to the current proposal for the doubling of the size of the Safeway store at College and Claremont Avenues and have detailed my reasons below.

1. The character and scale of this proposal is fundamentally too large for the neighborhood. The proposal calls for a 100 per cent increase in the size of the Safeway store, plus an additional 11,572 sq. ft. of retail space with only a 30 percent increase in the customer parking. The current Safeway parking traffic already creates major problems for this block of College Avenue and the proposed plan has the same number of entrances and exits with proportionately fewer parking spaces for a facility over twice as large. This will exacerbate an already frustrating traffic problem.
2. It violates both the spirit and the specific requirements of the C-31 zoning provisions for College Avenue. Even with all the language describing the compatibility of this design with the neighborhood, it is still a big box being dropped on the site with hardly any response to "*maintaining and enhancing*" the physical and visual character of the College Avenue environment or maintaining the "*historic continuity*" required by the C-31 Zoning. This zoning plan was enacted by enlightened civic officials to preserve the character of this special place for all the residents of the city as well as for the people and the retail establishments in this neighborhood.
3. The architectural character does not blend in with the streetscape as claimed. Our neighborhood is a place that is reminiscent of pedestrian enclaves evoking fond memories from our past, and now mostly non-existent as part of our daily lives. The scale and detailing indicated for this project will do nothing to enrich those images.
4. College Avenue is a relatively narrow, two-lane street with a rich mix of owner operated shops and restaurants, and a dated supermarket. A thoughtful remodel of the Safeway market, <u>with a modest increase in size</u>, could contribute to the ambience of the neighborhood without destroying the richness that is already here. The results of approving this project will be irrevocable and we will have lost something precious.

I was born in Oakland in 1929 and built a house in North Oakland in 1964. I shop at this Safeway and frequent the other retail establishments on a weekly basis. I have watched and participated in many of the changes that have taken place over the past 60 years in Oakland. Some have been inspired, supporting the preservation of the character of the architecture and the civic places, like the C-31 zoning of College Avenue, which has supported the people who live in the neighborhood as well as the local merchants. Others have resulted in the thoughtless desecration of both our history as well as the human character of our city and particularly our neighborhoods.
The disconnect between this proposal and the designers image of the reality of the existing environment is evident in Figure 16, of their presentation, which shows a photograph of the existing street and under it, their image of the same scene. This along with their project title: "Safeway, College/Claremont Shopping Center Project," indicates a major disconnect between their image and the reality of this special place.
Please do not allow this project to destroy one of the few areas left in the city that is still a rich, rewarding shopping

experience that extends beyond just the commercial activity. There are few of these places left in our urban environment today and College Avenue, particularly this block of College Avenue needs to be preserved.

Sincerely,

Richard R. Whitaker
Architect, Dean Emeritus

Vollman, Peterson

From: diana wiegel [dlwiegel@yahoo.com]

Sent: Tuesday, December 01, 2009 7:24 AM

To: Vollman, Peterson

Subject: Fw: Safeway EIR

Dear Mr. Vollman,

As a long time Rockridge resident I am very concerned about the potential expansion of the Safeway store at College and Claremont. The scope of the store is too large and out of scale for this neighborhood and its infrastructure. We already have huge parking and traffic issues due to commuting patterns on Colby and Hillegass, BART and Alta Bates (our neighborhood is not currently resident parking restricted). The impact on local traffic, pedestrian safety and parking should be taken into consideration. I would also like to see the scale of the store examined to see if a smaller alternative would be more appropriate for our neighborhood. We appreciate all of your help in this matter.

Diana Wiegel

PREVIEWGROUP
ARCHITECTS PROVIDING REGULATORY SOLUTIONS...

November 30, 2009

Comments Regarding the Initial Study for a New Safeway Store
6310 College Avenue, Oakland
File ER09-0006

By email and Hard Copy:

Peterson Vollmann, Planner III
Planning and Zoning Division
Oakland Community & Economic Development Agency
City of Oakland
250 Frank Ogawa Plaza, 3rd Floor
Oakland, CA 94612-2031
pvollman@oaklandnet.com.

By email only:

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Vince Gibbs
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Dear Commission and Staff:

I am a Berkeley resident who lives on Prince Street, about ½ mile from the existing Safeway store at College and Claremont Avenues in Oakland. The Safeway store and the other retail food and beverage retailers in the vicinity of Safeway are my primary grocery shopping venues. I am thus very concerned about the continued success of the entire shopping district, including

Safeway. I have several specific comments on the Initial Study for scoping of the CEQA documents for the proposed expansion of the Safeway store.

I am an architect and a building code expert and my comments regard items related to my areas of expertise. Several of my comments are about the city's CEQA checklist itself. There are several systemic errors in the checklist that lead me to question its currency and efficacy for determining CEQA requirements and compliance. Several additional comments regard the focusing-out of potential EIR elements on the checklist which I believe will have an impact on the Berkeley neighbors to the project, especially those immediately north of the project site.

RELEVANCE AND CURRENCY OF THE CHECKLIST

1. My first concern is in the Aesthetics Section I, Item (i), which refers to required compliance with the *Uniform Building Code*. This code was not adopted as a stand-alone document in California; its last adoption was as the model code underlying the 2001 Oakland Building Code. The new 2007 California Building Code and in turn the Oakland Building Code are now based upon the 2006 *International Building Code*. If the checklist does not correctly identify the reference documents it is applying how can the checklist be used with any confidence in arriving at CEQA compliant scoping?

2. The same question applies to the Geology Section IV, which in the explanation to Item (a) (ii) on Page 39 of the Initial Study refers again to the 1997 *Uniform Building Code*, a document now over 10 years out of date and not the basis for the current Oakland Building Code, as noted above. The building will of course be permitted under the current code, but the lack of currency in the checklist in areas with which I am familiar makes me very uncomfortable that the checklist correctly takes into account other current regulations.

3. It appears that that the checklist is an obsolete "boilerplate" document which may not be current with CEQA requirements. The checklist should be updated to have correct references to applicable building codes and other regulations. It should also be carefully compared with the current requirements of the CEQA Guidelines published by the State of California Natural Resources Agency to be certain the checklist meets all of the current state criteria. Use of an obsolete or incomplete checklist may lead the city to make erroneous decisions about what to put into the CEQA documents.

ADDITIONAL ITEMS FOR INCLUSION IN THE ENVIRONMENTAL IMPACT REPORT

Regarding other specific items that I believe should be included in the EIR I have the following comments:

1. I feel that the proposed 10 foot buffer at the north of the Safeway property does not offset the impact on the Berkeley residences of the new building wall to be built just south of their property, shading out their yards and denying them solar access. Both the height and the linear extent of the new wall exceed that of the current condition and thus I believe this should be studied per Checklist Item IX, Land Use and Planning, Item (b), as this will create a fundamental conflict between the proposed project and adjacent or nearby land

uses. The relationship of the size of the buffer, the height, extent and location of the new building and the locations of adjacent buildings should be comprehensively examined for shadow impacts, solar access and conflicting land uses.

2. The potential for conflict in land uses envisioned by Item (b) in the checklist is further compounded by the fact that the City Limits of Oakland and Berkeley abut along the northernmost boundary of the project site. The land use, parking and CEQA requirements of the two cities should be compared as part of the EIR. The CEQA document, which should have a wider view than just city limits, is the one vehicle that exists to compare requirements of adjacent cities for conflicts in land uses and land use policies. These conflicts may require mitigation measures to be imposed as part of the conditions of approval for the project. This will be especially important in mitigating regional issues such as traffic and parking which impact the land use and planning policy decisions of both cities affected by this project.

Thank you very much for your consideration of my comments.

Respectfully,

Steven R Winkel, FAIA, PE

Cc: Councilperson Gordon Wozniak, City of Berkeley

December 1, 2009

Pete Vollman
City of Oakland
Community & Economic Development Agency
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Re: ER09-006

Mr. Vollman,

I have reviewed the initial study for the Safeway expansion on College and Clarement Avenues Others have already commented on other aspects of the project and I will not repeat those comments. There is one other issue I wish to raise.

I believe that the study erroneously concludes that the project will have a less than significant aesthetic impact on Clarement Avenue. Question (c) under "Aesthetics" (p. 17 of the Initial Study), asks: Would the project "substantially degrade the existing visual character or quality of the site and its surroundings". I believe that its impact will be "Potentially Significant unless Mitigation Incorporated."

Claremont Avenue above the project site is residential, with one or two story buildings with front set backs and sideyards, My concern is the façades of the structures facing Claremont Avenue, as depicted or indicated in the Claremont Ave, Northeast Elevation (Figure 7, p. 11), the Proposed Ground Floor and Safeway Level Plans, (Figures 4 and 5, Page 8 and 9), and the Project Site Plan (Figure 3, page 7). These drawings provide only a hint about how the façades will look and how they will impact the visual character of the surroundings. (One need only to look at the picture of the existing site on College Avenue (Figure 15, p. 24) to be concerned.).

At sidewalk level, the lower portions of the structures above the "walk street" will be parking with drive way openings. Will the parking be screened? How and with what? Will the building face be articulated? How will the façade of the Safeway facing Clarement be treated? Will it appear to be largely a blank wall? What materials will be used? What landscaping will there be? Will the mature trees in the sidewalk along Claremont be retained? Replaced?

I recognize that the drawings in the Initial Study do not represent the final building design. But how the facades will be designed will very much affect whether the project will degrade the "visual character or quality of the project's surroundings". Therefore, I believe that the "potential aesthetic impact" of the project on Claremont Ave. needs to be studied in the EIR and appropriate mitigation conditions need to be imposed.

Thank you for your consideration.

Sincerely yours,

George A. Williams
210 Hillcrest Road, Berkeley 94705
gswilliams2001@yahoo.com

Comments on the Draft Environmental Impact Report on the Safeway, College/Claremont Shopping Center Project, File No. ER09-0006

Submitted by
Burke K. Zimmerman
6413 Hillegass Avenue
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Burke.zimmerman@gmail.com
Tel. 510-654-3547

I have owned my Craftsman bungalow on Hillegass Avenue since 1982. On moving from Washington, DC to the Berkeley/Oakland area, the selection of a house and a convenient, attractive neighborhood in which to live was essential. After exploring many areas, from Montclair to Kensington, we were delighted to discover Rockridge and the College Avenue neighborhood, with its small specialty shops and cafes, charming older homes (mine is now 105 years old), convenient to the University of California and BART, and perhaps best of all, where just about everything one needed was within a short walk or a bike ride. It was a refreshing alternative to the aggressive and tasteless commercialism of nearby suburbs, such as Walnut Creek, a view that I find is shared with the large majority of my neighbors.

It is against this background, of living in a most agreeable community, that I found Safeway's announcement that it planned a major expansion of its College Avenue store into a large shopping and commercial center, just two blocks from my home, grossly out of step with the culture, values and small retail nature of the Rockridge community. There is a multitude of reasons why the expansion of Safeway into what amounts to a mini shopping mall should not go forward. I was hoping to find that at least all of those relating to the perturbation of the exiting environment, including of course the anticipated increase in traffic and congestion and deterioration of air quality, would be addressed in the draft Environmental Impact Report. It was, however, surprising to find that the very important issues of Land Use and Aesthetics were deemed to be non-issues. I will confine my remarks to these two areas.

The commercial environment around the site of the existing Safeway is small retail. The largest retail establishment is in fact the 22,500 sq. ft. Safeway building… most retail businesses are much smaller. To replace this store not simply with one more than twice that size but with what is really an urban shopping mall… that is, the new structure will contain eight additional retail establishments…is going well beyond what this neighborhood is and is intended to be. This structure, including the size, design and architectural features being promoted by Safeway, looks to be quite consistent with what one finds in the urban mall area of downtown Walnut Creek, which is a major commercial area. It is NOT appropriate to a small retail area like Rockridge.

The discussion of aesthetics in the draft EIR seemed to concentrate on views of the surrounding areas, light and shadow issues, but not on the aesthetics of the proposed Safeway structure itself. The only reference was to ask if the project will "degrade the existing visual character or quality of the site.." If the only standard of judgment is to compare the proposed expanded Safeway design with the existing Safeway and parking lot, then this is a rather a loaded question, since the existing Safeway store and parking lot can hardly be considered examples of urban architectural beauty. The existing store and site are clearly in need of major improvements, including its appearance. I would urge Safeway to consider upgrading and redesigning the present store and site without significant enlargement or changing the character of the site into a major commercial development project

One should be asking if the proposed design is pleasing to the eye…something that one might describe as "beautiful", regardless of the deficiencies of the present site. If beauty is indeed in the eye of the beholder, then it seems that, in contrast to the adjectives used by the Safeway representative at the recent Oakland Planning Council meeting, most of the Rockridge residents do not find the proposed design aesthetic at all and some even describe it as "ugly". Indeed, its stark rectangular motifs are quite sterile and uninspiring… without a soul, one might say. That, together with its imposing size, does negatively affect the aesthetics of the area. It may be possible to ignore a small structure with a boring design, but one of the proposed dimensions of the Safeway project will dominate the area … confronted with such a structure day after day, many residents will very likely come to hate it.

A well designed house or building --- like a work of fine art or music -- conveys a very positive emotional experience to one encountering it. It was such a feeling of comfort and warmth that I felt upon entering my Craftsman house for the first time that told me it was the right house for me. But the plans we have been shown by Safeway convey something quite different --- a cold, impersonal feeling that is not inviting. Yes…sadly.. it is the same reaction I have to most shopping malls, which is a big reason why I avoid them if at all possible. There are, however, a few that are very well designed and do make attractive commercial areas. But even if this were the case with the Safeway design, it brings us back to the proper use of a small retail and residential area. It is simply too large … a commercial center of this size belongs in a part of the city designated for growth and commercial development… NOT in Rockridge. A shopping mall by any other name is still a shopping mall.