19TH & HARRISON STREET PROJECT

CEQA Analysis

Prepared for:

City of Oakland
Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

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URBAN
PLANNING
PARTNERS
INC.

TABLE OF CONTENTS

I. PROJECT CHARACTERISTICS 1

II. EXECUTIVE SUMMARY 2

III. BACKGROUND 3
Land Use and Transportation Element EIR 3
Oakland Housing Element Update EIR and Addendum 4
Central District Urban Renewal Plan Amendments EIR (Redevelopment Plan Amendments EIR) 5
Standard Conditions of Approval (SCAs) 7

IV. PURPOSE AND SUMMARY OF THIS DOCUMENT 8
19th & Harrison Project CEQA Compliance 10

V. PROJECT DESCRIPTION 12
Project Location 12
Existing Conditions and Surrounding Land Uses 12
General Plan and Zoning Designations 14
Proposed Project 14
Project Construction 21
Project Approvals 22

VI. SUMMARY OF FINDINGS 23

VII. CLASS 32 CATEGORICAL EXEMPTION OVERVIEW 25

VIII. CLASS 32 CATEGORICAL EXEMPTION ANALYSIS 27
Criterion Section 15332(a): General Plan and Zoning Consistency 27
Criterion Section 15332(b): Project Location, Size, and Context 29
Criterion Section 15332(c): Endangered, Rare, or Threatened Species 30
Criterion Section 15332(d): Traffic, Noise, Air Quality, or Water Quality 30
Criterion Section 15332(e): Utilities and Public Services 37

IX. EXCEPTIONS TO CATEGORICAL EXEMPTIONS 39
Criterion 15300.2(a): Location 39
Criterion 15300.2(b): Cumulative Impact 39

Criterion 15300.2(c): Significant Effect 40
Criterion 15300.2(d): Scenic Highway 40
Criterion 15300.2(e): Hazardous Waste Sites 41
Criterion 15300.2(f): Historical Resources 46
Criterion 15300.2: Other Potential Effects 47

ATTACHMENT A: 1

ATTACHMENT B: 1

ATTACHMENT C: 1

ATTACHMENTS

Attachment A: City of Oakland – Standard Conditions of Approval
Attachment B: Community Plan Exemption Findings
Attachment C: Qualified Infill Exemption Findings
Attachment D: Transportation Impact Analysis
Attachment E: Noise and Vibration Analysis
Attachment F: Air Quality Analysis
Attachment G: Shadow Diagrams
Attachment H: Greenhouse Gases Emissions Analysis

Note: For hard copies of this document, Appendices D through H are provided on a CD.

Tables

Table 1 19th & Harrison Project Summary 15
Table 2 Summary of Cortese List Search Results 42

Figures

Figure 1 Project Vicinity 13
Figure 2 Site Plan/Ground Floor 16
Figure 3 Podium Level Floor Plan (Floor 3) 17
Figure 4 Typical Residential Floor Plan (Floors 4-7) 18
Figure 5 Residential Lofts Mezzanine 19
Figure 6 Perspective Rendering from 19th and Harrison Streets 20

I. PROJECT CHARACTERISTICS

1. **Project Title:**
   19th & Harrison Street Project

2. **Lead Agency Name and Address:**
   City of Oakland
   Bureau of Planning
   250 Frank H. Ogawa Plaza, Suite 2114
   Oakland, CA 94612

3. **Contact Person and Phone Number:**
   Peterson Vollmann, Planner III
   (510) 238-6167
   250 Frank H. Ogawa Plaza, Suite 2114
   Oakland, CA 94612
   pvollmann@oaklandnet.com

4. **Project Location:**
   1750 Webster Street, 1810 Webster Street and 301 19th Street
   Assessor's Parcel No. 008-0625-002-01, 008-0625-016, 008-0625-017, 008-0625-018

5. **Project Sponsor's Name and Address:**
   Tyler Wood
   Lennar Multifamily Communities
   492 9th Street, Suite 300,
   Oakland, California 94612

6. **Existing General Plan Designations:**
   Central Business District

7. **Existing Zoning:**
   Central Business District Commercial (CBD-C)
   Height Area 6, no limit

8. **Requested Permits:**
   See Project Approvals in the Project Description, below.

II. EXECUTIVE SUMMARY

The project applicant, Lennar Multifamily Communities, is proposing the redevelopment of four parcels within downtown City of Oakland. The 19th & Harrison Street Project (project), would include construction of a seven-story mixed-use residential building, up to 85 feet in height. The building would have a total of approximately 256,897 gross square feet, consisting of approximately 195,242 gross square feet of residential uses (224 residential units), approximately 3,709 square feet of ground-floor retail space along 19th Street, and approximately 57,946 square feet of parking (219 vehicle parking spaces and 129 bicycle parking spaces). Table 1 summarizes the characteristics of the project. The project site is currently improved with surface parking lots.

This California Environmental Quality Act (CEQA) Analysis evaluates the 19th & Harrison Street Project. Specifically, the project is considered an urban infill development project, and is in the class of projects that is exempt from CEQA review under CEQA Guidelines Section 15332 (Class 32 exemption). In addition to the Class 32 exemption, this analysis uses CEQA streamlining and/or tiering provisions under CEQA Guidelines Section 15162, Section 15183, and Section 15183.3 to tier from the program-level analysis completed in the City of Oakland General Plan (General Plan) Land Use and Transportation Element (LUTE)[1] and LUTE Environmental Impact Report (EIR) (1998),[2] the General Plan 2007-2014 Housing Element[3] and EIR (2010)[4] and the 2015-2023 Housing Element[5] and Addendum (2014),[6] and the Central District Urban Renewal Plan Amendments EIR (2011 Redevelopment Plan Amendments EIR)[7]—collectively referred to herein as the Program EIRs—that analyzed environmental impacts associated with adoption and implementation of the General Plan and Redevelopment Plan.

[1] City of Oakland, 1998. *General Plan*, Land Use and Transportation Element.
[2] City of Oakland, 1998. Oakland General Plan Land Use and Transportation Element EIR.
[3] City of Oakland, 2010. *General Plan*, 2007-2014 Housing Element.
[4] City of Oakland, 2010. City of Oakland 2007-2014 Housing Element EIR.
[5] City of Oakland, 2014. *General Plan*, 2015-2023 Housing Element.
[6] City of Oakland, 2014. CEQA Addendum for City of Oakland Housing Element (2015-2023).
[7] City of Oakland, 2011. Proposed Amendments to the Central District Urban Renewal Plan EIR.

III. BACKGROUND

The following describes the Program EIRs that constitute the previous CEQA documents considered in this CEQA Analysis. Each of the following documents is hereby incorporated by reference and can be obtained from the City of Oakland Bureau of Planning at 250 Frank H. Ogawa Plaza, Suite 2114, Oakland, California 94612, and at http://www2.oaklandnet.com/Government/o/PBN/OurServices/Application/EIR/index.htm.

Land Use and Transportation Element EIR

The City certified the EIR for its General Plan LUTE in 1998. The LUTE identifies policies to guide land use changes in the City and sets forth an action program to implement the land use policy through development controls and other strategies. The LUTE identifies five "Showcase Districts" targeted for continued growth; the project site is located within the "Downtown Showcase District" ("Downtown"), which is intended to promote a mixture of vibrant and unique subdistricts with around-the-clock activity, continued expansion of job opportunities, and a growing residential population. The 1998 LUTE EIR is designated a "Program EIR" under CEQA Guidelines Sections 15183 and 15183.3. As such, subsequent activities under the LUTE are subject to requirements under each of the aforementioned CEQA Sections, which are described further in Section IV.

Applicable mitigation measures identified in the 1998 LUTE EIR are largely the same as those identified in the other Program EIRs prepared after the 1998 LUTE EIR, either as mitigation measures or newer City of Oakland Standard Conditions of Approval (SCAs), the latter of which are described below in Section IV.

Environmental Effects Summary – 1998 LUTE EIR

The 1998 LUTE EIR (including its Initial Study Checklist) determined that development consistent with the LUTE would result in impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or SCAs (described in Section IV): aesthetics (views, architectural compatibility and shadow only); air quality (construction dust [including PM_{10}] and emissions Downtown, odors); cultural resources (except as noted below as less than significant); hazards and hazardous materials; land use (use and density incompatibilities); noise (use and density incompatibilities, including from transit/transportation improvements); population and housing (induced growth, policy consistency/clean air plan); public services (except as noted below as significant)[8]; and transportation/circulation (intersection operations Downtown).

[8] The 1998 LUTE EIR addressed effects on solid waste demand and infrastructure facilities for water, sanitary sewer and stormwater drainage under Public Services.

Less-than-significant impacts were identified for the following resources in the 1998 LUTE EIR and Initial Study: aesthetics (scenic resources, light and glare); air quality (clean air plan consistency, roadway emissions in Downtown, energy use emissions, local/regional climate change); biological resources; cultural resources (historic context/settings, architectural compatibility); energy; geology and seismicity; hydrology and water quality; land use (conflicts in mixed use projects and near transit); noise (roadway noise Downtown and citywide, multifamily near transportation/transit improvements); population and housing (exceeding household projections, housing displacement from industrial encroachment); public services (water demand, wastewater flows, stormwater quality, parks services); and transportation/circulation (transit demand). No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 1998 LUTE EIR: air quality (regional emissions, roadway emissions Downtown); noise (construction noise and vibration in Downtown); public services (fire safety); transportation/circulation (roadway segment operations); wind hazards, and policy consistency (clean air plan). Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Oakland Housing Element Update EIR and Addendum

The City has twice amended its General Plan to adopt updates to its Housing Element. It certified a 2010 EIR for the 2007-2014 Housing Element, and a 2014 Addendum to the 2010 EIR for the 2015-2023 Housing Element. The General Plan identifies the City's current and projected housing needs, and sets goals, policies, and programs to address those needs, as specified by the state's Regional Housing Needs Allocation (RHNA) process. A portion of the project site—301 19th Street (APN 008-0625-002-01)—is identified as a Housing Opportunity Site per the Housing Element, Table C-6 (Site #DJL-27), and therefore the proposed project would contribute to the total number of housing units needed in the City of Oakland to meet its RHNA target.

Applicable mitigation measures and SCAs identified in the 2014 Addendum to the 2010 EIR are considered in the analysis of the residential components of the 19th & Harrison Street Project included in this document, and are largely the same as those identified in the 2011 Redevelopment Plan Amendments EIR. The 2010 Housing Element Update EIR was designated a "Program EIR" under CEQA Guidelines Sections 15183 and 15183.3. As such, subsequent activities under the Housing Element that involve housing, are subject to requirements under each of the aforementioned CEQA Sections, which are described further in Section IV. Applicable mitigation measures and SCAs (also described in Section IV) identified in the 2010 Housing Element Update EIR are considered in the analysis in this document and are largely the same as those identified in the other Program EIR documents described in this section.

Environmental Effects Summary – 2010 Housing Element and 2014 Addendum

The 2010 Housing Element Update EIR (including its Initial Study Checklist) and 2014 Addendum determined that housing developed pursuant to the Housing Element, which would include the project site, would result in impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or SCAs (described in Section IV): aesthetics (visual character/quality and light/glare only); air quality (except as noted below); biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials (except as noted below, and no impacts regarding airport/airstrip hazards and emergency routes); hydrology and water quality (except as noted below); noise; public services (police and fire only); and utilities and service systems (except as noted below).

Less-than-significant impacts were identified for the following resources in the Housing Element Update EIR and Addendum: hazards and hazardous materials (emergency plans and risk via transport/disposal); hydrology and water quality (flooding/flood flows, and inundation by seiche, tsunami or mudflow); land use (except no impact regarding community division or conservation plans); population and housing (except no impact regarding growth inducement); public services and recreation (except as noted above, and no impact regarding new recreation facilities); and utilities and service systems (landfill, solid waste, and energy capacity only, and no impact regarding energy standards). No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the Housing Element Update EIR and Addendum: air quality (toxic air contaminant exposure) and traffic delays. Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Central District Urban Renewal Plan Amendments EIR (Redevelopment Plan Amendments EIR)

The 19th & Harrison Street Project site is located within the Central District Urban Renewal Plan Area, which generally encompasses the entire Downtown: approximately 250 city blocks (828 acres) in an area generally bounded by Interstate 980 (I-980), Lake Merritt, 27th Street and the Embarcadero. The Oakland City Council adopted the Central District Urban Renewal Plan (Redevelopment Plan) for the Project Area in June 1969. The City prepared and certified an EIR for proposed amendments to the Urban Renewal Plan in 2011, and amended or supplemented the Plan up to April 3, 2012.[9] The 2011

[9] The 2011 EIR addressed two amendments. A 17th Amendment to the Redevelopment Plan to (1) extend the duration of the Plan from 2012 to 2022 and extend the time period that the then-Redevelopment Agency could receive tax increment funds from 2022 to 2032, as allowed by Senate Bill (SB) 211 (codified as Health and Safety Code Section 33333.10 et seq.); (2) increase the cap on the receipt of tax increment revenue to account

Redevelopment Plan EIR was designated a "Program EIR" under CEQA Guidelines Section 15180; as such, subsequent activities are subject to requirements under CEQA Guidelines Section 15168.

Applicable mitigation measures and SCAs (described in Section IV) identified in the 2011 Redevelopment Plan Amendments EIR are considered in the analysis in this document and are also largely the same as those identified in the other Program EIRs described in this section.

Environmental Effects Summary – 2011 Redevelopment Plan Amendments EIR

The 2011 Redevelopment Plan Amendments EIR determined that development facilitated by the Proposed Amendments would result in impacts to the following resources that would be reduced to a less-than-significant level with the implementation of identified mitigation measures and/or SCAs (described in Section IV): aesthetics (light/glare only); air quality (except as noted below as less than significant and significant); biological resources (except no impacts regarding wetlands or conservation plans); cultural resources (except as noted below as significant); geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality (stormwater and 100-year flooding only); noise (exceeding standards – construction and operations only); traffic/circulation (safety and transit only); and utilities and service systems (stormwater and solid waste only).

Less-than-significant impacts were identified for the following resources in the 2011 Redevelopment Plan EIR: aesthetics (except as noted above as less than significant with SCAs); air quality (clean air plan consistency); hydrology and water quality (except as noted above as less than significant with SCAs); land use and planning; population and housing; noise (roadway noise only); public services and recreation; traffic/circulation (air traffic and emergency access); and utilities and service systems (except as noted above as less than significant with SCAs). No impacts were identified for agricultural or forestry resources, and mineral resources.

The 2011 Redevelopment Plan EIR determined that the Proposed Amendments combined with cumulative development would have significant unavoidable impacts on the following environmental resources: air quality (toxic air contaminant exposure and odors); cultural resources (historic); and traffic/circulation (roadway segment operations).[10] Due to the

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for the proposed time extensions; and (3) renew the then-Redevelopment Agency's authority to use eminent domain in the Project Area. An 18th Amendment further extended the then-Redevelopment Plan time limit from 2022 to 2023 and extended the time period that the then-Redevelopment Agency could receive tax increment funds from 2032 to 2033, as allowed by Health and Safety Code Section 33331.5.

[10] The 2011 Redevelopment Plan Amendments EIR also identified significant and avoidable noise effects specifically associated with the potential development of a new baseball stadium at Victory Court, and

potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals.

Standard Conditions of Approval (SCAs)

The City established its Standard Conditions of Approval and Uniformly Applied Development Standards (SCAs) in 2008, and they have since been amended and revised several times.[11] The City's SCAs are incorporated into new and changed projects as conditions of approval regardless of a project's environmental determination. The SCAs incorporate policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection Ordinance, Stormwater Water Management and Discharge Control Ordinance, Oakland Protected Trees 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. The SCAs 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.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—i.e., **SCA-AIR-1**, **SCA-AIR-2**, etc. The SCA title is also provided—i.e., **SCA-AIR-1: Construction-Related Air Pollution (Dust and Equipment Emissions)**.

Consistent with the requirements of CEQA, a determination of whether the project would have a significant impact has occurred prior to the approval of the proposed project and, where applicable, SCAs have been identified that will mitigate them. In some instances, exactly how the SCAs identified will be achieved awaits completion of future studies, an approach that is legally permissible where SCAs are known to be feasible for the impact identified, where subsequent compliance with identified federal, state or local regulations or requirements apply, where specific performance criteria is specified and required, and where the proposed project commits to developing measures that comply with the requirements and criteria identified.

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multimodal safety at at-grade rail crossings, both near the Oakland Estuary. These effects would not pertain to the proposed project given the distance and presumably minimal contribution of multimodal trips affecting these impacts.

[11] A revised set of SCAs was recently published by the City of Oakland on July 22, 2015.

IV. PURPOSE AND SUMMARY OF THIS DOCUMENT

The purpose of this document is to evaluate the CEQA compliance of the proposed 19th & Harrison Street Project. Applicable CEQA sections are described below, each of which, separately and independently, provides a basis for CEQA compliance.

1. **Class 32 Categorical Exemption:** Public Resources Code Section 21084 and State CEQA Guidelines Section 15332, Class 32 Categorical Exemptions, apply to infill development projects that meet the following conditions:
   - Are consistent with applicable general plan policies and zoning designations;
   - Occur within a project site smaller than five acres and are substantially surrounded by urban uses;
   - Have no value as habitat for endangered, rare or threatened species;
   - Would not result in any significant effects relating to traffic, noise, air quality, or water quality; and
   - Are located on a site that can be adequately served by all required utilities and public services.

2. **Community Plan Exemption.** Public Resources Code Section 21083.3 and State CEQA Guidelines Section 15183 allow streamlined environmental review for projects that are "consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific significant effects that are peculiar to the project or its site." Section 15183(c) specifies that "if an impact is not peculiar to the parcel or to the proposed project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…, then an EIR need not be prepared for the project solely on the basis of that impact."

   The analysis in the Program EIRs—the 1998 LUTE EIR and, for only the residential components of the 19th & Harrison Street Project, the 2010 Housing Element Update EIR and its 2014 Addendum—are applicable to the 19th & Harrison Street Project and provide the basis for use of the Community Plan Exemption.

3. **Qualified Infill Exemption.** Public Resources Code Section 21094.5 and State CEQA Guidelines Section 15183.3 allow streamlining for certain qualified infill projects by limiting the topics that are subject to review at the project level, provided the effects of infill development have been addressed in a planning-level decision or by uniformly applicable development policies. Infill projects are eligible if they are:

- Located in an urban area and on a site that either has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site's perimeter.
- Able to satisfy the performance standards provided in State CEQA Guidelines Appendix M; and
- Consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy. No additional environmental review is required if the infill project would not cause any new specific effects or more significant effects or if uniformly applicable development policies or standards would substantially mitigate such effects.

The analysis in the Program EIRs—the 1998 LUTE EIR and, for only the residential components of the 19th & Harrison Street Project, the 2010 Housing Element Update EIR and its 2014 Addendum—are applicable to the 19th & Harrison Street Project and are the previous CEQA documents providing the basis for use of the Community Plan Exemption under CEQA Guidelines Section 15183.3.

4. **Program EIRs and Redevelopment Projects.** CEQA Guidelines Section 15168 (Program EIRs) and Section 15180 (Redevelopment Projects) provide that the 2011 Redevelopment Plan Amendments EIR can be used as a Program EIR in support of streamlining and/or tiering provisions under CEQA. The 2011 Redevelopment Plan Amendments EIR is a Program EIR for streamlining and/or tiering provisions by CEQA Guidelines Section 15168. Section 15168defines the "program EIR" as one prepared on a series of actions that can be characterized as one large project and are related geographically and by other shared characteristics. Section 15168 also states that "subsequent activities in the program EIR must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared." If the agency finds that pursuant to CEQA Guidelines Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR and no new environmental document would be required. Further, CEQA Guidelines Section 15180 specifies that if a certified redevelopment plan EIR is prepared, no subsequent EIRs are required for individual components of the redevelopment plan unless a subsequent EIR or supplement to the EIR would be required by Section 15162 or 15163.

   This CEQA Analysis for the project provided herein evaluates the specific environmental effects of the proposed project and whether such impacts were adequately covered by the Program EIRs to allow the above-listed provisions of CEQA to apply. The analysis conducted incorporates by reference the information contained in the General Plan. The proposed project is legally required to incorporate and/or comply with the applicable requirements of the mitigation measures identified in the General Plan as well as applicable SCAs; therefore, the measures and SCAs are herein assumed to be included as part of the proposed project. See Attachment A for the full text of applicable SCAs included in this CEQA Analysis. (Note that this is not an exhaustive list of all SCAs that may be required by the City for the project).

19th & Harrison Project CEQA Compliance

The proposed project satisfies each of the foregoing CEQA provisions, as summarized below.

- **Class 32 Exemption:** The analysis presented in the following section provides substantial evidence that the project qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would not result in any new significant effects on the environment. In addition, none of the specific exceptions to CEQA categorical exemptions (CEQA Guidelines Section 15300.2) are applicable to the project.
- **Community Plan Exemption:** When development proposals are brought before the City, the staff and decision-makers use the General Plan as a guide for project review. Projects are evaluated for consistency with the intent of General Plan policies and conformance with development regulations. The analyses performed for the Program EIRs were intended to expedite the processing of future projects that are consistent with the General Plan. As described within this CEQA Analysis, the proposed project is permitted in the zoning district where the project site is located and consistent with the bulk, density, and land use standards envisioned in the General Plan. The CEQA Analysis (and attachments) provided herein conclude that the proposed project would not result in significant impacts that (1) would be peculiar to the project or project site; (2) were not identified as significant project-level, cumulative, or off-site effects in the Program EIRs; or (3) were previously identified as significant but later determined as having a more severe adverse impact than that discussed in the Program EIRs. Findings regarding the proposed project's consistency with the General Plan are included as Attachment B to this document. Therefore, consistent with CEQA Guidelines Section 15183, this CEQA Analysis satisfies the requirements for a community plan exemption.
- **Qualified Infill Exemption:** The analysis conducted and presented in this CEQA Analysis indicates that the proposed project is eligible for a qualified infill exemption, pursuant to State CEQA Guidelines Section 15183.3. The infill eligibility criteria are evaluated and project-specific findings are provided in Attachment C.
- **Program EIRs and Redevelopment Projects:** The 19th & Harrison Street Project is consistent with the land uses identified for the area in the Central District Urban

Renewal Plan and analyzed in the 2011 Redevelopment Plan Amendments EIR. The analysis in the 2011 Redevelopment EIR and in this CEQA Analysis demonstrates that the 19th & Harrison Street Project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162.

Examination of the analysis, findings, and conclusions of the EIR, as summarized in the CEQA analysis below, indicates that the prior CEQA documents adequately analyzed and covered the potential environmental impacts associated with the proposed project. The Class 32 exemption as well as the streamlining and/or tiering provisions of CEQA apply to the proposed project. Therefore, no further review or analysis, under CEQA, is required.

SCAs identified in the Program EIRs that would apply to the 19th & Harrison Street Project are listed in Attachment A to this document, which is incorporated by reference into this CEQA Analysis. Because the SCAs are mandatory City requirements, the impact analysis for the proposed project assumes that they will be imposed and implemented, which the project sponsor has agreed to do or ensure as part of the proposed project. If this CEQA Analysis or its attachments inaccurately identifies or fails to list a mitigation measure or SCA, the applicability of that mitigation measure or SCA to the proposed project is not affected. Most of the SCAs that are identified for the 19th & Harrison Street Project were also identified the 2011 Redevelopment Plan Amendments EIR and the 2010 Oakland Housing Element Update EIR and 2014 Addendum; the 1998 LUTE EIR was developed prior to the City's application of SCAs.

V. PROJECT DESCRIPTION

This section describes the proposed 19th & Harrison Street Project (the project) evaluated in this CEQA analysis and includes a description of the project site, existing site conditions, the proposed development, and the required project approvals.

Project Location

As shown in Figure 1, the 1.02-acre project site is located in downtown Oakland within a portion of the northern half of the block bounded by 19th Street (north), Harrison Street (east), Webster Street (west), and 17th Street (south). The project site consists of four parcels at 1750 and 1810 Webster Street and 301 19th Street (Assessor Parcel Numbers 008-0625-016-00, 008-0625-017-00, 008-0625-018-00, and 008-0625-002-1. Regional access is provided by Interstate 580 (I-580), I-980, I-880, and Highway 24, approximately 0.8 to 1.4 miles from the site. A Bay Area Rapid Transit (BART) station is less than 0.25 mile west of the project site at 19th Street and Broadway. Alameda-Contra Costa Transit (AC Transit) bus routes 1, 1R, 11, 12, 18, 51A, 58L, 72, 72M, 651, 800, 802, 805, 851, NL, and Broadway Shuttle are all within 0.25 mile of the project site.

Existing Conditions and Surrounding Land Uses

The 1.02-acre project site is developed with three surface parking lots. Two of the lots are accessed from Webster Street, and the third from 19th and Harrison Streets. A total of eight curb cuts provide site access from the adjacent streets (three on Webster, two on 19th, and three on Harrison, although one on 19th and one on Webster are not currently in use). Though the site is relatively flat, several low retaining walls contour the downward slope towards the corner of 19th and Harrison streets. The site is almost entirely paved and limited weedy vegetation is growing on the site. Two street trees (Indian laurel fig [Ficus microcarpa]) are adjacent to the site along 19th Street.

Existing land uses in the project vicinity include surface parking lots, retail, office, commercial office uses, and recreational/park uses. Development and uses immediately adjacent and within the same block as the project site are:

- 1830 Webster Street/337-343 19th Street/northwest corner of block. A two-story commercial building with ground floor retail and restaurant uses and office uses on the second floor. The building has an Oakland Cultural Heritage Survey rating of Dc3.[12]

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[12] City of Oakland (OCHS) ratings: Individual property: A, highest importance; B, major importance; C, secondary importance; D, minor importance; E, of no particular interest; * or F, too recent to rate. District status: 1, in an Area of Primary Importance; 2, in an Area of Secondary Importance; 3, not in a district; + contributor to district's significance, - noncontributory, * potential contributor e.g. if restored.

Source: http://maps.us.nearmap.com, 2016

19th & Harrison Street Project

Figure 1
Project Vicinity

- 1732-36 Webster Street. Directly south of the site is a four-story mixed-use residential building with three levels of residential units above a ground floor restaurant. The building has an Oakland Cultural Heritage Survey B3+ historic rating.
- 1805 and 1811 Harrison Street. Also directly south of the site are a surface parking lot and a two-story office building.

The remaining southern portion of this block is developed with three additional two-story commercial buildings and one additional surface parking lot.

The surrounding vicinity is primarily characterized by commercial office, retail, and Snow Park—a City park. Development shifts to primarily multi-family residential approximately one-block east of the project site. Land uses in the closest proximity to the site include:

- A 17-story office building north across 19th Street at 1901 Harrison,
- A 25-story office building east across Harrison Street at 1800 Harrison Street,
- Snow Park at the northeast corner of 19th Street and Harrison Street, and
- One-story retail/restaurant uses and surface parking west across Webster Street.

Several historically significantly properties are also located in the vicinity including Snow Park (C1+ rating), Lake Merritt Historic District (Area of Primary Importance), the Lake Merritt's Necklace of Lights (Local Landmark), 244 Lakeside Drive (A1+ rating), and the Mentone Arms Apartments directly south of the project site at 1732 Webster Street (B+3 rating and Designated Historic Property).

General Plan and Zoning Designations

The project site's General Plan designation is Central Business District. This designation aims to encourage high density, mixed-use development that supports large-scale offices, commercial retail and urban high-rise residential units. The site is zoned Central Business District General Commercial Zone (CBD-C). The intent of the CBD-C zoning designation is to create and maintain areas of the Central Business District appropriate for a range of ground-floor retail, office and commercial uses. Upper-story spaces are encouraged to support additional residential, office and other commercial activities. The project site is also within Height Area 6. Height Area 6 designates a base building height limit of 85 feet and no tower height limit.

Proposed Project

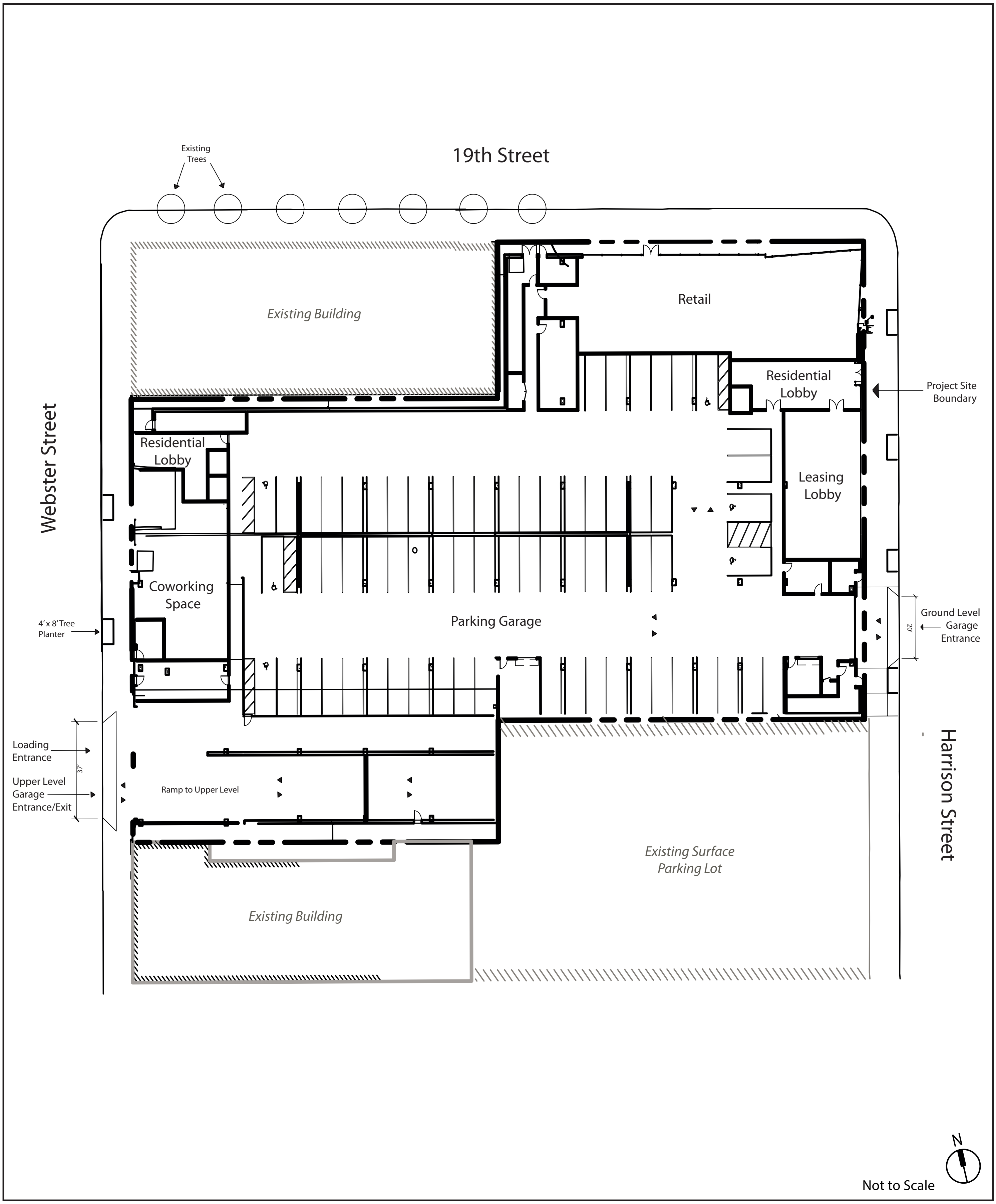
The proposed project would demolish three existing surface parking lots and construct a seven-story mixed-use residential building, up to 85 feet in height. The building would have a total of approximately 256,897 gross square feet, 195,242 gross square feet of residential uses (224 residential units), 3,709 square feet of ground-floor retail space along 19th Street, and 57,946 square feet of parking (219 vehicle parking spaces and 129 bicycle parking spaces). In addition, approximately 15 short-term bicycle parking spaces would be located within the sidewalk areas on Webster, Harrison, and 19th streets. Table 1 summarizes the characteristics of the project.

TABLE 1 19TH & HARRISON PROJECT SUMMARY

Project	Amount
Total site area	44,237 sf (1.02 acres)
Total gross floor area	~256,897 sf
Gross residential area, including amenities	~195,242 sf
Gross commercial/retail area	~3,709 sf
Gross parking area	~57,946 sf
Gross open space	~10,480 sf
Residential Units	224
Parking spaces	219
Bicycle spaces	129[a]
Number of building levels	7
Building height	85' (96'6" to top of mechanical penthouse)

Notes: The total gross floor area exclusive of the parking area is 198,951 sf.
[a] In addition, approximately 15 short-term bicycle parking spaces would be located within the sidewalk areas on Webster, Harrison, and 19th streets.
Source: LPAS, 2016.

The project proposes a two-story podium structure with five residential floors above. The podium would have two levels of parking and include an approximately 3,709-square-foot retail space at the corner of 19th and Harrison streets, a residential lobby and leasing office on Harrison Street, and a residential entrance and co-working space on Webster Street, as shown in Figure 2. Up to 224 residential units would be located on floors three to seven as shown in Figures 3 and 4. The third through sixth floors would have studios, one-bedroom, and two-bedroom apartments. Two-story loft apartments would occupy the seventh floor, as shown in Figure 5. Approximately 10,480 square feet of open space is proposed, including two courtyards on the third level, above the podium, private balconies, roof terraces, and amenity space. Figure 6 shows a rendering of the project from the perspective of the intersection of 19th and Harrison streets.



Source: LPAS, 2016

Figure 2
Site Plan/Ground Floor

19th & Harrison Street Project

Source: LPAS, 2016

19th & Harrison Street Project

Figure 3
Podium Level Floor Plan (Floor 3)

Source: LPAS, 2016

19th & Harrison Street Project

Figure 4

Typical Residential Floor Plan (Floors 4-7)

Note: Floors seven and eight are two-level loft units, which would be accessed from floor seven.

Source: LPAS,2016

Figure 5
Residential Lofts Mezzanine

19th & Harrison Street Project

Source: LPAS, 2016
Note: Proposed 1700 Webster Street project is shown in background.

19th & Harrison Street Project

Figure 6
Perspective Rendering from 19th and Harrison Streets

Two residential lobbies, on Webster and Harrison streets, respectively, would provide pedestrian access to the residential uses on the site. Vehicular access to the site is proposed from two driveways—a driveway on Harrison Street with access to the ground-level parking, and a driveway on Webster Street with access to the second-level garage. A loading dock would be adjacent to the Webster Street garage entrance.

Additional street trees are proposed including two fern pines on 19th Street, two English oaks on Webster Street, and four English oaks on Harrison Street. The existing Indian laurel fig trees on 19th Street are proposed to be retained.

Project Construction

The project would be constructed over approximately 26 months and is anticipated to start in September 2017. Construction activities would consist of demolition of the existing surface parking lots, limited excavation and grading, foundation construction, and construction of the building and finishing interiors.

Demolition and grading are anticipated to occur over the course of one month. Grading is expected to be limited to surface preparation, utility connections and limited excavations for the foundation, footings and utility services, as no basement or sub-grade parking structure is proposed. The site would be excavated to approximately 2 to 3 feet below grade and approximately 5,000 cubic yards of soil would be excavated and off-hauled. The groundwater is approximately 20 feet below ground surface and dewatering is not anticipated to be required during construction.[13] The project would have a shallow foundation system and conventional spread footings with slab-on-grade or mat foundation. No pile driving would be required.

Typical equipment used during construction would include an excavator, skid-steer loader, backhoe, trencher, crane, rough terrain forklift, paver, and paving equipment. The project sponsor has committed to using best available control technologies for all off-road diesel equipment used for the project and would meet Tier 4 (or equivalent) emissions standards.

Staging would primarily occur within the project site, except in certain instances, such as deliveries or removal of large quantities of material, when parking lanes on one or more of the street frontages may be temporarily closed.

Depending on the construction phase, the number of on-site construction workers could range from approximately 10 to 100 workers per day. The maximum number of workers

[13] GeoSolve, Inc., 2015. *Phase I Environmental Site Assessment on 1750 Webster Street and 30119th Street, APNs 008-625-016; 008-625-017; 008-625-018; 008-625-002-1; 008-625-004; 008-625-005; 008-625-006; 008-625-007; and 008-625-008 Oakland, California 94545*. November 6.

would be present during framing, rough-in, and interior finish, as well as the exterior work during the building construction phase. The minimum number of workers would be present during grading, excavation, and site preparation.

Project Approvals

The proposed project requires the following discretionary actions/approvals, including without limitation:

Actions by the City of Oakland

- Planning Director – Regular Design Review, CEQA determination, Tentative Parcel Map for lot merger and new condominiums, and Minor Variances.
- Building Bureau – Building permit.
- Other City Permits – Grading permit, encroachment permit and other related onsite and offsite work permits.

Actions by Other Agencies

- Bay Area Air Quality Management District (BAAQMD) – Issuance of permits for installation and operation of the emergency generator.
- Regional Water Quality Control Board (RWQCB) – Acceptance of a Notice of Intent to obtain coverage under the General Construction Activity Storm Water 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.
- East Bay Municipal Utility District (EBMUD) – Approval of new service requests and water meter installation.
- Alameda County Department of Health Care Services Agency (ACHSA) – Review and approval of risk assessment survey prepared in compliance with deed restriction on property.

VI. SUMMARY OF FINDINGS

An evaluation of the proposed project is provided in the CEQA Analysis below. This evaluation concludes that the proposed project qualifies for an exemption from additional environmental review and the project is consistent with the development density and land use characteristics established by existing zoning and General Plan policies for which an EIR was certified [i.e., the City of Oakland General Plan LUTE and LUTE Environmental Impact Report (EIR) (1998), the General Plan 2007-2014 Housing Element and EIR (2010) and the 2015-2023 Housing Element and Addendum (2014), collectively referred to as the Program EIRs herein]. As such, the proposed project would be required to comply with the applicable mitigation measures identified in the Program EIRs, as well as any applicable City of Oakland SCAs (see Attachment A for a complete list of SCAs referred to and required by this CEQA Analysis). With implementation of the applicable mitigation measures and SCAs, the project would not result in a substantial increase in the severity of significant impacts that were previously identified in the General Plan or any new significant impacts that were not previously identified in the prior EIRs.

In accordance with Public Resources Code Sections 21083.3, 21094.5, and 21166 and State CEQA Guidelines Sections 15183, 15183.3, and 15332, and as set forth in the CEQA Analysis below, the proposed project qualifies for an exemption because the following findings can be made:

- **Class 32 Exemption:** The following analysis demonstrates that the project is consistent with Criterion 15332 (a), (b), (c), (d), and (e), and that no exceptions per CEQA Guidelines Section 15300.2 apply to the project that have not been previously identified and mitigated under the City of Oakland General plan and its supporting EIRs.
- **Community Plan Exemption:** The following analysis demonstrates that the project is consistent with the development density established by existing zoning and General Plan policies for which an EIR was certified (i.e., the Program EIRs). As such, the analysis presents substantial evidence that, other than project-specific effects which may be peculiar to the project or its site, the project's potential contribution to overall cumulatively significant effects has already been addressed as such in the Program EIRs, or will be substantially mitigated by the imposition of SCAs, as further described in Attachment A.
- **Qualified Infill Exemption:** The following analysis demonstrates that the project is located in an urban area on a site that has been previously developed; satisfies the performance standards provided in CEQA Guidelines Appendix M; and is consistent with the General Plan land use designation, density, building intensity and applicable policies. As such, this environmental review is limited to an assessment of whether the project may cause any project-specific effects, and relies on uniformly applicable development policies or standards to substantially mitigate cumulative effects.

- **Program EIRs and Redevelopment Projects:** The analysis in the 2011 Redevelopment Plan Amendments EIR and in this CEQA Analysis demonstrates that the project would not result in substantial changes or involve new information that would warrant preparation of a subsequent EIR, per CEQA Guidelines Section 15162, because the level of development proposed for the site is within the broader development assumptions analyzed in the Previous EIRs. The effects of the proposed project have been addressed in those EIRs and no further environmental documents are required in accordance with CEQA Guidelines Sections CEQA Guidelines Sections 15168 and 15180.

Each of the above findings provides a separate and independent basis for CEQA compliance.

8/4/16

Darin Ranelletti
Environmental Review Officer

Date

VII. CLASS 32 CATEGORICAL EXEMPTION OVERVIEW

Article 19 of the CEQA Guidelines Sections 15300 to 15333, includes a list of classes of projects determined to not have a significant effect on the environment, and therefore are exempt from CEQA. Among the classes of projects that are exempt from CEQA review are those projects that urban infill development, as defined by CEQA Guidelines Section 15332 (Class 32 exemption). Infill projects must meet the following conditions to be exempt:

(a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

(c) The project site has no value as habitat for endangered, rare or threatened species.

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

(e) The site can be adequately served by all required utilities and public services.

Even if a project is ordinarily exempt under any of the potential categorical exemptions, CEQA Guidelines Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. In these cases, the CEQA exemption would not apply to a project. Exceptions to a categorical exemption would occur under the following circumstances:

(a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located. A project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

(b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

(c) *Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.*

(d) *Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.*

(e) *Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.*

(f) *Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.*

The analysis presented in the following section provides substantial evidence that the project properly qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would not have a significant effect on the environment. In addition, the analysis also presents substantial evidence that there are no exceptions that apply to the project or its site, that the project would not have a significant effect on the environment, and that the Class 32 exemption remains applicable.

Further, as outlined in Section IV, Purpose and Summary, the exemption and exception analyses in Sections VIII, Class 32 Categorical Exemption Analysis, and IX, Exceptions To Categorical Exemptions, as well as Attachments B and C, provide substantial evidence to support the use of the:

- Community Plan Exemption;
- Qualified Infill Exemption; and/or
- Program EIRs and Redevelopment Projects.

VIII. CLASS 32 CATEGORICAL EXEMPTION ANALYSIS

The following analysis provides substantial evidence to support a conclusion that the project qualifies for an exemption under CEQA Guidelines Section 15332 as a Class 32 urban infill development, and would not have a significant effect on the environment.

Criterion Section 15332(a): General Plan and Zoning Consistency

Yes	No	
☑	❐	The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

General Plan

The General Plan land use designation for the site is Central Business District (CBD). The intent of the CBD classification is to encourage, support, and enhance the downtown area as a high density, mixed-use urban center of regional importance. The CBD classification includes a mix of large-scale offices, commercial, retail, urban high-rise residential, institutional, open space, cultural, educational, arts, entertainment, service, community facilities, and visitor uses.

The project is a mixed-use development providing multi-family residential units and ground floor retail space in an urban area, consistent with the intent for the CBD. Further, a portion of the project site—301 19th Street (APN 008-0625-002-01)—is identified as a Housing Opportunity Site per the Housing Element, Table C-6 (Site #DJL-27). The project would provide multi-family housing on the site and would be consistent with the intended use for the site as defined by the Housing Element. The project is also aligned with policies set forth in the LUTE of the General Plan as listed below.

- **Policy 10.3 Framework for Housing Densities.** Downtown residential areas should generally be within the Urban Density Residential and Central Business District density range where not otherwise specified. The height and bulk should reflect existing and desired district character, the overall city skyline, and the existence of historic structures or areas.

The project is located within the CBD. For sites in the CBD, the maximum floor area ratio (FAR) is 20.0, and the maximum allowable residential density is 300 units per gross acre. At approximately 220 dwelling units per gross acre and a FAR of 4.5, the proposed project complies with these General Plan development standards.

- **Policy D10.2 Locating Housing.** Housing in the downtown should be encouraged in identifiable districts, within walking distance of the 12th Street, 19th Street, City Center, and Lake Merritt

BART stations to encourage transit use, and in other locations where compatible with surrounding uses.

The project would provide 224 new housing units within the downtown and within walking distance of regional transit access. The project site is less than 0.25 mile from the 19th Street Oakland BART Station.

- **Policy D10.6 Creating Infill Housing.** Infill housing that respects surrounding development and the streetscape should be encouraged in the downtown to strengthen or create distinct districts.

The project site is currently a surface parking lot. The proposed project would provide infill housing that complies with the City's design standards and respects the surrounding streetscape, as specified in the Planning Code and subject to the City's design review process.

- **Policy D11.1 Promoting Mixed-Use Development.** Mixed-use developments should be encouraged in the downtown for such purposed as to promote its diverse character, provide for needed goods and services, support local art and culture, an give incentive to reuse existing vacant or underutilized structures.

The project would redevelop an existing surface parking lot with a mixed-use residential development that would include ground floor retail uses.

- **Policy D11.2 Locating Mixed-Use Development.** Mixed-use development should be allowed in commercial areas, where the residential component is compatible with the desired commercial function of the area.

The project would be generally compatible with the adjacent apartment building immediately adjacent to the south of the project site as it would also provide residential uses, and would complement other adjacent buildings that contain ground floor retail by providing similar types of uses.

Therefore, the project would be consistent with the General Plan policies detailed above as it would construct a mix of commercial and residential uses at densities consistent with the General Plan and provide new infill housing in the downtown.

Zoning

The project site is zoned Central Business District General Commercial (CBD-C) per the City of Oakland Planning Code Section 17.58.01. This section states that "the intent of the CBD-C zone is to create, maintain, and enhance areas of the Central Business District appropriate for a wide range of ground-floor office and other commercial activities. Upper-story spaces are intended to be available for a wide range of residential and office or other commercial activities."

The project proposes approximately 3,709 square feet of ground-floor retail use along the 19th Street frontage and residential uses in the upper floors. The proposed design complies with design standards and regulations of the Planning Code, including but not limited to the following:

- The building conforms to the zero-lot line setback pursuant to the Planning Code, Table 17.58.03.
- The project would include a total of 224 residential units on the approximately 1.02-acre parcel at a residential density of approximately 197 square feet of lot area per unit. This would be less dense than, and would thus comply with, the maximum density of 90 square feet of lot area per unit allowed in CBD-C district pursuant to the Planning Code, Table 17.58.04.
- The proposed project would require a variance for the ground floor height of 13 feet for portions of the ground floor outside of the retail frontage, which is below the minimum 15-foot height pursuant to the Planning Code, Table 17.58.03.
- The project is a total height of 85 feet to the roofline (96.5 feet to the top of mechanical penthouse). The zoning district CBD-C, Height Area 6, has a maximum building base height of 85 feet and has no height limit pursuant to the Planning Code, Table 17.58.04. The project would be consistent with the maximum building base height.
- The project would provide 10,480 square feet of usable open space, which is below the required 16,800 square feet of usable open space (75 square feet per dwelling unit) pursuant to Planning Code Section 17.58.070. Therefore, a variance would be required.

Therefore, the project adheres to the criteria of CEQA Guidelines Section 15332(a) as being consistent with both the General Plan and applicable zoning regulations for the site.

Criterion Section 15332(b): Project Location, Size, and Context

Yes	No	
☑	❐	The proposed development occurs within city limits on a project site of no more than 5 acres substantially surrounded by urban uses

The project site is located within the incorporated limits of the City of Oakland on an approximately 1.02-acre site, and is entirely surrounded by parcels developed with urban land uses and paved public streets as described above in the Project Description and shown in Figure 1. Therefore, the project is consistent with the Section 15332(b).

Criterion Section 15332(c): Endangered, Rare, or Threatened Species

Yes	No	
☑	❒	The project site has no value as habitat for endangered, rare or threatened species.

As described in the Project Description and shown in Figure 1, the project site is a surface parking lot and is almost entirely paved. Limited weedy vegetation is growing on the site and two street trees (Indian laurel fig) are adjacent to the site along 19th Street. In addition, the City of Oakland's Open Space, Conservation, and Recreation (OSCAR) Element indicates that there are no known endangered, rare, or threatened species on or within the immediate vicinity of the project site.[14] Therefore, the project site does not include habitat for endangered, rare or threatened species and is consistent with Section 15332(c).

Criterion Section 15332(d): Traffic, Noise, Air Quality, or Water Quality

Yes	No	
☑	❒	Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

The analysis below describes the project effects for the resource topics in this criterion, organized as follows: traffic, noise, air quality, and water quality.

Traffic

A Transportation Impact Analysis (TIS) was prepared by Nelson\Nygaard Consulting Associates, Inc. for the proposed project (see Attachment D), based on the City of Oakland's CEQA Threshold of Significance Guidelines.[15] As described in Attachment D, the project would result in 1,116 daily vehicle trips (92 AM and 174 PM peak hour). The TIS evaluated the following six study intersections:

- Webster Street/Thomas L. Berkley Way
- Harrison Street/Thomas L. Berkley Way
- Webster Street/19th Street
- Harrison Street/19th Street
- Webster Street/17th Street
- Harrison Street/17th Street

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[14] City of Oakland, 1996. *General* Plan, Open Space, Conservation, and Recreation (OSCAR) Element, Chapter 3, Tables 5 and 6, pp. 3-42-3-43.

[15] The TIS conservatively analyzed a larger development scenario than proposed for the project site and evaluated in this CEQA Analysis. This maximum scenario included 240 residential units and 8,000 square feet of retail uses, which represents a "worst-case" of potential transportation impacts.

The TIS found that the project would not result in significant impacts related to the following topics:

- Existing Plus Project Intersection Analysis – The study intersections would operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours under existing (no project) conditions, and would continue to operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours with the project.
- 2040 Plus Project Intersection Analysis – The study intersections would operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours under cumulative (no project) conditions. In addition, the project would not result in any significant traffic impacts that would be cumulatively considerable, as all of the study intersections would continue to operate at acceptable LOS conditions.
- Congestion Management Program (CMP) – The project would not result in any impacts to the CMP network.
- Transit travel time – The project would result in a less-than-significant impact to transit travel times.
- Plans and Policies – The project would be consistent with City policies and programs.

In addition, the traffic safety analysis identified the following four recommended measures to address potential conflicts with pedestrians, bicyclists, activities during construction, and parking, although the measures are not required to address CEQA impacts:

Recommendation #1: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies**:**

- Ensure that the project driveway(s) would provide adequate sight distance between motorists exiting the driveway and pedestrians on the adjacent sidewalk. If adequate sight distance cannot be provided, provide audio-visual warning devices at the driveway.
- The Project Sponsor shall install signage at the egress driveway to notify drivers to slow, stop, and yield to any pedestrians walking along the sidewalk (e.g. "Caution: Pedestrians Crossing", "Watch for Pedestrians", "Exit Slowly", "STOP", etc.). The Project Sponsor shall also install rumble strips or similar devices to maintain slow speeds for vehicles exiting the garage.
- The project shall ensure that pedestrians maintain the right of way along all sidewalks adjacent to the project site. Therefore, to maintain an even path of travel for pedestrians crossing the planned driveway, curb cuts should be constructed such that the sidewalks continue to be at-grade and not depress across the driveway thresholds.

Constructing at-grade sidewalks at the driveway locations would also serve as a traffic calming measure which requires vehicles entering or exiting the driveway to considerably reduce their vehicle speeds and yield to any crossing pedestrians prior to entering the sidewalk space.

- Install pedestrian signal heads on all four pedestrian crossings at the 19th Street/Harrison Street intersection if approved by Department of Transportation.

Recommendation #2: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies:

- Ensure adequate bicycle parking in the building that follows bicycle parking guidelines set forth by the Association of Pedestrian and Bicycle Professionals (APBP). Bicycle parking should be safe and secure.
- Consider secure bicycle parking options of the ground floor, instead of the second floor. Bicyclists are more likely to use bicycle parking facilities that are safe and secure on the ground level, than to carry their bicycles upstairs to the second floor.
- Ensure that the short-term bicycle parking spaces on sidewalks do not block pedestrian circulation.
- Install two short-term bicycle parking spaces outside of proposed retail area.
- Consider implementing a bicycle parking corral on 19th Street to support short-term bicycle parking in the retail area.
- Consider providing funds to upgrade bicycle facilities on Webster Street to create a parking-protected bicycle lane as part of Transportation Demand Management Plan.
- Consider sponsoring a Bay Area Bike Share station near the project site as part of a Transportation Demand Management Plan.

Recommendation #3: While not required to address a CEQA impact, the following should be considered during construction as standard city practices that support adopted city policies:

It is recommended that if there are temporary closures of sidewalks, the Project Sponsors shall work with the City to provide temporary walkways for pedestrians. Additionally, with temporary prohibition of on-street parking, the Project Sponsor shall work with the City to ensure adequate advance notice for motorists.

Recommendation #4: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies:

- Given the project site's location near transit and bicycle facilities, and other neighborhood-serving uses, among other transportation facilities, the project sponsor could consider unbundling parking and any reserved parking spaces for residents could be leased separately from the housing.
- Consider dedicated parking spaces for carsharing services such as Zipcar and/or providing discounted or free carsharing memberships to residents as part of the TDM.

As also described in Attachment D, implementation of the City of Oakland's SCAs would lessen the project's potential impacts related to construction activity in the public right-of-way and transportation and parking demand. With the implementation of the required SCAs listed in Attachment A at the end of this CEQA Analysis (for reference, these are **SCA-TRANS-1: Construction Activity in the Public Right-of-Way** [and **SCA-TRANS-2: Transportation and Parking Demand**), the project would not result in significant effects related to traffic. Therefore, the project is consistent with Section 15332(d), traffic.

Noise

The analysis and conclusions described under this environmental topic are derived from an Environmental Noise Memorandum prepared by BASELINE Environmental Consulting (see Attachment E).

As described in Attachment E, implementation of the City of Oakland's SCAs would lessen the impacts of construction period noise, minimize potential adverse vibration effects from project-related construction activities, require compliance with City of Oakland operational noise standards including for noise generated by the HVAC systems and delivery trucks, and require the incorporation of noise reduction measures into the building's design. In addition, Draft Site-Specific Noise Attenuation Measures in accordance with **SCA-NOI-3: Extreme Construction Noise,** identified in Attachment E and described below, would further reduce potential noise impacts.

Draft Site-Specific Noise Attenuation Measures. In accordance with **SCA-NOI-3: Extreme Construction Noise**, the following draft site-specific noise attenuation measures are recommended during project construction:

- Temporary noise barriers will be placed between the proposed construction activities and nearby receptors. The noise barriers may be constructed from plywoodand installed on top of a portable concrete K-Rail system to be able to move and/or adjust the wall location during construction activities. A sound blanket system hung on scaffolding, or other noise reduction materials that result in an equivalent or greater noise reduction than plywood, may also be used. Due to the proximity of the commercial and apartment buildings located at the northern and southern borders of project site, respectively, the use of Sound Transmission Class (STC) rated materials, or other materials that could similarly provide high levels of noise reduction above what plywood or sound blankets alone could provide, should be incorporated into the design of the noise barriers installed at these borders. An STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide.[16] Therefore, using STC-rated materials could substantially increase the level of noise reduction provided by the barrier. The composition, location, height, and width of the barriers during different phases of construction will be determined by a qualified acoustical consultant and incorporated into the Construction Noise Management Plan for the project.

- Best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) will be used for project equipment and trucks during construction wherever feasible. For example, exhaust mufflers on pneumatic tools can lower noise levels by up to about 10 dBA and external jackets can lower noise levels by up to about 5 dBA.
- Noise control blankets will be utilized on the building structure as the building is erected to reduce noise emission from the site. The use of noise control blankets will particularly be targeted to cover the levels of the building that have line of sight with the windows of adjacent receptors;
- Construction equipment will be positioned as far away from noise-sensitive receptors as possible. The project site is surrounded by hard surfaces, and therefore, for every doubling of the distance between a given receptor and construction equipment, noise will be reduced by approximately 6 dBA.

With the implementation of the required SCAs listed above and included in Attachment A at the end of this CEQA Analysis (for reference, these are **SCA-NOI-1: Construction Days/Hours**, **SCA-NOI-2: Construction Noise, SCA-NOI-3: Extreme Construction Noise**, **SCA-NOI-4: Project-Specific Construction Noise Reduction Measures**, **SCA-NOI-5: Construction Noise Complaints, SCA-NOI-6: Exposure to Community Noise**, **SCA-NOI-7: Operational Noise**, and **SCA-NOI-8: Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities**), the project would not result in significant effects related to noise and vibration. Therefore, the project is consistent with Section 15332(d), noise.

[16] U.S. Department of Housing and Urban Development, undated. Noise Notebook, Chapter 4 Supplement, Sound Transmission Class Guidance.

Air Quality

An Air Quality Analysis was prepared by BASELINE Environmental Consulting for the proposed project (see Attachment F), based on the City of Oakland's significance thresholds and the BAAQMD's 2012 *CEQA Air Quality Guidelines*.[17]

As described in the project description and incorporated into the analysis in Attachment F, the project sponsor has committed to using best available control technologies for all off-road diesel equipment. The project would not result in significant impacts related to the following topics:

- **Operational-Phase Criteria Pollutant Emissions** – Estimated emissions for reactive organic gases (ROG), nitrogen oxides (NOx), and particulate matter (PM) with aerodynamic resistance diameters equal to or less than 10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$) during operation would be below the City of Oakland thresholds of significance.
- **Carbon Monoxide (CO)** – The project would meet the screening criteria related to local CO concentrations and would not have significant air quality effects on nearby sensitive receptors related to local CO concentrations.
- **Generation of Toxic Air Contaminants (TACs)** – Project would not introduce any stationary sources that would generate TAC emissions during project operations. The estimated excess cancer risk and chronic Hazard Index from TAC emissions and annual average $PM_{2.5}$ concentration during project construction would be below the City's cumulative thresholds.
- **Odors** – The project would not have impacts related to odors.

As also described in Attachment F, implementation of the City of Oakland's SCAs would lessen the project's impacts related to construction-phase criteria pollutant emissions and cumulative health risks from TAC emissions posed by the project. With the implementation of the required SCAs listed in Attachment A (for reference, these are **SCA-AIR-1: Construction-Related Air Pollution [Dust and Equipment Emissions]** and **SCA-AIR-2: Exposure to Air Pollution [Toxic Air Contaminants]**), the project would not result in significant effects related to air quality. Therefore, the project is consistent with Section 15332(d), air quality.

[17] BAAQMD, 2012. *California Environmental Quality Act Air Quality Guidelines*. May.

Water Quality

Yes	No	
☑	❐	Approval of the project would not result in any significant effects relating to water quality.

The project is located within a highly urbanized environment and there are no lakes, creeks or other surface waters in the immediate proximity. Lake Merritt, which is the nearest surface water body, is approximately 800 feet to the east and is separated from the project site by urban development and Snow Park.

Construction of the project will involve demolition, grading and construction, all of which could result in erosion and/or sedimentation of downstream receiving waters. Since the construction of the project will result in a land disturbance of over one acre, a Stormwater Pollution Prevention Plan (SWPPP) is required to for coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB).

According to a preliminary utility summary[18] prepared for the project, because the project is high-density, within 0.25 mile of a transit hub, and does not include surface parking, the project would qualify for 100 percent Low Impact Development (LID) treatment reduction credits which allow for non-LID treatment (per Provision C.3 of the Municipal Regional Permit[19]). Therefore, the project would direct all storm drainage to a media filter device located inside the building, treating 100 percent of the project site's impervious surface runoff using Bay Area Stormwater Management Agencies Association (BASMAA) approved media filter devices. No hydromodification management measures are required for the proposed project because the project would reduce impervious cover through construction of open space areas on the courtyard and roof terrace.

The proposed project would require excavation of up to 5,000 cubic yards of soil for construction of the building foundation. As indicated in City of Oakland Code of Ordinance Section 15.04.660, projects within the City that propose to excavate more than 500 cubic yards of soil are required to obtain a grading permit. The grading permit would require the proposed project to comply with local and state construction requirements, including the California Building Code, for the design and construction of the proposed project. **SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction** would reduce the project's potential to cause erosion and sedimentation from construction activities.

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[18] Talus Engineering, 2016. Preliminary Utility Summary, 19th & Harrison Street, Oakland, California 94612. March 17.

[19] California Regional Water Quality Control Board, 2015. San Francisco Bay Region Municipal Regional Stormwater NPDES Permit, Order No. R2-2015-0049, NPDES Permit No. CAS612008. November 19.

Under the existing conditions, the project site is almost entirely paved with impervious surfaces totaling 44,237 square feet. The total post-project impervious surface area would be reduced to 43,400 square feet by construction of open spaces on the courtyard and roof terrace. Therefore, given that the site is relatively flat and impervious surface area would be decreased, the potential of the proposed project to substantially alter drainage patterns or increase the flow of runoff would not be significant. The proposed project would also incorporate stormwater treatment measures in compliance with the C.3 requirements and implement the **SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects**.

With implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (**SCA-HYD-1** and **SCA-HYD-2**), the project would comply with the NPDES Permit requirements and reduce potential impacts related to water quality. Therefore, as described above, the project would not result in significant effects related to water quality and is consistent with Section 15332(d), water quality.

Criterion Section 15332(e): Utilities and Public Services

Yes	No	
☑	❐	The site can be adequately served by all required utilities and public services.

On-site utilities would include storm drainage, energy, gas, domestic water, and wastewater. All on-site utilities would be designed in accordance with applicable codes and current engineering practices. The project requires building of two new fire hydrants to serve fire department connections and due to site constraints, backflow prevention for water services would be placed within the project building.[20] The required utilities can be adequately serviced by utility providers. The project applicant would pay all fees in accordance with the City's Master Fee Schedule to fund utility improvements as required.

The increase in residential units is consistent with the General Plan LUTE and LUTE Environmental Impact Report (EIR) (1998), the General Plan 2007-2014 Housing Element and EIR (2010) and the 2015-2023 Housing Element and Addendum (2014)—collectively referred to herein as the Program EIRs—and the proposed project's increase in demand for public services is consistent with these prior CEQA analyses. The proposed project may increase student enrollment at local schools and, pursuant to Senate Bill 50, the project sponsor would be required to pay school impact fees, which are established to offset potential impacts from new development on school facilities. This would be deemed full and complete mitigation. In addition, the proposed project would provide

[20] Talus Engineering, 2016. Preliminary Utility Summary, 19th & Harrison Street, Oakland, California 94612. March 17.

approximately 10,480 square feet of private open space for the residential units, as described in the Project Description above.

With implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (for reference, these are **SCA-UTIL-1: Construction and Demolition Waste Reduction and Recycling**, **SCA-UTIL-2: Underground Utilities**, **SCA-UTIL-3: Recycling Collection and Storage Space**, **SCA-UTIL-4: Green Building Requirements**, **SCA-UTIL-5: Sanitary Sewer System**, and **SCA-UTIL-6: Storm Drain System**), potential impacts to utilities and public services would be reduced. Therefore, the project site can be adequately served by all required utilities and public services and would not result in significant effects, consistent with Section 15332(e), utilities and public services.

IX. EXCEPTIONS TO CATEGORICAL EXEMPTIONS

Under the Class 32 Categorical Exemption Overview, even if a project is ordinarily exempt under any of the potential categorical exemptions, CEQA Guidelines Section 15300.2 provides specific instances where exceptions to otherwise applicable exemptions apply. The following section addresses whether any of the exceptions to the CEQA exemption apply to the project, consistent with CEQA Guidelines Section 15300.2.

Criterion 15300.2(a): Location

Yes	No	
❒	☑	Is there an exception to the exemption for the project due to its location in a particularly sensitive environment, such that the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies?

This exception applies only to CEQA exemptions under Classes 3, 4, 5, 6 or 11. Since the project qualifies as a Class 32 urban infill exemption, this criterion is not applicable and is provided here for information purposes only. There are no environmental resources of hazardous or critical concern that are designated, precisely mapped or officially adopted in the vicinity of the project site, or that could be adversely affected by the project. Therefore, exception under CEQA Guidelines Section 15300.2(a) does not apply to the project.

Criterion 15300.2(b): Cumulative Impact

Yes	No	
❒	☑	Is there an exception to the exemption for the project due to significant cumulative impacts of successive projects of the same type and in the same place, over time?

As demonstrated under Criterion Section 15332(a), General Plan and Zoning Consistency, the project is consistent with the development density allowed under the General Plan and zoning for the site, as well as the portion of the site identified as a Housing Opportunity Site in the Housing Element. There are no peculiar aspects, other than those evaluated herein, that would increase the severity of any of the previously identified significant cumulative effects in the Program EIRs.

Pursuant to the streamlining provisions of CEQA Guidelines Sections 15183 and 15183.3, the cumulative effect of successive projects of the same type in the same place, over time would not be significant. Community Plan Exemption findings and Qualified Infill Exemption findings are provided in Attachments B and C of CEQA Analysis. These additional exemption analyses present findings that an exception under CEQA Guidelines Section 15300.2(b) regarding cumulative effects does not apply to the project.

Criterion 15300.2(c): Significant Effect

Yes	No	
❒	☑	Is there an exception to the exemption for the project because there is a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances?

There are no known unusual circumstances applicable to the project or its site, that have not already been discussed herein, that may result in a significant effect on the environment. Therefore, the exception under CEQA Guidelines Section 15300.2(c) does not apply to the project.

Criterion 15300.2(d): Scenic Highway

Yes	No	
❒	☑	Is there an exception to the exemption for the project because project may result in damage to scenic resources including but not limited to, trees, historic buildings, rock outcroppings or similar resources, within a highway officially designated as a state scenic highway?

The project site does not contain trees, historic buildings, rock outcroppings or similar visual resources, and is not visible from any state scenic highways described in the General Plan's Scenic Highway Element or as identified by California Department of Transportation.[21] The nearest scenic highway is Macarthur Freeway (I-580),[22] which is approximately 1.6 miles northeast of the site; the project site is not visible from I-580. The adjacent buildings at 1734 Webster Street, 1830 Webster Street, and 331 19th Street have various historic ratings per the Oakland Cultural Heritage Survey. However, the proposed project would not impact these buildings and applicable SCAs would reduce potential impacts, as described under Groundborne Vibration above. See also discussion under Criterion 15300.2(f), Historical Resources below. Therefore, the exception under CEQA Guidelines Section 15300.2(d) does not apply to the project.

[21] Department of Transportation, California. 2016. *Officially Designated State Scenic Highways and Historic Parkways, Alameda County*. Accessed March 25. Website: www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

[22] Department of Transportation, California. 2016. *Route 580 – Scenic Highway*. Accessed March 25. Website: www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

Criterion 15300.2(e): Hazardous Waste Sites

Yes	No	
❒	☑	Is there an exception to the exemption for the project because the project is located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code?

The provisions of Government Code Section 65962.5 are commonly referred to as the "Cortese List." The provisions require the Department of Toxic Substance Control (DTSC), the SWRCB, the California Department of Public Health (DPH),[23] and the California Department of Resources Recycling and Recovery (CalRecycle) to submit information pertaining to sites associated with solid waste disposal, hazardous waste disposal, leaking underground tank sites, and/or hazardous materials releases to the Secretary of California Environmental Protection Agency (Cal/EPA). As summarized in Table 2, the project site is not identified on any lists compiled pursuant to Section 65962.5 of the Government Code; therefore, an exception to the exemption under CEQA Guidelines Section 15300.2(e) does not apply to the project.

While the project site has not been identified on any lists compiled pursuant to Government Code Section 65962.5, the parking lot at 1750 Webster Street on the project site has been identified on the SWRCB's GeoTracker database as a "Cleanup Program Site." These sites are non-federally owned sites where recent or historical unauthorized releases of hazardous materials into the environment have occurred and the releases are not strictly from petroleum underground storage tanks. In 2000, the Alameda County Health Care Services Agency (ACHSA) reviewed the site files and concluded that groundwater contamination beneath the site was likely the result of migration of pollutants in the groundwater from an upgradient source. [24] In the site closure letter, ACHSA requested an indoor air quality assessment if any enclosed structure is proposed on the site, to be prepared and submitted for review and approval, and a deed restriction to ensure the site is re-evaluated if site use changes.[25] The soil-gas survey prepared for the project site, described below, addresses ACHSA's requirements for a risk assessment and determined no further action was required. The survey is subject to ACHSA's review and approval.

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[23] Formerly the California Department of Health Services.

[24] Alameda County Health Care Services Agency, 2000. *STID 4617, 1750 Webster Street, Oakland, CA 94612*, p.2. February 16.

[25] Alameda County Health Care Services Agency, 2000. *STID 4617, 1750 Webster Street, Oakland, CA 94612,* p.3. February 16.

TABLE 2 SUMMARY OF CORTESE LIST SEARCH RESULTS

Government Code Section	Responsible Agency	List Description	Project Identified on List?
65962.5(a)(1)	DTSC	List of hazardous waste facilities where DTSC have taken or contracted for corrective action because the owner failed to comply with an order or DTSC determined that immediate corrective action was necessary to abate an imminent or substantial endangerment.	No
65962.5(a)(2)	DTSC	List of all land designated as hazardous waste property or border zone property.	No
65962.5(a)(3)	DTSC	List of probable unauthorized disposal of hazardous waste on, under or into the land which the city, county, or state agency owns or leases. As of 1 April 2016, DTSC has not maintained or submitted a list of these records to Cal/EPA, but has indicated that they plan to in the future.	No
65962.5(a)(4)	DTSC	List of sites where a hazardous substance release has been confirmed by on-site sampling and a response action is required.	No
65962.5(a)(5)	DTSC	List of sites in the Abandoned Site Assessment Program. DTSC concluded the Abandoned Site Assessment Program in the 1990's and no longer maintains or submits a list of these records to Cal/EPA.	No
65962.5(b)	DPH	List of all public drinking water wells that contain detectable levels of organic contaminants or require water quality analysis. Since all required analyses required for this list were to have been completed by 1988, DHS no longer submits a list of these records to Cal/EPA. In addition, DHS does not provide the location of public drinking water wells to the public.	No
65962.5(c)(1)	SWRCB	List of all underground storage tanks for which an unauthorized release report is filed. The SWRCB provides information about "Leaking Underground Storage Tank Cleanup Sites" in its GeoTracker database, which includes reports filed each year going back to fiscal year 1996/1997. According to SWRCB, both "active" and "closed" sites are included on the list.	No
65962.5(c)(2)	SWRCB	List of all solid waste disposal facilities from which there is a migration of hazardous waste into water.	No
65962.5(c)(3)	SWRCB	List of sites for which either a Cease and Desist Order or a Cleanup or Abatement Order was issued that concerns the discharge of wastes that are hazardous materials.	No

Government Code Section	Responsible Agency	List Description	Project Identified on List?
65962.5(d)	CalRecycle	Former list of solid waste disposal facilities from which there is a known migration of hazardous waste. Subsequent legislation (AB 1220 Solid Waste Disposal Regulatory Reform Act of 1993) superseded this requirement, and lists compiled under Sections of 65962.5(c)(2) and/or 65962.5(c)(3) should capture this information.	No

Source: Baseline, 2016.

Subsequent environmental assessments and investigations indicate that hazardous materials remain in groundwater beneath the project site. In November 2015, a Phase I Environmental Site Assessment (ESA) was prepared for the project site and five adjoining parcels south of the project site along Harrison Street (Parcel Numbers 008-0625-004 through 008-0625-008).[26] In accordance with American Society for Testing and Materials (ASTM) standard Practice E1527-13, the Phase I ESA identified the following Recognized Environmental Conditions on the project site:

- Elevated concentrations of petroleum hydrocarbons and chlorinated solvents in groundwater beneath 1750 Webster Street (the west portion of the project site) from potential upgradient sources;
- A former gasoline service station at 1833 and/or 1839 Harrison Street (the northeastern portion of the project site);
- A potential underground storage tank on the south-central portion of the 301 19th Street property (the eastern portion of the project site);
- Potentially elevated concentrations of lead and/or asbestos-containing materials (ACMs) in the surficial soil from historical residences that used to occupy every parcel at the project site until the late 1940s to early 1950s; and
- Potential metal residues in surficial soils from a former printing facility at 1817 Harrison Street (the eastern portion of the project site).

The Phase I ESA did not identify any environmental liens or use limitations for the parcels. Based on the findings of the Phase I ESA, the following subsurface investigations were performed to evaluate the chemical quality of soil, groundwater, and soil gas beneath the project site:

[26] GeoSolve, Inc., 2015. *Phase I Environmental Site Assessment on 1750 Webster Street and 30119th Street, APNs 008-625-016; 008-625-017; 008-625-018; 008-625-002-1; 008-625-004; 008-625-005; 008-625-006; 008-625-007; and 008-625-008 Oakland, California 94545*. November 6.

- Phase II Environmental Site Assessment, Parking Lot Parcels, 1750 Webster Street and 301 19th Street, APNs 008-0625-016; 008-0625-017; and 008-0625-002-1;[27]
- Additional Phase II Environmental Site Assessment, Parking Lot Parcels, 1750 Webster Street, 008-0625-017;[28]
- Phase II Environmental Site Assessment, Parking Lot Parcel, 1810 Webster Street, APN 008-0625-018;[29] and
- Soil-Gas Survey, Parking Lot Parcels, 1750 Webster Street and 301 19th Street, APNs 008-0625-016; 008-0625-017; 008-0625-018; and 008-0625-002-1.[30]

Based on the previous environmental investigations, groundwater generally flows to the northeast and is about 20 feet below ground surface. The previous investigations did not identify elevated concentrations of petroleum hydrocarbons, lead, or chlorinated solvents in soil samples collected above the water table at the project site. The previous investigations identified elevated concentrations of petroleum hydrocarbons in groundwater samples collected across the project site that reportedly originate from an off-site and upgradient source. Since no sources of soil or groundwater contamination were identified at the project site, the Phase II Environmental Site Assessments for 1750 and 1810 Webster Street did not recommend additional investigation and/or remedial action. The soil-gas survey did not identify elevated concentrations of petroleum hydrocarbons and chlorinated solvents in soil gas samples collected across the project site, except for benzene reported in one soil-gas sample located on the east side of the project site. Based on the soil-gas sampling results, it was reported that soil-gas vapor intrusion from the groundwater to the shallow vadose zone is not occurring at the project site and additional investigation and/or remedial action was not necessary.

The proposed project would be required to follow the applicable laws and regulations related to transportation, use, and storage of all hazardous materials and to safeguard workers and the general public. The project would be subject to the City of Oakland's **SCA-HAZ-1: Hazardous Materials Related to Construction**, which requires implementation of best management practices for hazardous materials during construction.

In accordance with **SCA-HAZ-2: Site Contamination**, the Phase I and II ESAs prepared for the project, described above, must be submitted to and approved by the Oakland Fire

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[27] GeoSolve, Inc., 2015. *Phase II Environmental Site Assessment, Parking Lot Parcels, 1750 Webster Street and 301 19th Street, APNs 008-0625-016; 008-0625-017; and 008-0625-002-1, Oakland, California.* November 7.

[28] GeoSolve, Inc., 2015. *Additional Phase II Environmental Site Assessment, Parking Lot Parcels, 1750 Webster Street, 008-0625-017, Oakland.* December 23.

[29] GeoSolve, Inc., 2016. *Phase II Environmental Site Assessment, Parking Lot Parcel, 1810 Webster Street, APN 008-0625-018, Oakland, California.* February 12.

[30] GeoSolve, Inc., 2016. *Soil-Gas Survey, Parking Lot Parcels, 1750 Webster Street and 301 19th Street, APNs 008-0625-016; 008-0625-017; 008-0625-018; and 008-0625-002-1, Oakland, California.* February 22.

Department. Although no remedial actions are recommended in the Phase II ESA, the project sponsor is required to prepare and implement a Health and Safety Plan to protect project construction workers from risks associated with exposure to hazardous materials if encountered, consistent with SCA-HAZ-2. The Health and Safety Plan would include, but is not limited to, measures related to personal protective equipment, exposure monitoring, emergency response plan, and a training program. In addition, SCA-HAZ-2 requires the implementation of best management practices for the handling of contaminated soil and groundwater discovered during construction activities to ensure their proper storage, treatment, transport, and disposal. Specifically, SCA-HAZ-2 would require that all suspect soil be stockpiled on-site in a secure and safe manner and adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. If new or more significant contamination is encountered during site redevelopment earthwork, the project sponsor shall confirm that any cleanup actions are performed consistent with applicable laws and local agency requirements as required. Implementation of SCA-HAZ-2 will be reviewed, approved, and overseen by the City, and any applicable regulatory agency, as required by law.

Consistent with the requirements of CEQA, a determination of whether the project would have a significant impact will occur as part of the preparation of this document prior to the approval of the proposed project and, where applicable, standard conditions of approval have been identified that will mitigate them. In some instances, exactly how the measures/conditions identified will be achieved awaits completion of future studies, an approach that is legally permissible where measures/conditions are known to be feasible for the impact identified, where subsequent compliance with identified federal, state or local regulations or requirements apply, where specific performance criteria is specified and required, and where the proposed project commits to developing measures that comply with the requirements and criteria identified.

Therefore, with the implementation of the required SCAs listed in Attachment A at the end of the CEQA Analysis (**SCA-HAZ-1: Hazardous Materials Related to Construction, SCA-HAZ-2: Site Contamination, SCA-HAZ-3: Hazardous Materials Business Plan**), project's potential impacts related to the disturbance of potential soil and/or groundwater contamination would not be significant.

Criterion 15300.2(f): Historical Resources

Yes	No	
❒	☑	Is there an exception to the exemption for the project because the project may cause a substantial adverse change in the significance of a historical resource?

Historic Architectural Resources

The project site is occupied by surface parking lots and there are no buildings on the site. Therefore, the project would not have any direct impacts to historical resources. Historic resources in the immediate vicinity of the project site include the following buildings:

- 1830 Webster Street/337-343 19th Street, a store and office building constructed in 1928, two stories in height (PDHP, OCHS Rating is Dc3), adjacent to and immediately north of the project site;
- 351-61 19th Street, an Art Deco store building constructed in 1946, one story in height (Local Register, OCHS Rating is F3), across Webster Street, catty-corner to the project site;
- 1732-36 Webster Street, a Renaissance Revival apartment building constructed in 1926-27 called the Mentone Arms, four stories in height (Local Register, OCHS Rating is B3+), adjacent to and immediately south of the project site; and
- 1711-39 Webster Street, a decorative brick garage and store building constructed in 1924, two stories in height (Local Register, OCHS Rating is D3), across Webster Street.

The project would not indirectly materially impair any of the adjacent historic resources, either within the same block or in adjacent blocks. While the project would be taller than the existing building stock surrounding the site, and could cast some shadows on these nearby historic resources, any shadows would be cast for a short period of the day.

Specifically, the project would also shade a small portion of the nearby historic Leamington Hotel at 1814 Franklin Street (Landmark 86-154) during the early morning hours during the winter solstice; however, by about 9 a.m., the shadow would no longer shade the hotel. This shading would not materially impair any of the physical character-defining features of this historic building.

Overall, the extent of the shadows would not materially impair adjacent resources' historic significance by materially altering the physical characteristics of the resources that convey their historical significance and that justify their inclusion on or eligibility for listing in any federal, state or local registers.

The 17th Street Commercial Historic District is located south of the project site across 17th Street. The project site is neither located within the District nor directly adjacent to the District—17th Street, Webster Street and the approved 1700 Webster project lie between.

The project would not result in indirect substantial adverse changes to the significance of the District.

With required implementation of **SCA-NOI-8: Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities** described under Criterion Section 15332(d) Noise above and in Attachment E, Noise and Vibration Analysis, potential adverse vibration effects on adjacent historic architectural resources would not be significant, and the exception under CEQA Guidelines Section 15300.2(f) does not apply.

Archaeological Resources

The project site is located within an urbanized portion of the downtown, has been previously developed and is surrounded by other urban development. While no archaeological research, investigations or database searches have been conducted for the project site, archaeological studies have been conducted for areas that are not far removed from the site.[31] These studies indicate that the general area is potentially sensitive for archaeological and buried sites that are obscured by urban development, the area has low to moderate paleontological sensitivity and fossils could be discovered during excavation, and the inadvertent discovery of human remains during ground-disturbing activities could occur.

Implementation of **SCA-CULT-1: Archaeological and Paleontological Resources – Discovery During Construction** and **SCA-CULT-2: Human Remains – Discovery during Construction** would ensure that appropriate procedures would be followed in the event of accidental discovery of archaeological resources or human remains to minimize potential risks of impact during project construction. With required implementation of these SCAs, potential adverse effect on as-yet undiscovered archaeological and/or historic resources would not be significant. Therefore, the exception under CEQA Guidelines Section 15300.2(f) does not apply to the project.

Criterion 15300.2: Other Potential Effects

Yes	No	
❐	☑	Is there an exception to the exemption for the project because the project may result in substantial adverse impacts other than those discussed above?

Shade and Shadow

Based on City of Oakland significance threshold criteria, potential adverse effects pertaining to shadows from new buildings within the downtown area of Oakland were also considered as described below.

[31] City of Oakland, 2014. Broadway-Valdez Specific Plan EIR.

Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it were to introduce landscape that would cast substantial shadows on existing solar collectors; if it were to cast a shadow that substantially impairs the function of a building using passive solar energy; if it were to cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or if it were to cast a shadow on an historic resource 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 designation as an historic resource.

A shadow analysis has been prepared for the project (see Attachment G), which shows shadows that would be cast by the building at 9:00 a.m., 12:00 p.m., and 3:00 p.m. for the summer solstice (June 21st), spring/fall equinoxes (March 20th and September 22nd), and winter solstice (December 21st), based on City of Oakland significance threshold criteria.

The shadow analysis demonstrates that the project would cast some shadows throughout the year across Webster Street and along a portion of 19th Street. The project would not cast new shadows on Lake Merritt and the project would not cast shadows on Snow Park during the day from 9:00 a.m. to 3:00 p.m., during the peak use of the park. The project would start to cast some new shadows on the park after 3:00 p.m., when the park is largely shaded under existing conditions. These shadows would be greatest during the winter period from October to February and would shade a portion of the existing unshaded area of the park, starting around 4 p.m. By 5 p.m., the project would shade approximately 15 percent of the park area, which is unshaded under existing conditions. Maximum shading from the project would occur on the park around 5:30 p.m., and would cover approximately 25 percent of the park area, which is unshaded under existing conditions. This shading would not be substantial and would not impair the use of the space. In addition, shading would occur when the sun is low in the sky and the majority of the park is already shaded.

The cumulative conditions assesses the project's potential impacts along with other proposed projects in the vicinity that have the potential to cast shadow on Snow Park – the proposed 1700 Webster Street project, the 222 19th Street project, and the 1900 Broadway project. The cumulative projects would shade the currently unshaded portion of the park starting in the late afternoon around 4 p.m. By 5 p.m., cumulative shading would cover the majority of the existing unshaded portion of the park, which is approximately 30 percent of park area. The project's contribution to this shading would largely coincide with the shading from other cumulative projects. Therefore, the project would have a minor contribution to this cumulative shading on Snow Park as described above, given that new shading of the park by the project would occur only in the winter in the late afternoon, and thus would not substantially affect or change the use of the park.

Potential shadow impacts on adjacent historic resources are discussed under CEQA Guidelines Section 15300.2(f).

Overall, the project would not have a significant shadow impact.

Greenhouse Gases Emissions

Based on City of Oakland significance threshold criteria, potential project-level impacts pertaining to greenhouse gas emissions were also considered as summarized below and detailed in Attachment H, Greenhouse Gas Emissions Analysis.

The City's significance threshold criterion states that a project would have a significant impact on the environment if it would generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment. Specifically, a significant impact would occur if:

- For a project involving a stationary source, produce total emissions of more than 10,000 metric tons of CO2e annually [NOTE: Stationary sources are projects that require a BAAQMD permit to operate.].
- For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO2e annually **<u>and</u>** more than 4.6 metric tons of CO2e per service population annually.

The project's construction and operational emissions of GHGs, expressed as CO2e emissions, were modeled using methodology recommended by the Bay Area Air Quality Management District (BAAQMD). The project's estimated CO2e emissions exceeded the City's annual emissions threshold, but were below the efficiency-based threshold in terms of annual emissions per service population (see Attachment H, Table B2). Therefore, the project would not exceed the significance threshold identified above and thus would not have a significant impact in relation to GHG emissions.

The project is also required to determine if a GHG Reduction Plan is required in accordance with the City' SCAs. The City's current SCA for a GHG Reduction Plan (Greenhouse Gas (GHG) Reduction Plan) applies to any project that meets one of three scenarios. The proposed project does not meet any one of these three scenarios (see Attachment H for a detailed discussion) and therefore is not required to implement the Greenhouse Gas (GHG) Reduction Plan SCA.

Overall, the project would not have a significant GHG impact.

ATTACHMENT A:
CITY OF OAKLAND – STANDARD CONDITIONS OF APPROVAL

The City of Oakland's Uniformly Applied Development Standards adopted as Standard Conditions of Approval (Standard Conditions of Approval, or SCAs) were originally adopted by the City in 2008 (Ordinance No. 12899 C.M.S.) pursuant to Public Resources Code section 21083.3) and have been incrementally updated over time. The SCAs 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, Green Building Ordinance, historic/Landmark status, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects.

These SCAs are incorporated into projects as conditions of approval, regardless of the determination of a project's environmental impacts. As applicable, the SCAs are adopted as requirements of an individual project when it is approved by the City, and are designed to, and will, avoid or substantially reduce a project's environmental effects.

In reviewing project applications, the City determines which SCAs apply based upon the zoning district, community plan, and the type of permits/approvals required for the project. Depending on the specific characteristics of the project type and/or project site, the City will determine which SCAs apply to a specific project. Because these SCAs are mandatory City requirements imposed on a city-wide basis, environmental analyses assume that these SCAs will be imposed and implemented by the project, and are not imposed as mitigation measures under CEQA.

All SCAs identified in the CEQA Analysis—which is consistent with the measures and conditions presented in the City of Oakland General Plan, Land Use and Transportation EIR (LUTE EIR, 1998)—are included herein. To the extent that any SCA identified in the CEQA Analysis was inadvertently omitted, it is automatically incorporated herein by reference.

- The first column identifies the SCA applicable to that topic in the CEQA Analysis.
- The second column identifies the monitoring schedule or timing applicable to the project.
- The third column names the party responsible for monitoring the required action for the project.

In addition to the SCAs identified and discussed in the CEQA Analysis, other SCAs that are applicable to the project are included herein.

The project sponsor is responsible for compliance with any recommendations in approved technical reports and with all SCAs set forth herein at its sole cost and expense, unless otherwise expressly provided in a specific SCA, and subject to the review and approval of the City of Oakland. Overall monitoring and compliance with the SCAs will be the responsibility of the Planning and Zoning Division. Prior to the issuance of a demolition, grading, and/or construction permit, the project sponsor shall pay the applicable mitigation and monitoring fee to the City in accordance with the City's Master Fee Schedule.

Note that the SCAs included in this document are referred to using an abbreviation for the environmental topic area and are numbered sequentially for each topic area—i.e., **SCA-AIR-1**, **SCA-AIR-2**, etc. The SCA title and the SCA number that corresponds to the City's master SCA list are also provided—i.e., **SCA-AIR-1: Construction-Related Air Pollution (Dust and Equipment Emissions) (#19)**.

<table>
<tr><th rowspan="2">Standard Conditions of Approval</th><th colspan="3">Implementation/Monitoring</th></tr>
<tr><th>When Required</th><th>Initial Approval</th><th>Monitoring/ Inspection</th></tr>
<tr><td colspan="4">Aesthetics, Shadow and Wind</td></tr>
<tr><td>SCA-AES-1: Graffiti Control. (#16)
a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
iii. Use of paint with anti-graffiti coating.
iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.
b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include:
i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
ii. Covering with new paint to match the color of the surrounding surface.
iii. Replacing with new surfacing (with City permits if required).</td><td>Ongoing</td><td>N/A</td><td>Bureau of Building</td></tr>
<tr><td>SCA-AES-2: Landscape Plan. (#17)
a. Landscape Plan Required
The project applicant shall submit a final Landscape Plan for City review and approval that is consistent with the approved Landscape Plan. The Landscape Plan shall be included with the set of drawings submitted for the construction-related permit and shall comply with the landscape requirements of chapter 17.124 of the Planning Code.</td><td>Prior to approval of construction-related permit</td><td>Bureau of Planning</td><td>N/A</td></tr>
<tr><td>b. Landscape Installation
The project applicant shall implement the approved Landscape Plan unless a bond, cash deposit, letter of credit, or other equivalent instrument acceptable</td><td>Prior to building permit final</td><td>Bureau of Planning</td><td>Bureau of Building</td></tr>
</table>

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
to the Director of City Planning, is provided. The financial instrument shall equal the greater of $2,500 or the estimated cost of implementing the Landscape Plan based on a licensed contractor's bid.			
c. *Landscape Maintenance* All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. The property owner shall be responsible for maintaining planting in adjacent public rights-of-way. All required fences, walls, and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.	Ongoing	N/A	Bureau of Building
SCA-AES-3: Lighting. (#18) Proposed new exterior lighting fixtures shall be adequately shielded to a point below the light bulb and reflector to prevent unnecessary glare onto adjacent properties.	Prior to building permit final	N/A	Bureau of Building
Air Quality			
SCA-AIR-1: Construction-Related Air Pollution (Dust and Equipment Emissions). (#19) The project applicant shall implement all of the following applicable air pollution control measures during construction of the project: a. Water all exposed surfaces of active construction areas at least twice daily. 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 feasible. 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. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.	During construction	N/A	Bureau of Planning

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
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 on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in 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. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations"). i. 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. j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas. k. 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. l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph. m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways. n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
o. 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. p. 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. q. 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. r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time. s. All trucks and equipment, including tires, shall be washed off prior to leaving the site. t. 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. u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met. v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings). w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM. x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard. y. Post a publicly-visible large on-site sign that includes the contact name and phone number for			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.			
Note: Screening analysis demonstrated that the proposed project would be below the applicable threshold. No further action is required under this SCA. **SCA-AIR-2: Exposure to Air Pollution (Toxic Air Contaminants). (#20)** *a. Health Risk Reduction Measures* The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods: i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/ users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City. – or – ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City: • Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of	Prior to Approval of Construction-Related Permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection

implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
• Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph).
• Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
• The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
• Sensitive receptors shall be located on the upper floors of buildings, if feasible.
• Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).
• Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
• Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
• Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
  • Installing electrical hook-ups for diesel trucks at loading docks.
  • Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
  • Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
  • Prohibiting trucks from idling for more than two minutes.
  • Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
b. Maintenance of Health Risk Reduction Measures: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.	Ongoing	N/A	Bureau of Building
Note: No stationary sources of TAC emissions (e.g., backup generator) are proposed for the project. Thus, no further action is required under this SCA. **SCA-AIR-3: Stationary Sources of Air Pollution (Toxic Air Contaminants). (#21)** The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to on-site stationary sources of toxic air contaminants.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
Biological Resources			
SCA-BIO-1: Tree Removal During Bird Breeding Season. (#26) To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of birds shall not occur during the bird breeding season of February 1 to August 15 (or during December 15 to August 15 for trees located in or near marsh, wetland, or aquatic habitats). If tree removal must occur during the bird breeding season, all trees to be removed 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 and shall be submitted to the City for review and approval. If 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 California Department of Fish and Wildlife, and will be based 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 disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.	Prior to removal of trees	Bureau of Building.	Bureau of Building.

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
SCA-BIO-2: Tree Permit. (#27) *a. Tree Permit Required* Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.	Prior to approval of construction-related permit	Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building	Bureau of Building
b. Tree Protection During Construction 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: i. 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 project's consulting arborist. 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. ii. 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 project's consulting arborist 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. iii. 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 project's consulting arborist 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	During construction	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring When Required	Initial Approval	Monitoring/ Inspection
operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. 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. iv. 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. v. 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 Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. 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. vi. 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.			
c. Tree Replacement Plantings Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria: **i.** No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered. **ii.** Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or	Prior to building permit final	Public Works Department, Tree Division	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
other tree species acceptable to the Tree Division. **iii.** Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate. **iv.** Minimum planting areas must be available on site as follows: • For Sequoia sempervirens, three hundred fifteen (315) square feet per tree; • For other species listed, seven hundred (700) square feet per tree. **v.** In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians. **vi.** The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.			
Cultural Resources			
SCA-CULT-1: Archaeological and Paleontological Resources – Discovery During Construction. (#29) Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented. In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense. In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
SCA-CULT-2: Human Remains – Discovery during Construction. (#31) Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event 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 California Health and Safety Code. 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 and at the expense of the project applicant.	During Construction	N/A	Bureau of Building
Geology and Soils			
SCA-GEO-1: Construction-Related Permit(s). (#33) The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
SCA-GEO-2: Soils Report. (#34) The project applicant shall submit a soils report prepared by a registered geotechnical engineer for City review and approval. The soils report shall contain, at a minimum, field test results and observations regarding the nature, distribution and strength of existing soils, and recommendations for appropriate grading practices and project design. The project applicant shall implement the recommendations contained in the approved report during project design and construction.	Prior to approval of construction-related permit	Bureau of Building	Bureau of Building
Hazards and Hazardous Materials			
SCA-HAZ-1: Hazardous Materials Related to Construction. (#39) The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following: a. Follow manufacture's recommendations for 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. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and 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 project 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 notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, 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.			
SCA-HAZ-2: Site Contamination. (#40) *a. Environmental Site Assessment Required* The project applicant shall submit a Phase I Environmental Site Assessment report, and Phase II Environmental Site Assessment report if warranted by the Phase I report, for the project site for review and approval by the City. The report(s) shall be prepared by a qualified environmental assessment professional and include recommendations for remedial action, as appropriate, for hazardous materials. The project applicant shall implement the approved recommendations and submit to the City evidence of approval for any proposed remedial action and required clearances by the applicable local, state, or	Prior to Approval of Construction-Related Permit	Oakland Fire Department	Oakland Fire Department

Standard Conditions of Approval	Implementation/Monitoring When Required	Initial Approval	Monitoring/ Inspection
federal regulatory agency.			
b. Health and Safety Plan Required The project applicant shall submit a Health and Safety Plan for the review and approval by the City in order to protect project construction workers from risks associated with hazardous materials. The project applicant shall implement the approved Plan.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building
c. Best Management Practices (BMPs) Required for Contaminated Sites The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential soil and groundwater hazards. These shall include the following: i. Soil generated by construction activities shall be stockpiled on-site 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 requirements. ii. Groundwater pumped from the subsurface shall be contained on-site 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. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building.	During construction	N/A	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
SCA-HAZ-3: Hazardous Materials Business Plan. (#41) The project applicant shall submit a Hazardous Materials Business Plan for review and approval by the City, and shall implement the approved Plan. The approved Plan shall be kept on file with the City and the project applicant shall update the Plan as applicable. The purpose of the Hazardous Materials Business Plan is to ensure that employees are adequately trained to handle hazardous materials and provides information to the Fire Department should emergency response be required. Hazardous materials shall be handled in accordance with all applicable local, state, and federal requirements. The Hazardous Materials Business Plan shall include the following: a. The types of hazardous materials or chemicals stored and/or used on-site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids. b. The location of such hazardous materials. c. An emergency response plan including employee training information. A plan that describes the manner in which these materials are handled, transported, and disposed.	Prior to building permit final	Oakland Fire Department	Oakland Fire Department
Hydrology and Water Quality			
SCA-HYD-1: Erosion and Sedimentation Control Plan for Construction. (#45) *a. Erosion and Sedimentation Control Plan Required* The project applicant shall submit an Erosion and Sedimentation Control Plan to the City for review and approval. 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 and/or construction 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 City. The Plan shall specify	Prior to Approval of Construction-Related Permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
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.			
b. *Erosion and Sedimentation Control During Construction* Requirement: The project applicant shall implement the approved Erosion and Sedimentation Control Plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Bureau of Building.	During Construction	N/A	Bureau of Building
SCA-HYD-2: NPDES C.3 Stormwater Requirements for Regulated Projects. (#50) a. *Post-Construction Stormwater Management Plan Required* The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following: i. Location and size of new and replaced impervious surface; ii. Directional surface flow of stormwater runoff; iii. Location of proposed on-site storm drain lines; iv. Site design measures to reduce the amount of impervious surface area; v. Source control measures to limit stormwater pollution; vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and vii. Hydromodification management measures, if required by Provision C.3, so that post-project stormwater runoff flow and duration match pre-project runoff.	Prior to Approval of Construction-Related Permit	Bureau of Planning; Bureau of Building	Bureau of Building
b. *Maintenance Agreement Required* The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following: i. The project applicant accepting responsibility for the adequate installation/construction, operation,	Prior to Building Permit Final	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring: When Required	Implementation/Monitoring: Initial Approval	Implementation/Monitoring: Monitoring/ Inspection
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 ii. 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 maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.			
SCA-HYD-3: State Construction General Permit. (#46) The project applicant shall comply with the requirements of the Construction General Permit issued by the State Water Resources Control Board (SWRCB). The project applicant shall submit a Notice of Intent (NOI), Stormwater Pollution Prevention Plan (SWPPP), and other required Permit Registration Documents to SWRCB. The project applicant shall submit evidence of compliance with Permit requirements to the City.	Prior to approval of construction-related permit	State Water Resources Control Board; evidence of compliance submitted to Bureau of Building	State Water Resources Control Board
Noise			
SCA-NOI-1: Construction Days/Hours. (#58) The project applicant shall comply with the following restrictions concerning construction days and hours: a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday. c. No construction is allowed on Sunday or federal holidays. 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.	During Construction	N/A	Bureau of Building

<table>
<tr><th rowspan="2">Standard Conditions of Approval</th><th colspan="3">Implementation/Monitoring</th></tr>
<tr><th>When Required</th><th>Initial Approval</th><th>Monitoring/ Inspection</th></tr>
<tr><td>Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.</td><td></td><td></td><td></td></tr>
<tr><td>SCA-NOI-2: Construction Noise. (#59)
The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:
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. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered 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, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
c. Applicant shall use temporary power poles instead of generators where feasible.
d. Stationary noise sources shall be located as far from adjacent properties as possible, and they</td><td>During Construction</td><td>N/A</td><td>Bureau of Building</td></tr>
</table>

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction. e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.			
SCA-NOI-3: Extreme Construction Noise. (#60) *a. Construction Noise Management Plan Required* Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following: i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings; ii. 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; iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site; iv. 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 implement such measure if such measures are feasible and would noticeably reduce noise impacts; and v. Monitor the effectiveness of noise attenuation measures by taking noise measurements. Based on the potential noise impacts from construction equipment to nearby sensitive receptors, the following draft site-specific noise attenuation measures are additionally recommended for inclusion in the Construction Noise Management Plan: • Temporary noise barriers will be placed between the	Prior to Approval	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
proposed construction activities and nearby receptors. The noise barriers may be constructed from plywood and installed on top of a portable concrete K-Rail system to be able to move and/or adjust the wall location during construction activities. A sound blanket system hung on scaffolding, or other noise reduction materials that result in an equivalent or greater noise reduction than plywood, may also be used. Due to the proximity of the commercial and apartment buildings located at the northern and southern borders of project site, respectively, the use of Sound Transmission Class (STC) rated materials, or other materials that could similarly provide high levels of noise reduction above what plywood or sound blankets alone could provide, should be incorporated into the design of the noise barriers installed at these borders. An STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide. Therefore, using STC-rated materials could substantially increase the level of noise reduction provided by the barrier. The composition, location, height, and width of the barriers during different phases of construction will be determined by a qualified acoustical consultant and incorporated into the Construction Noise Management Plan for the project. • Best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) will be used for project equipment and trucks during construction wherever feasible. For example, exhaust mufflers on pneumatic tools can lower noise levels by up to about 10 dBA and external jackets can lower noise levels by up to about 5 dBA. • Noise control blankets will be utilized on the building structure as the building is erected to reduce noise emission from the site. The use of noise control blankets will particularly be targeted to cover the levels of the building that have line of sight with the windows of adjacent receptors; • Construction equipment will be positioned as far away from noise-sensitive receptors as possible. The project site is surrounded by hard surfaces, and therefore, for every doubling of the distance between a given receptor and construction equipment, noise will be reduced by approximately 6 dBA.			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
b. Public Notification Required The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.			
SCA-NOI-4: Project-Specific Construction Noise Reduction Measures. (#61) The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction noise impacts. The project applicant shall implement the approved Plan during construction.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building
SCA-NOI-5: Construction Noise Complaints. (#62) The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a. Designation of an on-site construction complaint and enforcement manager for the project; b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit; c. Protocols for receiving, responding to, and tracking received complaints; and d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building
SCA-NOI-6: Exposure to Community Noise. (#63) The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door	Prior to Approval of Construction-Related Permit	Bureau of Planning	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following: a. 45 dBA: Residential activities, civic activities, hotels. b. 50 dBA: Administrative offices; group assembly activities. c. 55 dBA: Commercial activities. d. 65 dBA: Industrial activities.			
SCA-NOI-7: Operational Noise. (#64) Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 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 City.	Ongoing	N/A	Bureau of Building
SCA-NOI-8: Vibration Impacts on Adjacent Historic Structures or Vibration-Sensitive Activities. (#66) The project applicant shall submit a Vibration Analysis prepared by an acoustical and/or structural engineer or other appropriate qualified professional for City review and approval that establishes pre-construction baseline conditions and threshold levels of vibration that could damage the structure and/or substantially interfere with activities located at: • 1711–39 Webster, a 1924 decorative brick garage and store building, two stories in height (Local Register, OCHS Rating is D3). • 1830 Webster/337-343 19th Street, a 1928 store and office building, two stories in height (PDHP, OCHS Rating is Dc3). • 351–61 19th Street, a 1946 Art Deco store building, one story in height (Local Register, OCHS Rating is F3). • 1732–36 Webster Street, a 1926-27 Renaissance Revival apartment building called the Mentone Arms, four stories in height (Local Register, OCHS Rating is B+3). The Vibration Analysis shall identify design means and methods of construction that shall be utilized in order to not exceed the thresholds. Design considerations may include operating heavy-construction equipment as far away from vibration-	Prior to Construction	Bureau of Building	Bureau of Building

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
sensitive sites as possible and not performing demolition, earth-moving, and other ground-impacting operations simultaneously. The applicant shall implement the recommendations during construction.			
Transportation /Traffic			
SCA-TRANS-1: Construction Activity in the Public Right-of-Way. (#68) *a. Obstruction Permit Required* The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks.	Prior to Approval of Construction Related Permit	Bureau of Building	Bureau of Building
b. Traffic Control Plan Required In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.	Prior to Approval of Construction Related Permit	Public Works Department, Transportation Services Division	Bureau of Building
c. Repair City Streets The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her 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 approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.	Prior to Building Permit Final	N/A	Bureau of Building
SCA-TRANS-2: Bicycle Parking. (#69) The project applicant shall comply with the City of Oakland Bicycle Parking Requirements (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall demonstrate compliance with the requirements.	Prior to approval of construction-related permit	Bureau of Planning	Bureau of Building
SCA-TRANS-2: Transportation and Parking Demand. (#71) *a. Transportation and Parking Demand Management (TDM) Plan Required* The project applicant shall submit a Transportation and	Prior to Approval of Construction-Related Permit	Bureau of Planning	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
Parking Demand Management (TDM) Plan for review and approval by the City. i. The goals of the TDM Plan shall be the following: • Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable, consistent with the potential traffic and parking impacts of the project. • Achieve the following project vehicle trip reductions (VTR): o Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR o Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR • Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate. • Enhance the City's transportation system, consistent with City policies and programs. ii. TDM strategies to consider include, but are not limited to, the following: • 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 the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement. • Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping. • Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project. • Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan. • Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements. • 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). • Provision of a transit subsidy to employees or			

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	Initial Approval	Monitoring/ Inspection
residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes. • Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3). • Guaranteed ride home program for employees, either through 511.org or through separate program. • Pre-tax commuter benefits (commuter checks) for employees. • 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. • On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools. • Distribution of information concerning alternative transportation options. • 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. • Parking management strategies including attendant/valet parking and shared parking spaces. • Requiring tenants to provide opportunities and the ability to work off-site. • 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 (e.g., working four, ten-hour days; allowing employees to work from home two days per week). • 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 TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines			

Standard Conditions of Approval	Implementation/Monitoring When Required	Initial Approval	Monitoring/ Inspection
where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.			
b. TDM Implementation — Physical Improvements For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.	Prior to Building Permit Final	Bureau of Building	Bureau of Building
c. TDM Implementation — Operational Strategies For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.	Ongoing	Bureau of Planning	Bureau of Planning
Utilities and Service Systems			
SCA-UTIL-1: Construction and Demolition Waste Reduction and Recycling. (#74) The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/ modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-	Prior to Approval of Construction-Related Permit	Public Works Department, Environmental Services Division	Public Works Department, Environmental Services Division

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalo systems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.			
SCA-UTIL-2: Underground Utilities. (#75) The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.	During Construction	N/A	Bureau of Building
SCA-UTIL-3: Recycling Collection and Storage Space. (#76) The project applicant shall comply with the City of Oakland Recycling Space Allocation Ordinance (chapter 17.118 of the Oakland Planning Code). The project drawings submitted for construction-related permits shall contain recycling collection and storage areas in compliance with the Ordinance. For residential projects, at least two cubic feet of storage and collection space per residential unit is required, with a minimum of ten cubic feet. For nonresidential projects, at least two cubic feet of storage and collection space per 1,000 square feet of building floor area is required, with a minimum of ten cubic feet.	Prior to Approval of Construction-Related Permit	Bureau of Planning	Bureau of Building
SCA-UTIL-4: Green Building Requirements. (#77) *a. Compliance with Green Building Requirements During Plan-Check* The project applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the City of Oakland Green Building Ordinance (chapter 18.02 of the Oakland Municipal Code). i. The following information shall be submitted to the City for review and approval with the application for a building permit:	Prior to Approval of Construction-Related Permit	Bureau of Building	N/A

Standard Conditions of Approval	Implementation/Monitoring When Required	Initial Approval	Monitoring/ Inspection
• Documentation showing compliance with Title 24 of the current version of the California Building Energy Efficiency Standards. • Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit. • Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit. • Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (ii) below. • Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance. • Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit. • Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance. Ii. The set of plans in subsection (i) shall demonstrate compliance with the following: • CALGreen mandatory measures. • All pre-requisites per the green building checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit. • A minimum of 23 points (3 Community; 6 IAQ/Health; 6 Resources; 8 Water) as defined by the Green Building Ordinance for Residential New Construction. • All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Bureau of Planning that shows the previously approved points that will be eliminated or substituted. • The required green building point minimums in the appropriate credit categories.			
b. Compliance with Green Building Requirements During Construction	During	N/A	Bureau of

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
The project applicant shall comply with the applicable requirements of CALGreen and the Oakland Green Building Ordinance during construction of the project. The following information shall be submitted to the City for review and approval: i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit. ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance. iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.	Construction		Building
c. *Compliance with Green Building Requirements After Construction* Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green and attain the minimum required certification/point level. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the Bureau of Planning the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.	After Project Completion as Specified	Bureau of Planning	Bureau of Building
SCA-UTIL-5: Sanitary Sewer System. (#79) The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.	Prior to Approval of Construction-Related Permit	Public Works Department, Department of Engineering and Construction	N/A

Standard Conditions of Approval	Implementation/Monitoring		
	When Required	**Initial Approval**	**Monitoring/ Inspection**
SCA-UTIL-6: Storm Drain System. (#80) The project storm drainage system shall be designed in accordance with the City of Oakland's Storm Drainage Design Guidelines. To the maximum extent practicable, peak stormwater runoff from the project site shall be reduced by at least 25 percent compared to the pre-project condition.	Prior to Approval of Construction-Related Permit	Bureau of Building	Bureau of Building

ATTACHMENT B:
COMMUNITY PLAN EXEMPTION FINDINGS

Section 15183 (a) of the California Environmental Quality Act (CEQA) Guidelines states that "…projects which are consistent with the development density established by the existing zoning, community plan, or general plan policies for which an Environmental Impact Report (EIR) was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site."

Proposed Project. The proposed project is located in the City of Oakland General Plan area. It would demolish the existing surface parking lots and construct a new mixed-use development of approximately 198,951 square feet (256,897 gross square feet including parking), with seven stories up to 85 feet in height. The project would include up to 195,242 gross square feet of residential floor area (up to 224 units), 57,946 square feet of residential parking, and up to 3,709 square feet of retail.

Project Consistency. The City of Oakland completed an update of the General Plan Land Use and Transportation Element (LUTE) in March 1998. The LUTE includes the City's current Land Use and Transportation Diagram as well as strategies, policies, and priorities for Oakland's development and enhancement during a two decade period. The EIR certified for the LUTE is used to simplify the task of preparing environmental documents on later projects that occur as a result of LUTE implementation. Cumulative environmental effects identified in the LUTE's EIR as significant unavoidable and significant, but which can be reduced to a less-than-significant level through mitigation, are limited to the following topics: aesthetics/winds, cultural resources, hazards/hazardous materials, land use/planning, population/housing, and public services. In accordance State CEQA Guidelines 15183, the proposed project qualifies for a Community Plan Exemption because the following findings can be made:

- As demonstrated under Criterion Section 15332(a): General Plan and Zoning Consistency (above), the project is consistent with the development density established by existing zoning and General Plan policies for the site, and there are no peculiar aspects, other than those evaluated herein, that would increase the severity of any of the previously identified significant cumulative effects in the LUTE EIR.
- The land use designation for the site is Central Business District. This classification is intended to encourage, support, and enhance the downtown area as a high-density mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The proposed mixed-use project would be consistent with this designation.

- Since the project is consistent with the development assumptions for the site as provided under the LUTE EIR, and within the overall range of development within the downtown as assumed in the Housing Element EIR, the project's potential contribution to cumulatively significant effects has already been addressed in these prior EIRs. Therefore, consistent with CEQA Guidelines Section 15183 which allows for streamlined environmental review, this document needs only to consider whether there are project-specific effects peculiar to the project or its site, and relies on the streamlining provisions of CEQA Guidelines Section 15183 to not re-consider cumulative effects.

The City of Oakland's 2015-2023 Housing Element indicates that there are as many as 10,400 new housing units that are allowable within the downtown under current zoning designations, with a likely number of 4,310 housing units to be developed within the Downtown without rezoning or further General Plan Amendments, through opportunity sites and with projects either built, under construction, approved or in predevelopment. A portion of the project site, 301 19th Street (APN 008-0625-002-01), is identified as a Housing Opportunity Site under the Housing Element. Further, the entire project site meets the Housing Element's criteria of sites suitable for new housing development, including:

- It is an underutilized site with outmoded facilities and/or marginal existing use;
- It is within downtown, which accounts for the largest number of potential housing units, as the densities of permitted development are higher than most other areas; and
- It is located along one of the City's major commercial corridors, and utilizes ground floor commercial space with housing above, as encouraged by zoning and development guidelines to maximize residents' access to services including retail opportunities, transportation alternatives and civic activities, while reducing the need for automobiles, thus increasing the sustainability of such development.

Therefore, the proposed project is eligible for consideration of an exemption under California Public Resources Code Section 21083.3 and Section 15183 of the CEQA Guidelines.

ATTACHMENT C:
QUALIFIED INFILL EXEMPTION FINDINGS

The following information demonstrates that the project is eligible for permit streamlining pursuant to CEQA Guidelines Section 15183.3 as a qualified infill project.

Eligibility

The following analysis demonstrates that the project is located in an urban area on a site that has been previously developed; satisfies the performance standards provided in CEQA Guidelines Appendix M; and is consistent with the General Plan land use designation, density, building intensity and applicable policies. As such, this environmental review is limited to an assessment of whether the project may cause any project-specific effects, and relies on uniformly applicable development policies or standards to substantially mitigate cumulative effects.

PROJECT INFILL ELIGIBILITY		
CEQA Eligibility Criteria		**Eligible?/Notes for Proposed Project**
1.	Be located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter. For the purpose of this subdivision, "adjoin" means the infill project is immediately adjacent to qualified urban uses, or is only separated from such uses by an improved right-of-way. (CEQA Guidelines Section 15183.3[b][1])	Yes. The project site has been previously developed as surface parking lots, and adjoins existing urban uses, as described in the Project Description, above.
2.	Satisfy the performance Standards provided in Appendix M (CEQA Guidelines Section 15183.3[b][2]) as presented in 2a and 2b below:	—
	2a. *Performance Standards Related to Project Design.* All projects must implement **all** of the following:	—
	Renewable Energy. *Non-Residential Projects.* All nonresidential projects shall include onsite renewable power generation, such as solar photovoltaic, solar thermal, and wind power generation, or clean back-up power supplies, where feasible. *Residential Projects.* Residential projects are also encouraged to include such onsite renewable power generation.	Not Applicable. According to Section IV (G) of CEQA Appendix M, for mixed-use projects "…the performance standards in this section that apply to the predominant use shall govern the entire project." Because the predominant use is residential, the proposed project is not required to include onsite renewable power generation.

PROJECT INFILL ELIGIBILITY		
CEQA Eligibility Criteria		**Eligible?/Notes for Proposed Project**
	Soil and Water Remediation. If the project site is included on any list compiled pursuant to Section 65962.5 of the Government Code, the project shall document how it has remediated the site, if remediation is completed. Alternatively, the project shall implement the recommendations provided in a preliminary endangerment assessment or comparable document that identifies remediation appropriate for the site.	Not Applicable. The project site is not located on any list compiled pursuant to Section 65962.5 of the Government Code (the "Cortese List"). See the discussion under Criterion 15300.2(e) included in the CEQA Analysis for a more detailed discussion of Cortese List status and site remediation efforts.
	Residential Units Near High-Volume Roadways and Stationary Sources. If a project includes residential units located within 500 feet, or other distance determined to be appropriate by the local agency or air district based on local conditions, of a high volume roadway or other significant sources of air pollution, the project shall comply with any policies and standards identified in the local general plan, specific plan, zoning code, or community risk reduction plan for the protection of public health from such sources of air pollution. If the local government has not adopted such plans or policies, the project shall include measures, such as enhanced air filtration and project design, that the lead agency finds, based on substantial evidence, will promote the protection of public health from sources of air pollution. Those measures may include, among others, the recommendations of the California Air Resources Board, air districts, and the California Air Pollution Control Officers Association.	Yes. For projects that include residential units, the BAAQMD recommends evaluating the cumulative health risks to the residents from mobile and stationary sources of TAC emissions within 1,000 feet of the proposed project. Based on a screening-level analysis, the project would be required to implement the health risk reduction measures under SCA-20, including the installation and maintenance of high efficiency filtration systems with a Minimum Efficiency Reporting Value rating of 13 (MERV-13). See the discussion under Criterion Section 15332(d), Air Quality, included in this CEQA Analysis.
	2b. *Additional Performance Standards by Project Type.* In addition to implementing all the features described in criterion 2a above, the project must meet eligibility requirements provided below by project type.[a]	—

PROJECT INFILL ELIGIBILITY

CEQA Eligibility Criteria		Eligible?/Notes for Proposed Project
	Residential. A residential project must meet **one** of the following: A. *Projects achieving below average regional per capita vehicle miles traveled.* A residential project is eligible if it is located in a "low vehicle travel area" within the region; B. *Projects located within ½ mile of an Existing Major Transit Stop or High Quality Transit Corridor*. A residential project is eligible if it is located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor; **or** C. *Low – Income Housing*. A residential or mixed-use project consisting of 300 or fewer residential units all of which are affordable to low income households is eligible if the developer of the development project provides sufficient legal commitments to the lead agency to ensure the continued availability and use of the housing units for lower income households, as defined in Section 50079.5 of the Health and Safety Code, for a period of at least 30 years, at monthly housing costs, as determined pursuant to Section 50053 of the Health and Safety Code.	Yes, satisfies B. The project site is well-served by multiple transit providers, including Alameda-Contra Costa County Transit District (AC Transit) bus routes 1, 1R, 11, 12, 18, 51A, 58L, 72, 72M, 651, 800, 802, 805, 851, NL, and Broadway Shuttle, which are all within 0.25-mile of the project site. The project site is also within 0.25-mile of the 19th Street BART station. Broadway qualifies as a "High Quality Transit Corridor," as defined by Section II of CEQA, with fixed route bus service at intervals no longer than 15 minutes during peak commute hours. The AC Transit Line 51A runs along Broadway in the project vicinity, and has service intervals no longer than 15 minutes during peak commute hours. Other bus routes in the project vicinity further satisfy this criterion.
	Commercial/Retail. A commercial/retail project must meet **one** of the following: A. *Regional Location.* A commercial project with no single-building floor-plate greater than 50,000 square feet is eligible if it locates in a "low vehicle travel area"; **or** B. *Proximity to Households.* A project with no single-building floor-plate greater than 50,000 square feet located within ½ mile of 1,800 households is eligible.	Not Applicable. According to Section IV (G) of CEQA Appendix M, for mixed-use projects "…the performance standards in this Section that apply to the predominant use shall govern the entire project." Because the predominant use is residential, the requirements for commercial/retail projects do not apply.
	Office Building. An office building project must meeting **one** of the following: A. *Regional Location.* Office buildings, both commercial and public, are eligible if they locate in a low vehicle travel area; **or** B. *Proximity to a Major Transit Stop.* Office buildings, both commercial and public, within ½ mile of an existing major transit stop, or ¼ mile of an existing stop along a high quality transit corridor, are eligible.	Not Applicable.

PROJECT INFILL ELIGIBILITY		
CEQA Eligibility Criteria		**Eligible?/Notes for Proposed Project**
	Schools. Elementary schools within 1 mile of 50 percent of the projected student population are eligible. Middle schools and high schools within 2 miles of 50 percent of the projected student population are eligible. Alternatively, any school within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor is eligible. Additionally, to be eligible, all schools shall provide parking and storage for bicycles and scooters, and shall comply with the requirements of Sections 17213, 17213.1, and 17213.2 of the California Education Code.	Not Applicable.
	Transit. Transit stations, as defined in Section 15183.3(e)(1), are eligible.	Not Applicable.
	Small Walkable Community Projects. Small walkable community projects, as defined in Section 15183.3, subdivision (e)(6), that implement the project features in 2a above are eligible.	Not Applicable.
3.	Be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, **except** as provided in CEQA Guidelines Sections 15183.3(b)(3)(A) or (b)(3)(B) below: (b)(3)(A). Only where an infill project is proposed within the boundaries of a metropolitan planning organization for which a sustainable communities strategy or an alternative planning strategy will be, but is not yet in effect, a residential infill project must have a density of at least 20 units per acre, and a retail or commercial infill project must have a floor area ratio of at least 0.75; **or** (b)(3)(B). Where an infill project is proposed outside of the boundaries of a metropolitan planning organization, the infill project must meet the definition of a "small walkable community project" in CEQA Guidelines Section 15183.3(f)(5). (CEQA Guidelines Section 15183.3[b][3])	Yes. **(See explanation below table.)**

Explanation for Eligibility Criteria 3

The adopted Plan Bay Area (2013)[1] serves as the sustainable communities strategy for the Bay Area, per Senate Bill 375. As defined by the Plan, Priority Development Areas (PDAs) are areas where new development will support the needs of residents and workers in a pedestrian-friendly environment served by transit. The proposed project is consistent with the general land use designation, density, building intensity, and applicable policies specified in the General Plan as described in further detail the CEQA Analysis under Criterion 15332(a) and summarized below.

The General Plan land use designation for the site is Central Business District; this classification is intended to encourage, support, and enhance the downtown area as a high-density mixed-use urban center of regional importance, and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation. The proposed mixed-use project would be consistent with this designation.

Consistent with CEQA Guidelines Section 15183.3(b) which allows streamlining for qualified infill projects, this environmental document is limiting to topics applicable to project-level review only. Cumulative level effects of infill development have been addressed in other planning level decisions of the General Plan Land Use and Transportation Element (LUTE) and LUTE Environmental Impact Report (EIR) (1998), the General Plan 2007-2014 Housing Element and EIR (2010) and the 2015-2023 Housing Element and Addendum (2014), or by uniformly applicable development policies (SCAs) which mitigate such impacts.

Based on the streamlining provisions of CEQA Guidelines Sections 15183 and 15183.3, the project's cumulative effect would be less than significant, and an exception under CEQA Guidelines Section 15300.2(c) regarding cumulative effects does not apply to the project.

[1] Metropolitan Transportation Commission and Association of Bay Area Governments, 2013. Plan Bay Area, Strategy for a Sustainable Region. Adopted July 18, 2013.

Attachment D:
Transportation Impact Analysis

MEMORANDUM

To: Hayley Cox and Hannah Young, Urban Planning Partners

From: Pete Costa and Danielle Dai, Nelson\Nygaard

Date: July 29, 2016

Subject: Transportation Impact Analysis for 19th & Harrison Project – SCREENCHECK

This memorandum serves as the transportation impact analysis for the proposed project in the southwest corner of the 19th Street and Harrison Street intersection in the City of Oakland, known as “19th & Harrison”. The proposed project involves infilling a surface parking area to construct a 7-story residential building with a maximum of 240 units. The ground-floor would comprise a maximum of 8,000 square feet of retail use as well as a maximum of 90,000 square feet of space for vehicle and bicycle parking, with vehicle access to the parking garage along the east side of Webster Street and west side of Harrison Street.

Based on the application of the City of Oakland’s *CEQA Threshold of Significance Guidelines*, the proposed project would not cause significant impacts to the transportation network.

This memorandum outlines the analyses to arrive to this conclusion, and is structured as follows:

1. **Project description**, which provides context to the proposed project and details the transportation infrastructure in the vicinity.
2. **Existing setting**, which offers trip generation rates and shows trip distribution and assignments.
3. **Significance criteria**, which outlines analysis considerations as per the City of Oakland *CEQA Thresholds of Significance Guidelines*.
4. **Traffic load and capacity analysis**, which analyzes transportation impacts following four scenarios: (1) Existing; (2) Existing Plus Project; (3) 2040 No Project; and (4) 2040 Plus Project. In addition, nearby intersections, the Congestion Management Program (CMP) network, and AC Transit travel times are considered.
5. **Traffic safety analysis**, which studies existing conditions and policy considerations for pedestrian, bicyclist, and bus rider safety.
6. **Consistency with Adopted Policies, Plans, or Programs**, which briefly discusses the project in relation to adopted city policies, plans, and programs. The project’s forthcoming Parking and Transportation Demand Management (TDM) Plan is outlined.
7. **Other Impacts**, which considers project construction impacts, changes in air traffic patterns, cumulative impacts, and general parking issues.

1. PROJECT DESCRIPTION

The project site is located on four continuous parcels located at 301 19th Street and 1750 Webster Street in the City of Oakland. The property site is commonly known as "19th and Harrison" and comprises approximately 1.02 acres. The project proposes no change to the existing zoning Central Business District-Commercial (CDB-C), and a change in land use classification from "parking" to "high-density multi-family residential". **Figure 1** illustrates the proposed development on 19th Street and Harrison Street.

The proposed project would involve infilling a surface parking area to construct a 7-story residential building with a maximum of 240 units. From plans dated March 2016, there are 224 units proposed with an average unit size of 742 square feet. The ground floor would include 3, 709 square feet of retail on 19th Street; 1,426 square feet of leasing/lobby space on Harrison Street; 2,386 square feet of co-working space exclusively for residents on Webster Street; 1,171 square feet for a mail room; 146 parking spaces, including at least three ADA spaces, with the garage entrance on Harrison Street; loading zone area with the main loading entrance on Webster Street; multiple utility rooms; trash room; and emergency stair egress. The main building entrances are on Webster Street (by the co-working space) and Harrison Street (by the leasing office). The proposed project would include 175 long-term (on-site, secured) bicycle parking spaces and 15 short-term (e.g., U-racks) bicycle parking spaces within the Webster, Harrison, and 19th Street sidewalks areas. **Figure 2** depicts the proposed site plan for the ground floor as of March 2016.

On the second floor or "upper garage" level, the March 2016 plans include the following: 79 automobile parking spaces; 175 bicycle parking spaces including a bike lounge; 1,879 square feet of fitness; dedicated motorcycle parking; trash room; and multiple utility rooms. **Figure 3** displays the proposed site plan for the upper garage level as of March 2016.

Two driveways are proposed: a two-way, two-lane (ingress and egress) driveway on Webster Street, which would provide access to the parking spaces on the second floor, and a two-way, two-lane (ingress and egress) driveway on Harrison Street, which would provide access to the parking spaces on the ground level. A loading area is adjacent to the Webster Street entrance. There are 225 parking spaces proposed, which would equate to a parking ratio of one space per unit. Because characteristics of the project are not finalized and subject to change, such as the number of units and potential non-residential square footage, the following transportation analyses evaluates the maximum development capacity of 240 units and 8,000 square feet of retail uses to represent a conservative and "worst-case scenario" of potential transportation impacts associated with the proposed project.[1] [2]

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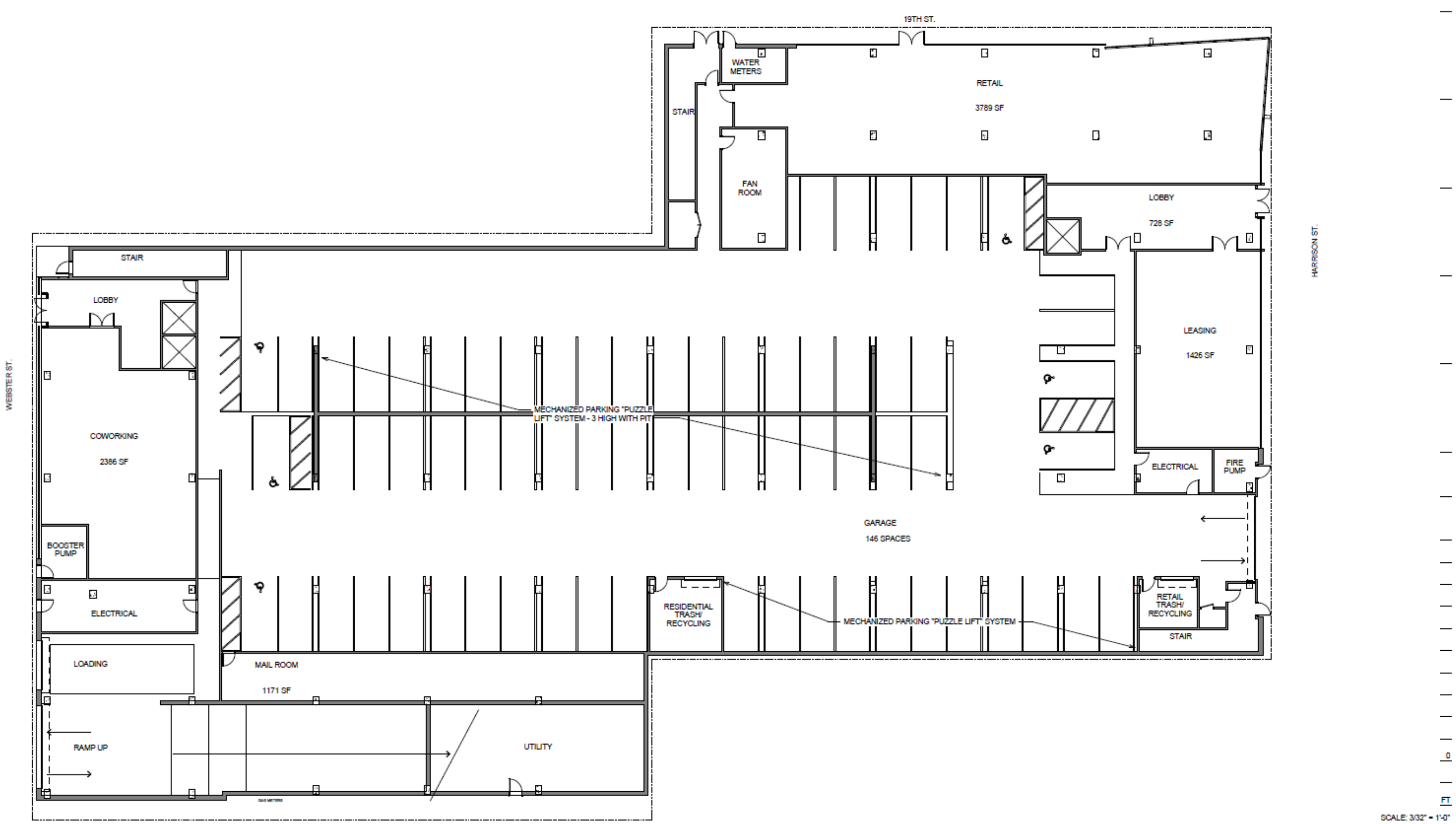
[1] It is noted that because this study is analyzing a larger buildout of the project, it is assumed that the project would include up to 240 parking spaces to comply with current Code requirements (i.e., one parking space per residential unit). A complete parking code compliance review and demand analysis is provided herein.

[2] As of July 2016, the proposed number of parking spaces has decreased from 225 to 219, and the proposed number of bicycle spaces has also decreased from 175 to 129.

Figure 1 Illustrative Perspective of 19th & Harrison Project

Source: Lennar Multifamily, April 2016.

Figure 2 **Ground Floor Site Plan**



19TH & HARRISON

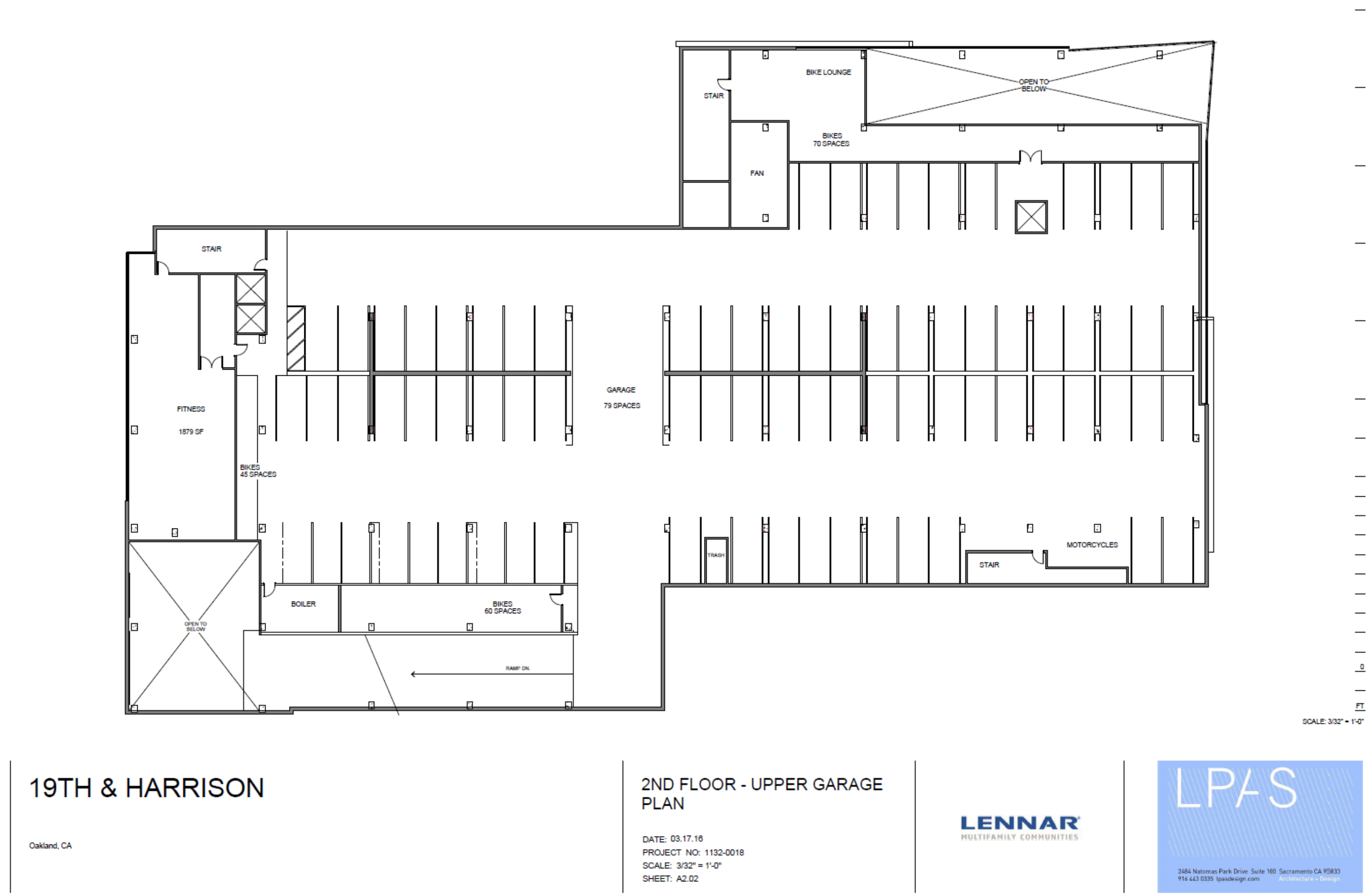
Oakland, CA

GROUND FLOOR PLAN

DATE: 03.17.16
PROJECT NO: 1132-0018
SCALE: 3/32" = 1'-0"
SHEET: A2.01

Source: Lennar Multifamily, April 2016.

Figure 3 Second Floor Garage Level Site Plan



Source: Lennar Multifamily, April 2016.

2. EXISTING SETTING

The proposed project is situated in the heart of downtown Oakland, in one of the most urban environments in the city. The project is located within a multimodal environment that includes access to bus transit, commuter rail, and an established bicycle and pedestrian network. The proposed project is three blocks east of the 19th Street Oakland Bay Area Rapid Transit (BART) station and two blocks directly west of Lake Merritt. Community resources and attractions within a 1/2-mile vicinity include Snow Park, the historic Paramount Theater, Fox Theater, and City Hall.

For the transportation impact analysis, the intersections studied include locations where vehicle trips generated by the proposed project would potentially increase traffic volumes by 50 or more peak hour trips, pursuant to Oakland's TIS Guidelines. The six intersections evaluated are listed below.

1. Webster Street/ Thomas L. Berkley Way
2. Harrison Street/ Thomas L. Berkley Way
3. Webster Street/ 19th Street
4. Harrison Street/ 19th Street
5. Webster Street/ 17th Street
6. Harrison Street/ 17th Street

This study builds upon an existing transportation impact analysis for the neighboring 1700 Webster project, which was conducted in March 2015.[3]

2.1 Existing Traffic Conditions

Figure 4 and **Figure 5** depict existing intersection lane configurations, as well as the weekday peak-hour automobile, bicycle, and pedestrian volumes at the six study intersections. Traffic data was collected on Tuesday, April 5, 2016, between the hours of 7:00 a.m. to 9:00 a.m. (weekday AM) and 4:00 p.m. to 6:00 p.m. (weekday PM) for four of the six study intersections. Traffic data for Webster Street/17th Street was based on data provided in the 1700 Webster Transportation Memorandum (Fehr & Peers, 2015); this data was collected on Thursday, March 26, 2015. Traffic data for Harrison Street/ 17th Street was collected on Wednesday, April 20, 2016 during the same peak hours. It is noted that because the intersection volume data was collected on different dates, the volumes were balanced accordingly to assure that volumes were consistent between each intersection and to assure that any considerable increase or decrease in traffic volumes were properly adjusted to reflect existing conditions.[4]

The data includes automobile turning movements, as well as pedestrian and bicycle counts. All data collection occurred on clear days with fair weather and when schools were in session. **Appendix A** provides the intersection turning movement count data.

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[3] The format of the transportation analysis and methodology used to determine project travel demand (trip generation, distribution, mode split, assignment, etc.) and impacts are consistent with Oakland's TIS Guidelines.

[4] For example, if there are no driveways between two intersections, the through traffic volumes would remain the same, as there would be no net gain or loss in volumes between these two intersections. The adjustment (balancing) of traffic volumes is a common practice in the transportation planning industry and it reduces any evident inconsistencies with various and differing peak-hour intersection turning movement volumes at area intersections.

Webster Street has three lanes for automobiles, two lanes for parked vehicles and loading, and a buffered bike lane. Webster Street is one direction going southbound, and acts as a couplet to Franklin Street, which is one direction going northbound just west of Webster Street.

Harrison Street has four lanes for automobiles, and two lanes for parked vehicles and loading; there are two lanes in each direction.

19th Street has two lanes for automobiles, and two lanes for parked vehicles and loading. 19th Street is one direction going westbound, and acts as a couplet to 17th Street.

17th Street has two lanes for automobiles, and two lanes for parked vehicles and loading. 17th Street is one direction going eastbound.

Figure 4 Intersection Counts for A.M. Peak Period

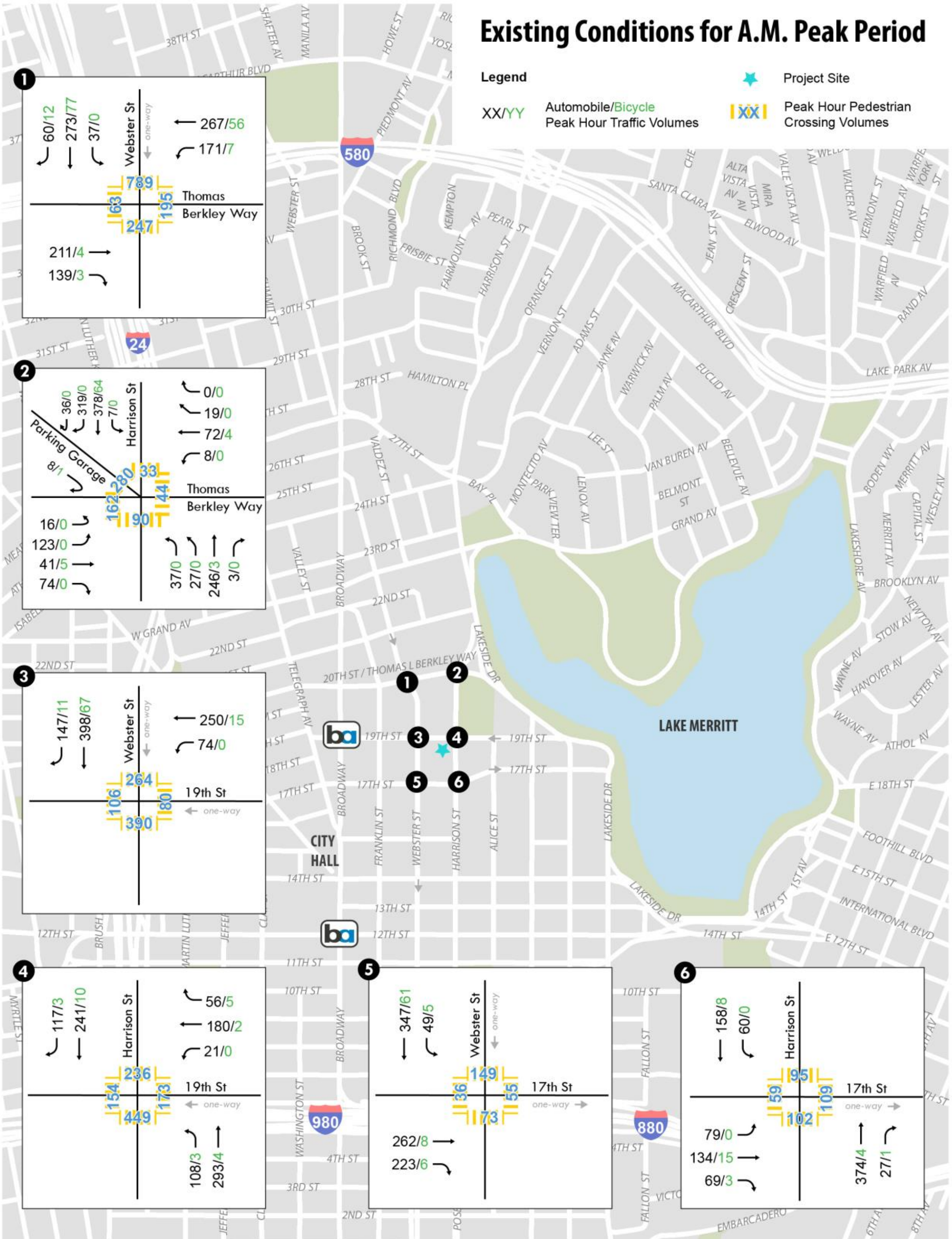
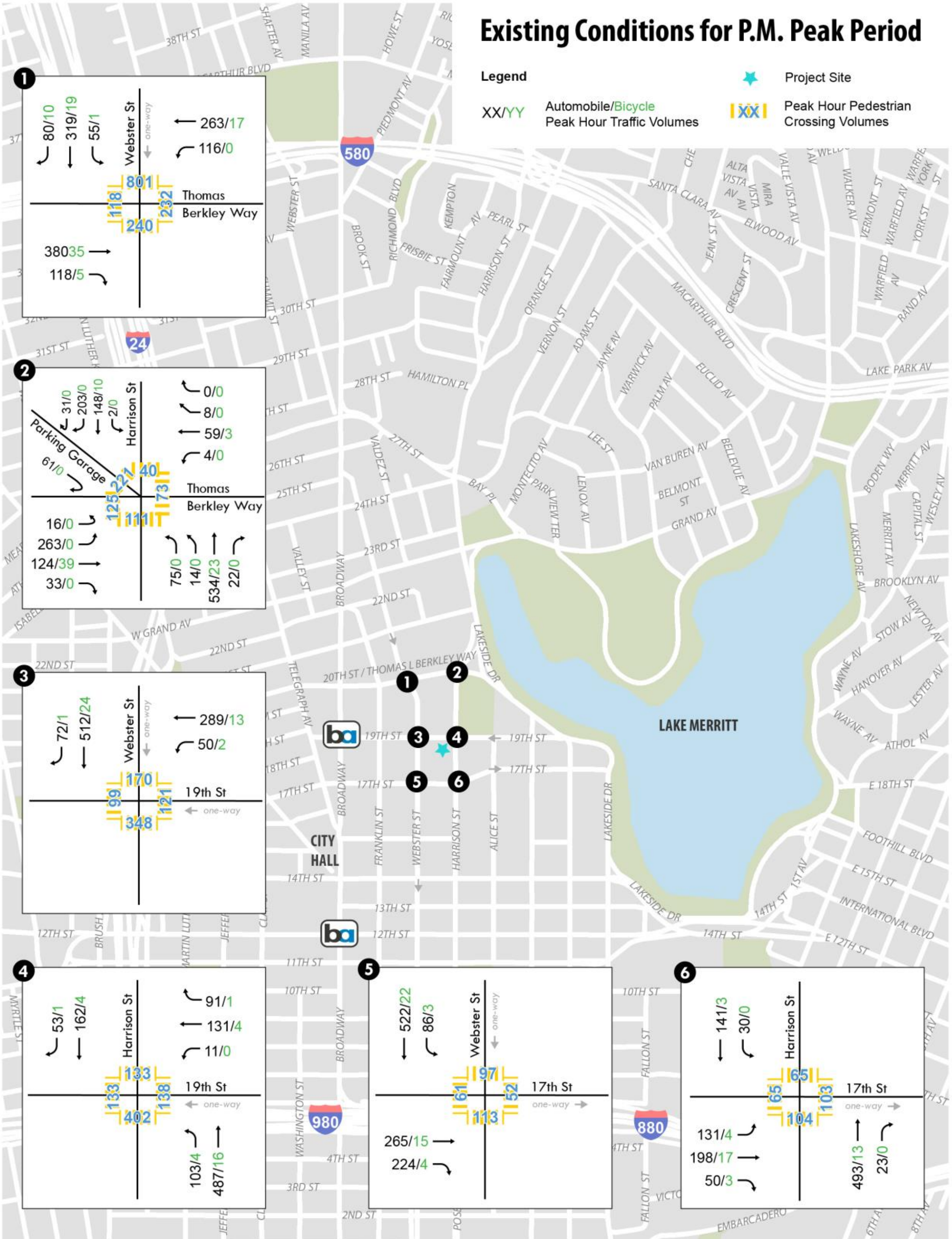


Figure 5 Intersection Counts for P.M. Peak Period



Level of Service (LOS) at the study intersections was calculated using the *2010 Highway Capacity Manual* (HCM) methodologies. The City of Oakland considers LOS E as the threshold of significance for intersections within the Downtown area or that provide direct access to downtown, and LOS D for all other intersections.[5]

The study intersections currently operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours. **Figure 6** summarizes the existing intersection analysis results. **Appendix B** provides detailed LOS calculations.

Figure 6 Existing Weekday AM and PM Peak Hour – LOS Conditions

Intersection	Control	Peak Hour	Delay (sec)	LOS
1. Thomas Berkley Way / Webster Street	Signal	AM	19	B
		PM	20	B
2. Thomas Berkley Way / Harrison Street	Signal	AM	53	D
		PM	25	C
3. 19th Street / Webster Street	Signal	AM	8	A
		PM	8	A
4. 19th Street / Harrison Street	Signal	AM	8	A
		PM	8	A
5. 17th Street / Webster Street	Signal	AM	8	A
		PM	7	A
6. 17th Street / Harrison Street	Signal	AM	10	B
		PM	11	B

Source: Nelson\Nygaard, 2016.

2.2 Travel Demand and Trip Generation

Travel demand refers to the new vehicular, transit, pedestrian, bicycling, and other traffic generated by the proposed project. Travel demand is described by trip generation, the number of multimodal trips as a result of the proposed project, and how new motor vehicle traffic will be distributed throughout the transportation network. For purposes of this analysis, trip generation is calculated based on the maximum proposed number of residential dwelling units and retail square footage.

The project travel demand estimation is based on the methodologies and procedures provided by the City of Oakland TIS Guidelines. The *TIS Guidelines* assumes that project trip generation is determined based on the rates provided in the Institute of Transportation Engineers (ITE) *Trip Generation Handbook*. Research has shown that *ITE Trip Generation* often over-estimates motor vehicle trips when applied to dense, urban environments; as such, per the *TIS Guidelines*, modal split adjustment factors are applied to

[5] The Downtown area is defined in the *Land Use and Transportation Element* of the City of Oakland General Plan 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. Intersections that provide direct access to downtown are generally defined as principal arterials within two (2) miles of Downtown and minor arterials within one (1) mile of Downtown, provided that the street connects directly to Downtown.

the project trip generation per land use. The adjustment factors are based on observed travel data for Alameda County from the Metropolitan Transportation Commission's 2000 Bay Area Travel Survey. The adjustment factors are applied to convert vehicle trip generation from the ITE *Trip Generation Handbook* to person trips by travel mode.

Figure 7 presents the project trip generation using ITE rates with non-auto reduction adjustment from the City of Oakland's *TIS Guidelines*. It is noted that the ITE *Trip Generation Handbook* provides guidance on estimating traffic generation for various land use development based on observations conducted across the United States. While transportation conditions likely vary among these locations, residences and retail uses in the ITE *Trip Generation Handbook* were primarily located outside of central business districts in suburban areas. Thus, these national rates used in generating project trips represent a conservative estimate for only vehicle trips, and do not account for trips by other modes of transportation (i.e. transit, bicycling, and walking). The general non-auto reduction adjustment from the *TIS Guidelines* tailors trip generation rates to the more urban environment.

Figure 7 Project Vehicle Trip Generation – ITE Rates with Non-Auto Reduction Adjustment

Land Use	ITE Code	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
Apartment								
240 Units	220 [a]	1,578	24	97	121	98	52	150
Retail								
8,000 square feet [b]	820	380	18	23	41	74	81	155
Total Vehicle Trips		1,958	42	120	162	172	133	305
Non-Auto Reduction (-43%)[c]		*-842*	*-18*	*-52*	*-70*	*-74*	*-57*	*-131*
Total Adjusted Vehicle Trips		**1,116**	**24**	**68**	**92**	**98**	**76**	**174**

Notes:

a. Weekday Daily rate = 6.06(X) + 123.56; AM peak rate = 0.49(X) + 3.73 (20% entering; 80% exiting); PM peak rate = 0.55(X) + 17.65 (65% entering, 35% exiting); Land Use Code 220 (Apartment).

b. Weekday Daily rate = 42.78(X)+37.66; AM peak rate = 2.4(X) + 21.48 (44% entering; 56% exiting); PM peak rate = 4.91(X) + 115.59 (48% entering, 52% exiting); Land Use Code 826 (Specialty Retail Center).

c. Reduction of 43.0% assumed based on City of Oakland *Transportation Impact Study Guidelines* data for development in an urban environment within 0.25 miles of a BART station.

Source: Institute of Transportation Engineers (ITE) Trip Generation Handbook (9th Edition); Nelson\Nygaard (2016)

Figure 8 presents the mode split adjustment factors from the *TIS Guidelines*. The *TIS* Guidelines identify a 57% adjustment factor for vehicle trip generation estimates for development in an urban environment within 0.25 miles of a BART station. The city's *TIS Guidelines* also offer adjustment factors for estimated transit, bike, and walk trips (30.4%, 3.9%, and 23.0% respectively).

The planned development is located less than 0.25 miles of the 19th Street BART Station. As such, the "<0.5 miles" modal adjustment factors should be used.

Figure 8 Default City of Oakland Modal Adjustment Factors

Distance from BART/Amtrak	<0.5 miles	>0.5 miles, <1.0 mile	> 1.0 mile		
Land Use Type (Density)[1]			Urban (>10,000)	Dense Suburban (6,000 - 10,000)	Suburban (<6,000)
Motor Vehicle Trips	57.0%	78.6%	91.4%	96.9%	100.0%
Transit	30.4%	11.8%	9.8%	6.0%	5.6%
Bike	3.9%	5.6%	2.5%	1.3%	1.2%
Walk	23.0%	20.1%	13.2%	12.6%	10.3%

[1]People per square mile

Source: Table 1 of City of Oakland Transportation Impact Study Guidelines 2013

Figure 9 presents the adjusted project person trip generation using the mode split adjustment factors derived from the *TIS Guidelines* and presents the estimated number of weekday peak-hour project person trips generated by travel mode.

Figure 9 Adjusted Weekday Peak-Hour Person Trip Generation Summary

	Person Trips by Mode				
	Motor Vehicle	Transit	Bike	Walk	Total
	57.0%	30.4%	3.9%	23.0%	
Apartment					
240 units					
AM Peak Hour	69	37	5	28	139
PM Peak Hour	86	46	6	35	173
Daily	899	480	62	363	1,804
Retail					
8,000 square feet					
AM Peak Hour	23	12	2	9	46
PM Peak Hour	88	47	6	36	177
Daily	217	116	15	87	435
Total Person Trips					
AM Peak Hour	**92**	**49**	**7**	**37**	**185**
PM Peak Hour	**174**	**93**	**12**	**71**	**350**
Daily	**1,116**	**596**	**77**	**450**	**2,239**

Note: ITE vehicle trip generation for weekday and a.m. and p.m. peak hour was adjusted by applying a City of Oakland *TIS Guidelines* mode split percentages.

Sources: Institute of Transportation Engineers (ITE) Trip Generation Handbook (9th Edition); City of Oakland TIS Guidelines (2013); Nelson\Nygaard (2016)

As shown in **Figure 9**, the project would generate about 185 person trips in the weekday AM peak hour (92 motor vehicle trips; 49 transit trips; 7 bicycling trips; and 37 walking trips), and would generate about 350 person trips in the weekday PM peak hour (174 motor vehicle trips; 93 transit trips; 12 bicycling trips; and 71 walking trips).

The project site is currently occupied by an off-street parking lot. Although the parking lot on the project site currently attracts a number of vehicles throughout the day, the amount of morning and evening peak-hour vehicle trips entering and exiting the project site was not collected and therefore, was not discounted (or netted out) for project trip generation purposes. Thus, the trip generation rates are overstated and thus conservative.

As standard transportation planning practice, subtracting existing trips linked to a parking facility is generally inappropriate. The inherent nature of parking facilities is to accommodate vehicle trips generated by land uses in the vicinity of the parking facility and to concentrate these vehicular trips in proximity to the parking facility's access points. The analytical presumption is that drivers who have previously parked in the parking facility to be displaced by the proposed project would seek other parking nearby. As a result, vehicle trips associated with the existing off-street parking facility would be displaced to other off-street facilities and to on-street parking spaces, and would no longer access the project site, and these vehicles associated with nearby activities would continue to operate in the area and may remain in the vicinity.

2.3 Trip Distribution and Assignment

Given the project site's close proximity to the 19th Street BART station, it is likely that most auto users are driving to areas that are not as transit-, bicycling-, and walking-accessible, such as destinations in Marin, Santa Clara, or San Mateo counties. Motor vehicle drivers would likely be connecting to various surrounding highways, such as Interstate 580 (I-580) via Harrison Street, I-980 via 17th Street, or I-880 via 17th Street and Madison or Oak Street. **Figure 10** estimates trip distribution and assignment of project-related vehicle trips.

Figure 10 Motor Vehicle Project Trip Distribution and Assignment

Origin Location	Percent (%) of Project Traffic[a]	AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
To/From north of site via Lakeside Drive to Harrison	20%	5	14	20	15
To/From west of site via 17th to Harrison	30%	7	22	29	22
To South and East of site via 17th and Madison (outbound)	20%	0	32	0	37
From South and East of site via 19th and Oak (inbound)	30%	12	0	49	0
Total Trips	**100%**	**24**	**68**	**98**	**74**

Notes:

a. Project traffic distribution was based on similar methods applied in the Lake Merritt Specific Plan and from the estimated weekday peak hour & peak direction volume-to-capacity map from the Comprehensive Circulation Study of Downtown Oakland and Access to/from Alameda's Baseline Assessment. The following streets have V/C ratio of <0.25 (Significantly Under) – Webster Street from 22nd to 8th Streets, 17th Street from Webster to Oak Street. The following streets have

V/C ratio of 0.25-0.75 (Under) – 17th Street from I-980 to Webster Street, Harrison Street from Grand Avenue to 10th Street, Oak Street from 19th to 14th Street, and Lakeside Drive.

Source: Nelson\Nygaard (2016).

Figure 11 illustrates the estimated trip distribution and assignment of project-related vehicle trips. The estimated trip distribution is based on data provided in the 1700 Webster Transportation Memorandum (Fehr & Peers, 2015).[6] **Figure 12** shows the estimated automobile traffic volumes generated by the project during the a.m. peak period, and **Figure 13** shows the estimated automobile traffic volumes generated by the project during the p.m. peak period.

[6] It is noted that the same trip distribution from the 1700 Webster Street Memorandum was applied to this analysis as both development projects would be located in the same area, adjacent to each other and both would propose vehicular access via Webster Street. Therefore, in order to maintain consistency, these percentages were applied.

Figure 11 Project Trip Distribution

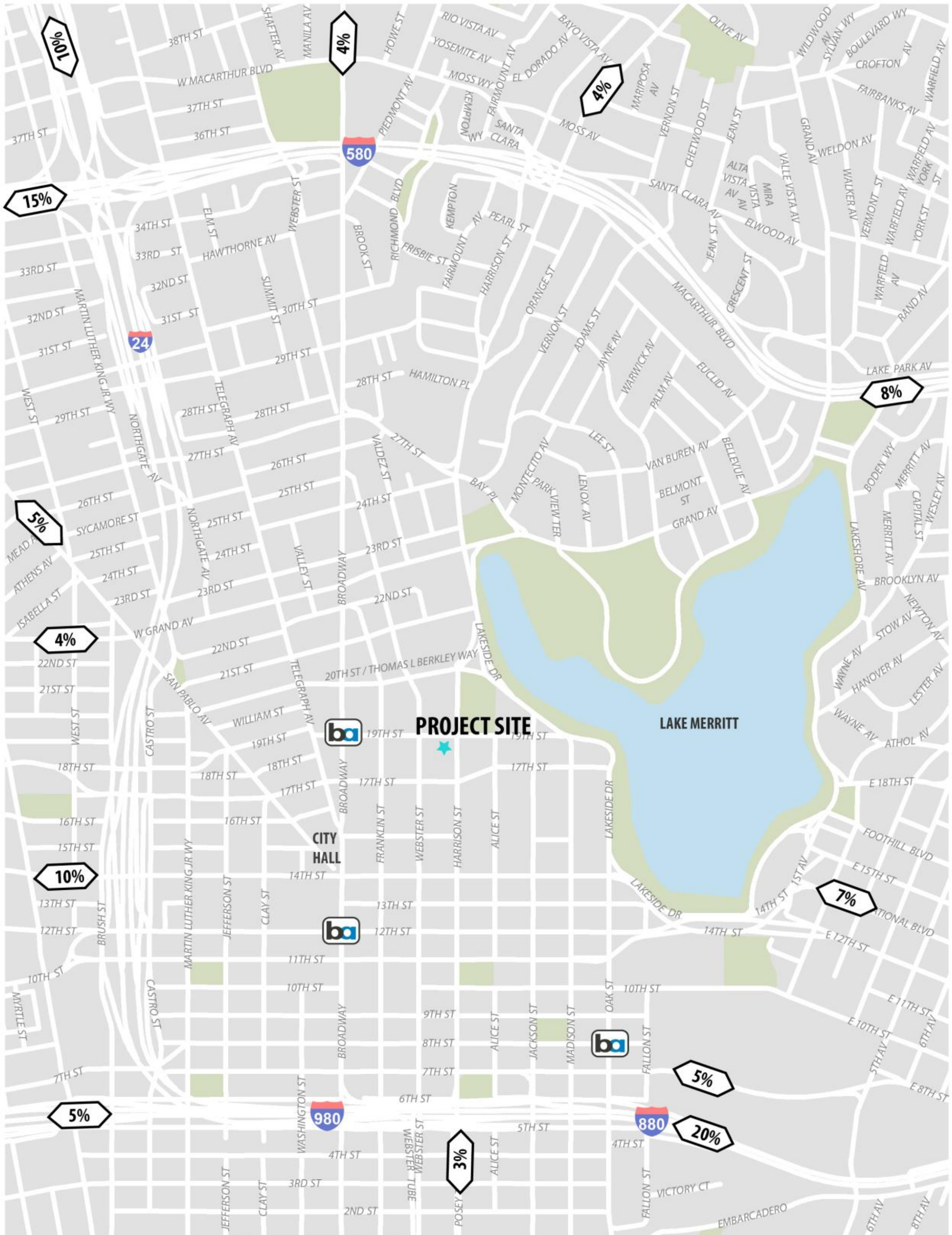


Figure 12 Project Trip Assignment for A.M. Peak Period

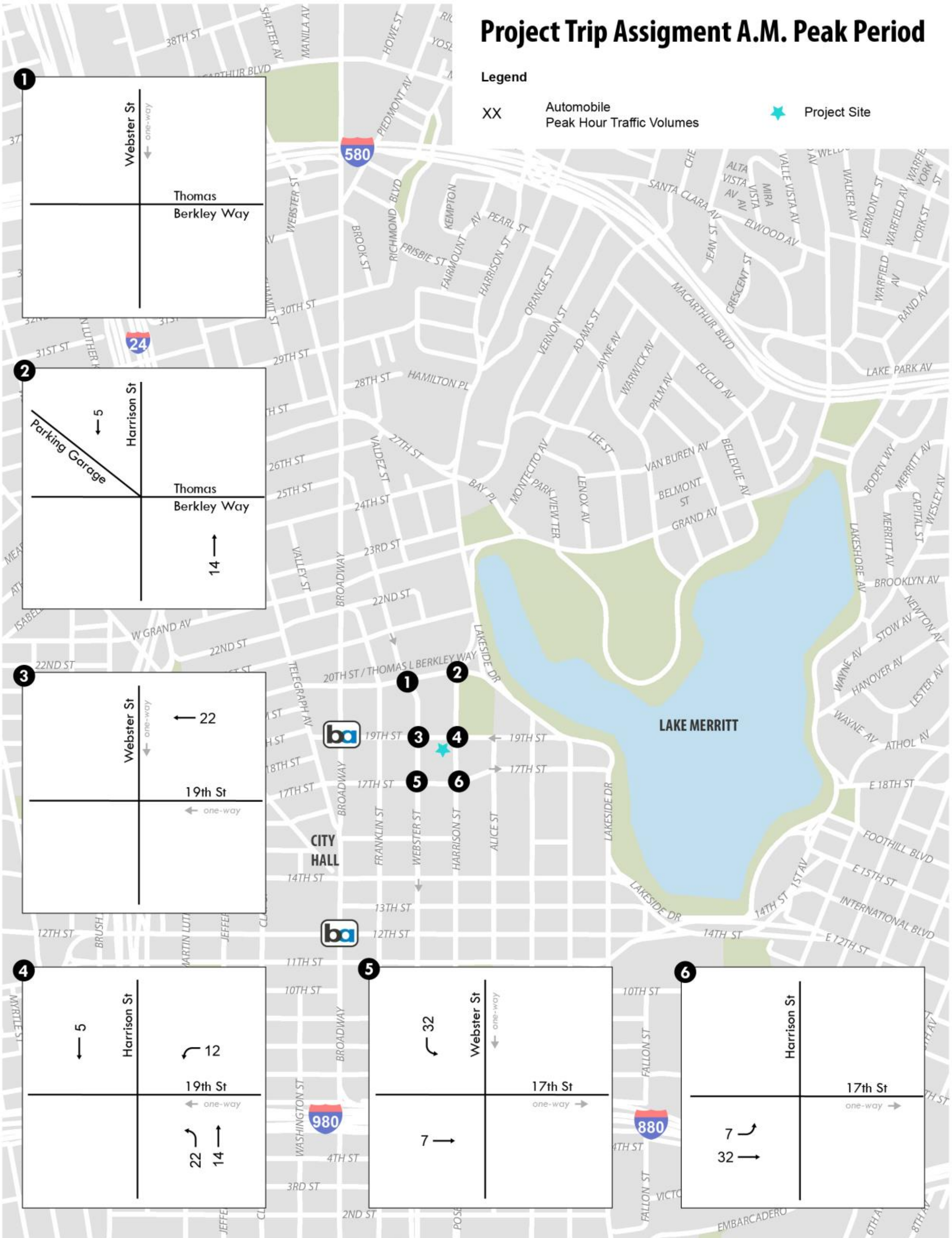
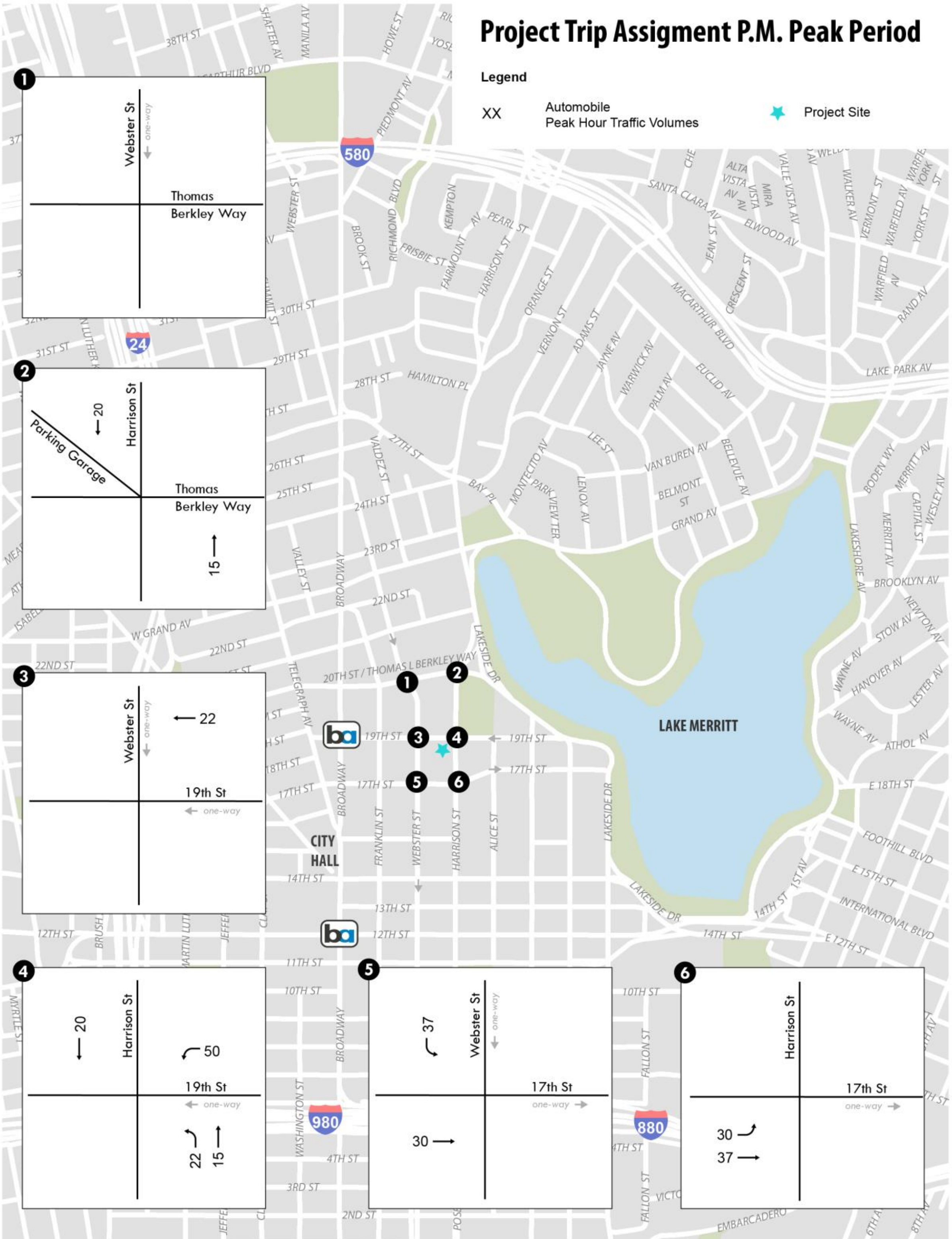


Figure 13 Project Trip Assignment for P.M. Peak Period



3. SIGNIFICANCE CRITERIA

The analysis follows the City of Oakland *CEQA Thresholds of Significance Guidelines* to determine whether the proposed project would cause a significant impact on the environment. The project would have a significant impact if it conflicts with a plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, specifically[7]:

Traffic Load and Capacity Thresholds

1. At a study, signalized intersection which is locate **outside the Downtown area[8] and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
2. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
3. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;
4. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle 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;
5. At a study, signalized intersection for all areas where the level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;
6. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement and after project completion satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour volume traffic signal warrant;
7. For a roadway segment of the Congestion Management Program (CMP) Network[9], the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project
8. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP[10]

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7 The following significance criteria is taken directly from the City of Oakland CEQA Thresholds of Significance Guidelines from May 2013.
8 The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the 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. Intersections that provide direct access to Downtown are generally defined as principal arterials within two (2) miles of the Downtown area and minor arterials within one (1) mile of the Downtown area, provided that the street connects directly to the Downtown area.
9 This threshold only applies to land use development projects that generate a vehicle trip on a roadway segment of the CMP Network located in the project study area and to transportation projects that would reduce the vehicle capacity of a roadway segment of the CMP Network. In Oakland, the CMP Network includes all state highways, plus the following streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Ave., 29th Ave., and Hegenberger Rd.

9. Result in substantially increased travel times for AC Transit buses[11]

Traffic Safety Thresholds

10. Directly or indirectly cause or expose roadway users (e.g. motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses[12]
11. Directly or indirectly result in a permanent substantial decrease in pedestrian safety[13]
12. Directly or indirectly result in a permanent substantial decrease in bicyclist safety[14]
13. Directly or indirectly result in a permanent substantial decrease in bus rider safety[15]
14. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g. motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard.

Other Thresholds

15. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment [**NOTE:** Factors to consider in evaluating the potential conflict include, but are not limited to, the following:
    - Does the project prevent or otherwise substantially adversely affect the future installation of a planned transportation improvement identified in an adopted City policy, plan, or program?
    - Does the project fundamentally conflict with the applicable goals, policies, and/or actions identified in an adopted City policy, plan, or program?

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[10] This threshold only applies to a land use development project that involves either (a) a general plan amendment that would generate 100 or more p.m. peak hour trips above the current general plan land use designation or (b) an EIR and the project would generate 100 or more p.m. peak hour trips above the existing condition. Factors to consider in evaluating the potential impact include, but are not limited to, the relationship between the project and planned improvements in the Countywide Transportation Plan, the project's consistency with City policies concerning infill and transit-oriented development, the proximity of the project to other jurisdictions, and the magnitude of the project's contribution based on V/C ratios.

11 Factors to consider in evaluating the potential impact include, but are not limited to, the proximity of the project site to the transit corridor(s), the function of the roadway segment(s), and the characteristics of the potentially affected bus route(s). The evaluation may require a qualitative and/or quantitative analysis depending upon these relevant factors.

12 Factors to consider in evaluating the potential impact of roadway users due to physical design features and incompatible uses include, but are not limited to, collision history, and the adequacy of existing traffic controls.

13 Consider whether factors related to pedestrian safety such as, but not limited to, the following are substantial in nature:
- Degradation to existing pedestrian facilities
- Addition of new vehicle travel lanes and/or turn lanes
- Permanent removal of existing sidewalk-street buffering elements
- Addition of vehicle driveway entrance(s) that degrade pedestrian safety

14 Consider whether factors related to bicyclist safety such as, but not limited to, the following are substantial in nature:
- Removal or degradation of existing bikeways
- Addition of new vehicle travel lanes and/or turn lanes
- Addition of vehicle driveway entrance(s) that degrade(s) bicycle safety

15 Consider whether factors related to bus rider safety such as, but not limited to, the following are substantial in nature:
- Removal or degradation of existing bus facilities
- Siting of bus stops in locations without marked crossing, with insufficient sidewalks, or in isolated or unlit areas
- Addition of new bus riders that creates overcrowding at a bus stop

Adopted City policies, plans, and programs to consider include, but are not limited to, the following:

- Land Use and Transportation Element (LUTE) of the General Plan (march 1998)
- Pedestrian Master Plan (November 2002)
- Bicycle Master Plan (December 2007)
- Public Transit and Alternative Modes Policy (formerly known as the "Transit-First Policy;" City Council Resolution 73036 C.M.S.)
- Sustainable Development Initiative (City Council Resolution 74678 C.M.S.)
- U.N. Environmental Accords (City Council Resolution 79808 C.M.S.)
- Capital Improvement Program];

16. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project
17. 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.

Cumulative Impacts

18. A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of the thresholds listed above in a future year scenario.

4. TRAFFIC LOAD AND CAPACITY ANALYSIS

Four scenarios were considered for the Transportation Impact Analysis, following the City of Oakland Transportation Impact Study guidelines:

- **Existing** – Represents existing 2016 conditions (**Figure 4** and **Figure 5**)
- **Existing Plus Project** – Represents existing conditions plus traffic generated by the project (**Figure 15** and **Figure 16**)
- **2040 No Project** – Estimates future conditions in 2040 with planned population growth, employment growth, and transportation system changes (**Figure 18** and **Figure 19**)
- **2040 Plus Project** – Estimates future conditions in 2040 with planned population growth, employment growth, transportation system changes, and the impacts generated by the project (**Figure 20** and **Figure 21**)

This section discusses the impacts of the proposed project on traffic operations under existing and 2040 conditions, based on the City of Oakland's Thresholds of Significance described above.

Existing Plus Project Intersection Analysis

Figure 15 and **Figure 16** show traffic volumes under existing plus project conditions, which consists of existing traffic volumes (as shown in **Figure 4** and **Figure 5**), plus added traffic volumes generated by the project (as shown in **Figure 12** and **Figure 13**).

The study intersections would continue to operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours. **Figure 14** summarizes the existing intersection analysis results. **Appendix B** provides detailed LOS calculations.

Figure 14 Existing and Existing Plus Project Weekday AM and PM Peak Hour – LOS Conditions

Intersection	Control	Peak Hour	Existing		Existing+Project	
			Delay (sec)	LOS	Delay (sec)	LOS
1. Thomas Berkley Way / Webster Street	Signal	AM	19	B	19	B
		PM	20	B	20	B
2. Thomas Berkley Way / Harrison Street	Signal	AM	53	D	55	D
		PM	25	C	26	C
3. 19th Street / Webster Street	Signal	AM	8	A	8	A
		PM	8	A	8	A
4. 19th Street / Harrison Street	Signal	AM	8	A	8	A
		PM	8	A	8	A
5. 17th Street / Webster Street	Signal	AM	8	A	7	A
		PM	7	A	7	A
6. 17th Street / Harrison Street	Signal	AM	10	B	10	B
		PM	11	B	12	B

Source: Nelson\Nygaard, 2016.

Figure 15 Existing + Project for A.M. Peak Period

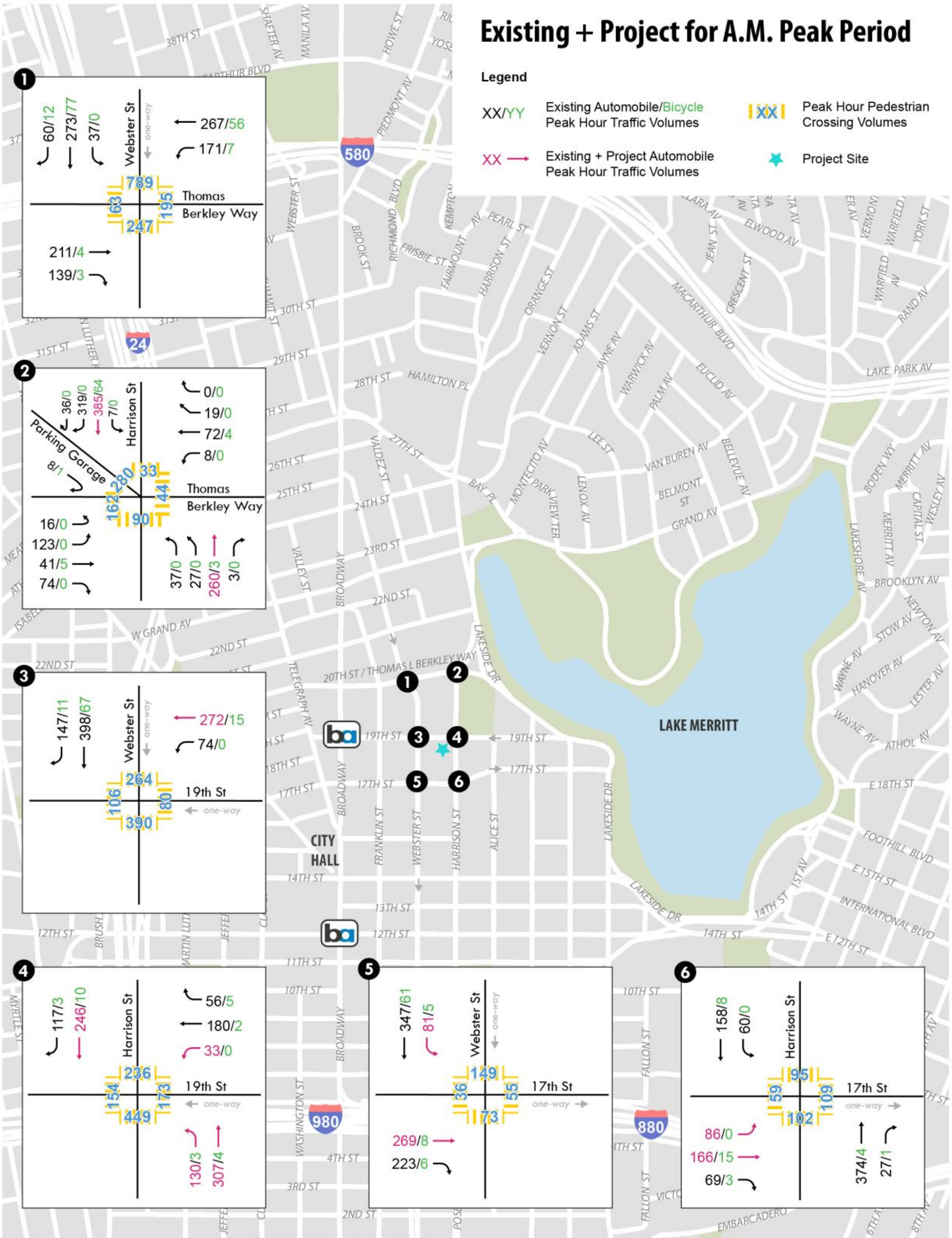
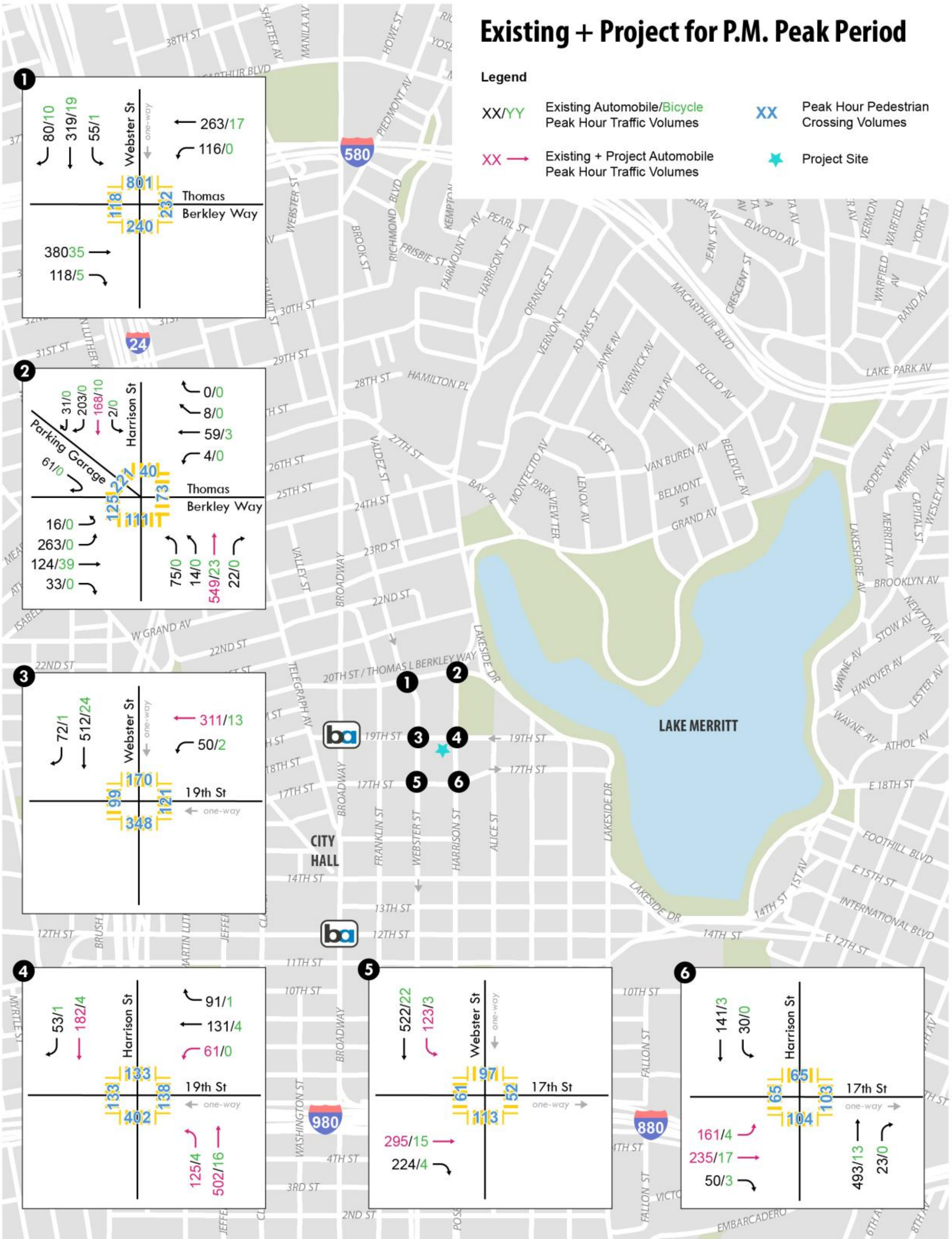


Figure 16 Existing + Project for P.M. Peak Period



2040 Intersection Analysis

Cumulative year 2040 traffic forecasts for the study intersections are based on the 2014 ACTC Travel Demand Model. **Figure 18** and **Figure 19** show traffic volumes for the cumulative 2040 no project scenario, and **Figure 20** and **Figure 21** show traffic volumes for 2040 plus project.

The study intersections would operate at acceptable conditions (i.e., LOS E or better) during weekday AM and PM peak hours under cumulative (no project) conditions. In addition, the project would not result in any significant traffic impacts that would be cumulatively considerable, as all of the study intersections would continue to operate at acceptable LOS conditions. **Figure 17** summarizes the existing intersection analysis results. **Appendix B** provides detailed LOS calculations.

Figure 17 Cumulative and Cumulative Plus Project Weekday AM and PM Peak Hour – LOS Conditions

Intersection	Control	Peak Hour	Cumulative (2040)		Cumulative+Project	
			Delay (sec)	LOS	Delay (sec)	LOS
1. Thomas Berkley Way / Webster Street	Signal	AM	20	B	20	B
		PM	21	C	21	C
2. Thomas Berkley Way / Harrison Street	Signal	AM	53	D	60	E
		PM	38	D	39	D
3. 19th Street / Webster Street	Signal	AM	8	A	8	A
		PM	9	A	9	A
4. 19th Street / Harrison Street	Signal	AM	8	A	9	A
		PM	8	A	9	A
5. 17th Street / Webster Street	Signal	AM	8	A	8	A
		PM	8	A	8	A
6. 17th Street / Harrison Street	Signal	AM	10	B	10	B
		PM	12	B	12	B

Source: Nelson\Nygaard, 2016.

Figure 18 Cumulative A.M.

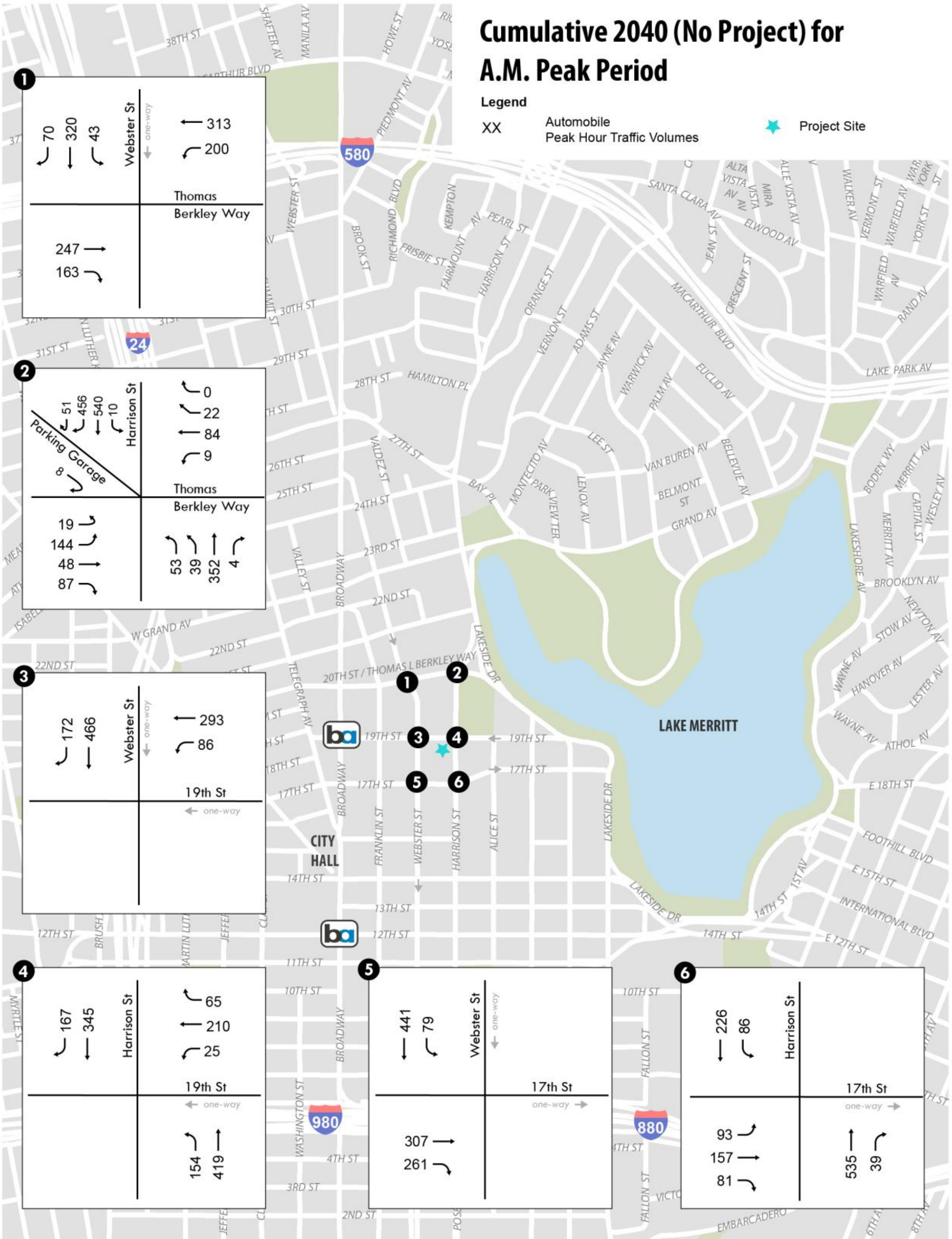


Figure 19 Cumulative P.M.

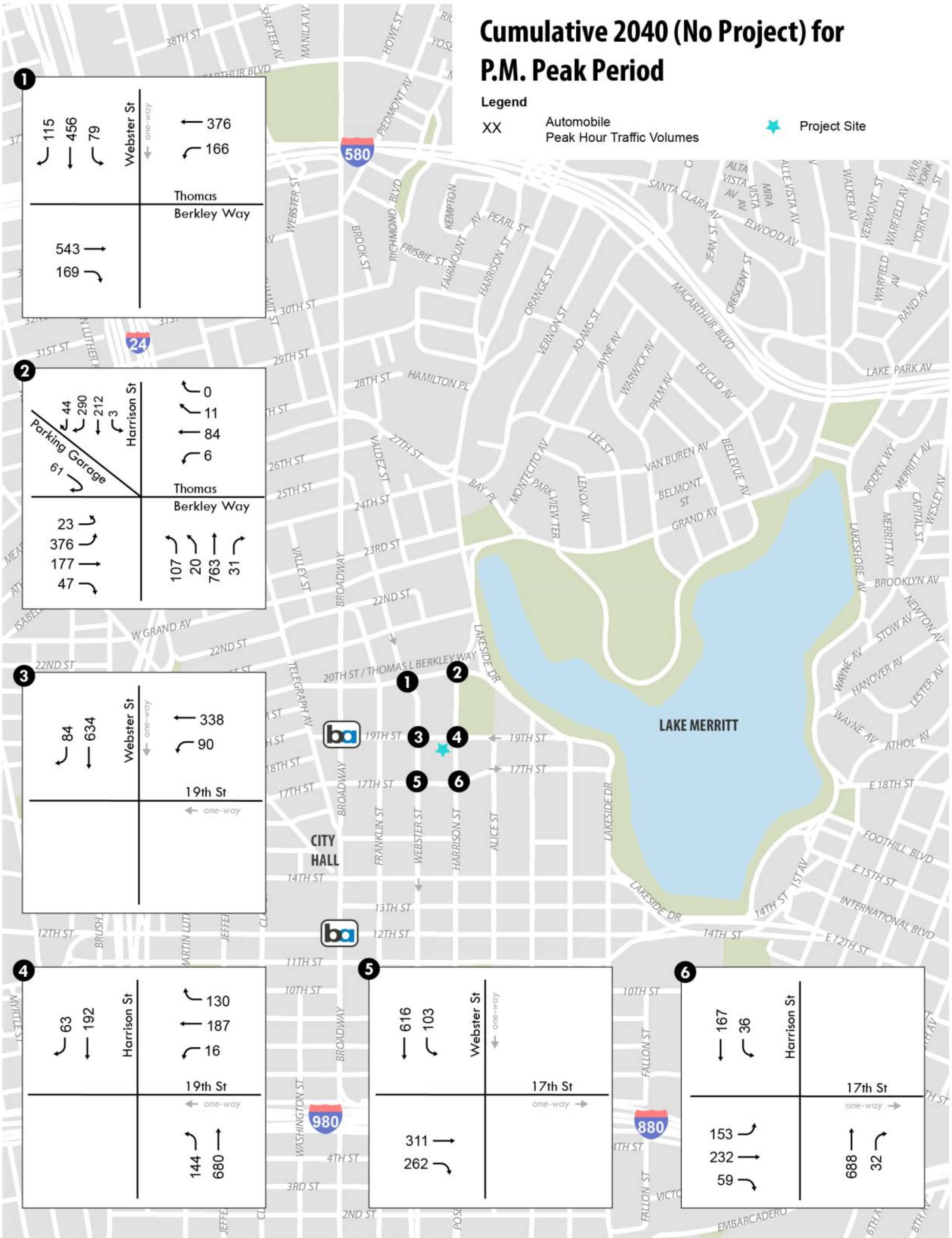


Figure 20 Cumulative + Project A.M.

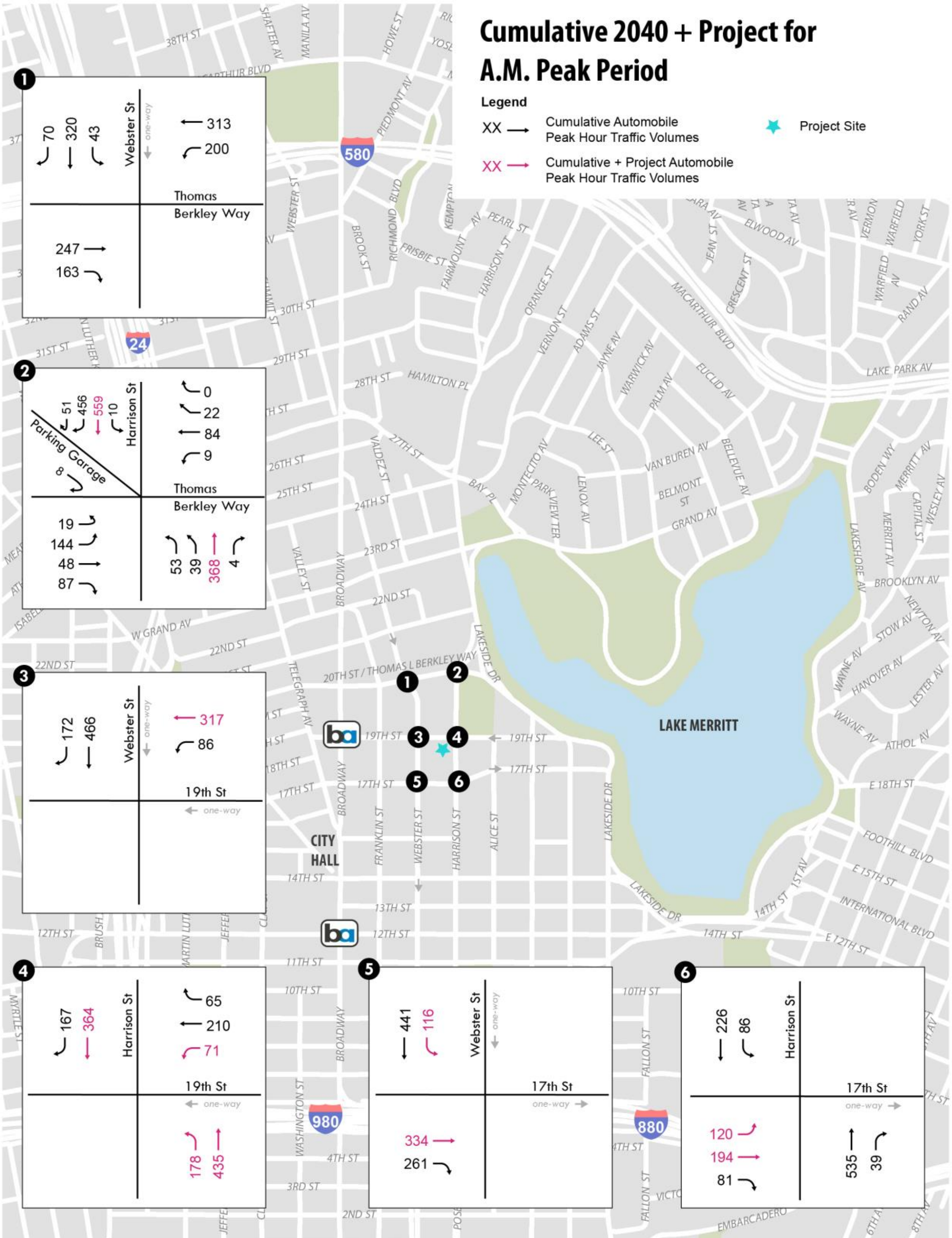
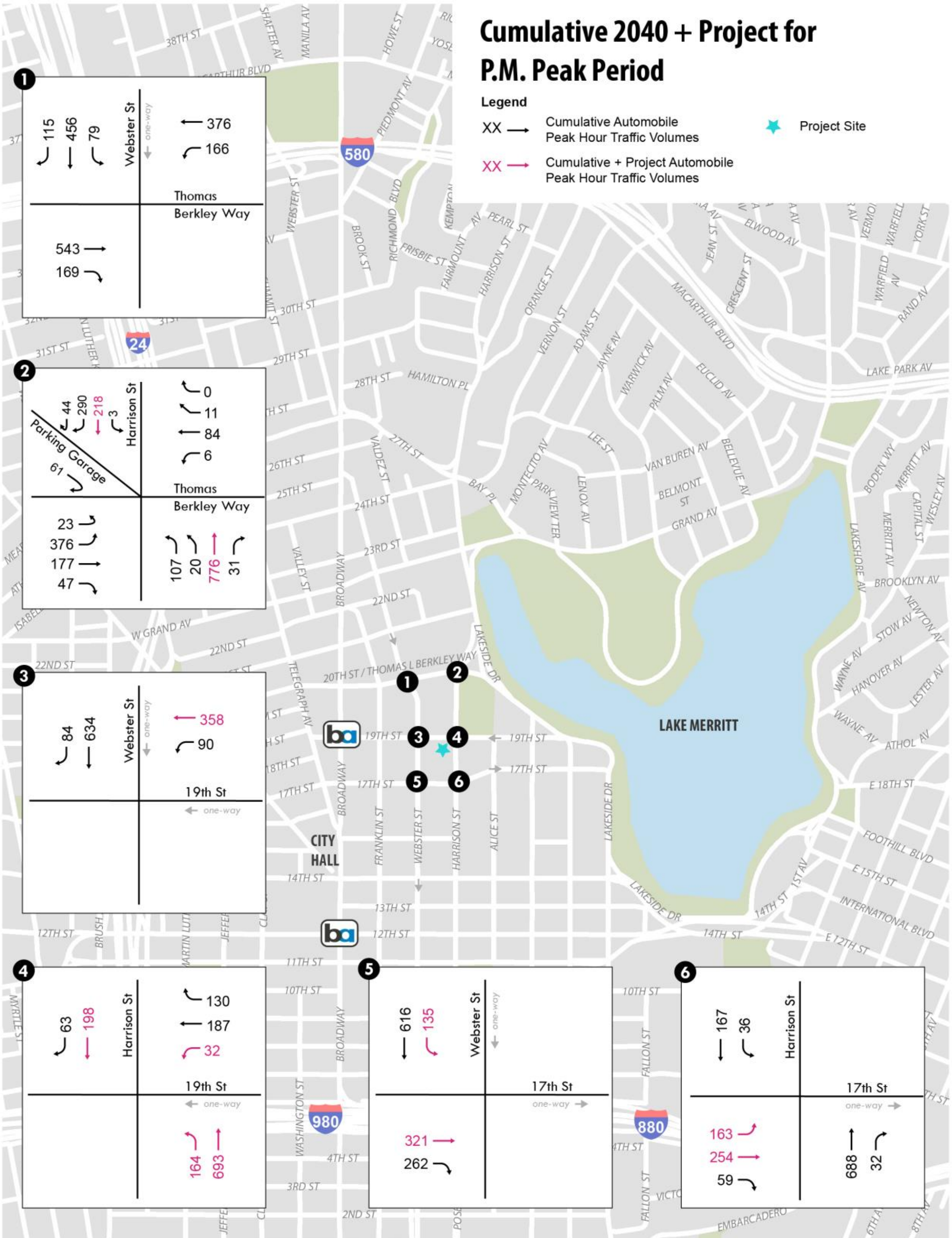


Figure 21 Cumulative + Project P.M.



Congestion Management Program (CMP) Evaluation

Significance Thresholds #7 and #8 consider the CMP network. The Alameda County CMP requires assessment of development-driven impacts to regional roadways for projects that would generate more than 100 net new weekday PM peak hour trips.

Although the proposed project would generate more than 100 net new weekday PM peak hour trips, the amount of vehicles generated by the proposed project that would likely (if at all) traverse CMP-designated roadways (e.g., all highways and local streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road) would not considerable or measureable. For example, as shown in Figure 11, about 5% of project-generated traffic may be added along portions of the Webster/Posey tubes; however, this equates to about five (5) weekday PM peak-hour trips, which would not result in a substantial contribute to existing traffic levels and such an increase would be within the daily fluctuation in traffic. Similarly, about 20% of project-generated may be added along portions of I-880; however, such an increase equates to about 30 vehicle trips and would not be considerable relative to current freeway traffic volumes. In addition, according to the ACTC *2015 Congestion Management Program*, none of CMP-designated roadways near the project site or that would experience any measurable increase in traffic volumes from the propose project are operated at unacceptable service levels.[16] Based on these findings, the proposed project would result in any impacts to the CMP network and no mitigation measures are required.

Transit Travel Time

Significance Threshold #9 considers transit travel times. The project site is served by several AC Transit routes along Broadway and Thomas L Berkley Way (20th Street). Traffic (intersection) impacts on Broadway were not studied, but two intersections by Thomas Berkley Way were analyzed. As presented, the proposed project would add any new vehicles along Thomas Berkeley Way during the weekday AM and PM peak hours, respectively. Based on these findings, traffic generated by the proposed project would not result in a noticeable increase in congestion along this street. The proposed project would have a very minor effect on transit service within the area as the estimated increase is within the variability in travel time experienced by each bus on this street. As a result, the proposed project would result in a less-than-significant impact to transit travel times and no mitigation measures are required.

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[16] Information on CMP roadway performance provided in ACTC 2015 Congestion Management Program document; available online at: http://www.alamedactc.org/files/managed/Document/17368/2015_Alameda_County_CMP.pdf; accessed May 13, 2016.

5. TRAFFIC SAFETY ANALYSIS

Significant thresholds #10-13 consider traffic safety as it relates to the range of roadway users, from pedestrians to bicyclists to bus riders. There is no at-grade railroad crossing at or near the project site, so significance criteria #14 does not apply.

The following section details existing conditions, project proposal, policy considerations, and recommendations for different users at and near the project site.

5.1 Pedestrian

Existing Conditions and Project Conditions

19th Street is a neighborhood, east-west street that connects pedestrians from downtown sites, such as 19th Street BART, to attractions to the east, such as Snow Park and Lake Merritt. 19th Street currently provides a 10-foot-wide sidewalk along the north side of the project site. Intermittently-placed trees, parking meters, and sign posts narrow the through passage zone to a minimum of 6 feet. The south side of 19th Street is activated by several commercial uses, including a boutique clothing store, record shop, and neighborhood bar. The south side of 19th Street also experiences adequate shade cover from six trees. The north side of 19th Street is more exposed and home to a few surface parking lots and an office supply store. The project currently proposes retail uses on 19th Street to add to the existing commercial character along 19th Street.

17th Street runs parallel to 19th Street and is a neighborhood east-west street. 17th Street currently provides a 10-foot-wide sidewalk along the south side of the project site. Intermittently-placed trees, parking meters, and sign posts narrow the through passage zone to a minimum of 7.5 feet. The south side of 17th Street is activated by several commercial uses, including a bike shop, book store, burger restaurant, and boutique market. The north side of 17th Street is home to salons. There are a few vacant storefronts along 17th Street.

Webster Street is a major north-south street and provides a 12-foot-wide sidewalk along the west side of the project site. Intermittently-placed trees, parking meters, and sign posts narrow the through passage zone to a minimum of nine feet. Webster Street is activated by a couple small shops on the west side, including a coffee shop, pet food store, and braiding shop, and a couple restaurants on the east side of the street. The project currently proposes a vehicle driveway and loading berth midblock on Webster Street.

Harrison Street is a north-south street that provides a 12-foot-wide sidewalk along the east side of the project site. Intermittently-placed trees, parking meters, and sign posts narrow the through passage zone to a minimum of nine feet. Harrison Street is not currently activated by commercial uses. The project currently proposes a two-way, two-lane vehicle driveway mid-block on Harrison Street.

There are currently pedestrian countdown signals at the intersection of 19th and Webster, and the intersection of 17th and Harrison. There are no pedestrian countdown signals at the intersection of 17th and Webster, and the intersection of 19th and Harrison. Curb cuts and marked crosswalks are provided on all four intersections near the project site.

The proposed project would not alter sidewalk widths. The primary impediment to pedestrian safety is the introduction of two proposed vehicle driveways – one on Webster Street, and one on Harrison Street. The two driveway locations would disrupt the continuity of the sidewalk and pedestrian realm, and would also create additional vehicle-pedestrian conflict zones. Recommendations are presented herein to improve pedestrian safety and reduce potential vehicle-pedestrian conflicts adjacent the driveway locations.

Policy Considerations

The City of Oakland Pedestrian Master Plan (PMP), adopted by City Council in 2002, outlines a vision to promote a pedestrian-friendly environment where public spaces, including streets and off-street paths, offer a level of convenience, safety, and attractiveness that encourages and rewards the choice to walk. The City of Oakland is currently in the process of updating its Master Plan to incorporate up-to-date information on existing conditions, refine the city's pedestrian vision and goals, and outline a five-year work plan of specific, high-priority, and cost-effective improvements.

Webster Street and 17th Street are both designated as neighborhood streets, or secondary pedestrian routes, in the PMP. The project would not alter sidewalk widths and sidewalk widths would continue to exceed PMP recommendations.

In the on-going Master Plan Update, the Technical Advisory Committee (TAC) and Pedestrian Advisory Group (PAG) drafted recommended strategies to improve Oakland's walking environment over the next five years. For safe crossings and speed reduction, the following treatments are recommended:

- **Low-cost & quick improvements**, such as high-visibility crosswalks, painted safety zones, signal modification, in-street "Yield to Pedestrians" sign, and advance yield or stop lines.
- **More intensive, higher cost improvements**, such as pedestrian signal heads and countdown timers, rectangular rapid flash beacons, pedestrian refuge islands, and concrete bulb-outs**.**
- **Maintenance of existing facilities**, such as crosswalks, bollards, and traffic signals

Recommendation #1: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies:

- Ensure that the project driveway(s) would provide adequate sight distance between motorists exiting the driveway and pedestrians on the adjacent sidewalk. If adequate sight distance cannot be provided, provide audio-visual warning devices at the driveway.
- The Project Sponsor shall install signage at the egress driveway to notify drivers to slow, stop, and yield to any pedestrians walking along the sidewalk (e.g. "Caution: Pedestrians Crossing", "Watch for Pedestrians", "Exit Slowly", "STOP", etc.). The Project Sponsor shall also install rumble strips or similar devices to maintain slow speeds for vehicles exiting the garage.
- The project shall ensure that pedestrians maintain the right of way along all sidewalks adjacent to the project site. Therefore, to maintain an even path of travel for pedestrians crossing the planned driveway, curb cuts should be constructed such that the sidewalks continue to be at-grade and not depress across the driveway thresholds. Constructing at-grade sidewalks at the driveway locations would also serve as a traffic calming measure which requires vehicles entering or exiting the driveway to considerably reduce their vehicle speeds and yield to any crossing pedestrians prior to entering the sidewalk space.
- Install pedestrian signal heads on all four pedestrian crossings at 19th Street/Harrison Street intersection if approved by Department of Transportation.

5.2 Bicycling

Existing Conditions, Project Conditions, and Policy Considerations

The project site is located near a network of bicycle facilities. Webster Street, which is directly adjacent to the project site, is the sole continuous southbound bicycle facility through the Lake Merritt district of downtown Oakland. From Grand Avenue to 14th Street, Webster Street's buffered bicycle lanes facilitate bicyclists traveling south to Jack London Square. Franklin Street, which is the parallel street west of Webster Street, facilitates bicyclists traveling north. Dedicated bikeways on Grand Avenue, 20th Street, Lakeside Drive, and Broadway, which are bikeways designated in the Oakland Bicycle Plan, are within a half mile of the project site. The presence of bicycle infrastructure nearby highlights the importance of bicycling in the area.

While the current 5 foot lane with 2 foot buffer provides additional width for bicyclists on Webster Street, the bicycle lane is not physically separated and subject to double parking, passenger loading, dumpsters and other refuse receptacles, turning vehicles, and other obstacles that degrade the facility. Additionally, while the 10 foot parking lane is generous, bicyclists are not outside the effective door zone. The City's first parking protected bicycle lane on Telegraph Avenue between 20th Street and 29th Street, as well as the City's proposed protected bikeway on 14th Street, are models for appropriate bicycle facilities for a downtown through route.

Short-term on-street bicycle parking is also available adjacent to the project site, as shown below in **Figure 22**.

Figure 22 Short-Term On-Street Bicycle Parking

Street	No. of Bicycle U-Racks
19th Street (North)	0
19th Street (South)	1
17th Street (North)	3
17th Street (South)	1
Webster Street (West)	3
Webster Street (East)	2
Harrison Street (West)	1
Harrison Street (East)	0

Source: Nelson\Nygaard, 2016.

Chapter 17.117 of the City of Oakland Planning Code require long- and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks. **Figure 23** summarizes the bicycle parking requirement for the proposed project. The proposed project is required to provide 62 long-term and 14 short-term parking spaces.

Based on the existing bicycle network and existing activity levels within the project vicinity (based field reconnaissance and count data), it is reasonable to assume that the anticipated increase in bicycle trips associated with the proposed project (about 7 bicycle trips in the AM peak hour and 12 bicycle trips in the

PM peak hour) would be accommodate by surrounding bicycle network facilities within the project vicinity.

Figure 23 Bicycle Parking Requirements

Land Use	Size	Long-Term		Short-Term	
		Spaces per Unit	Spaces	Spaces per Unit	Spaces
Apartments	240 DU	1:4 DU	60	1:20 DU	12
Retail	8.0 KSF	1:12 KSF	2 (minimum)	1:5 KSF	2 (minimum)
Total Required Bicycle Spaces			62		14
Total Bicycle Parking Provided			175		15
Bicycle Parking Surplus(+) / Deficit (-)			113		1

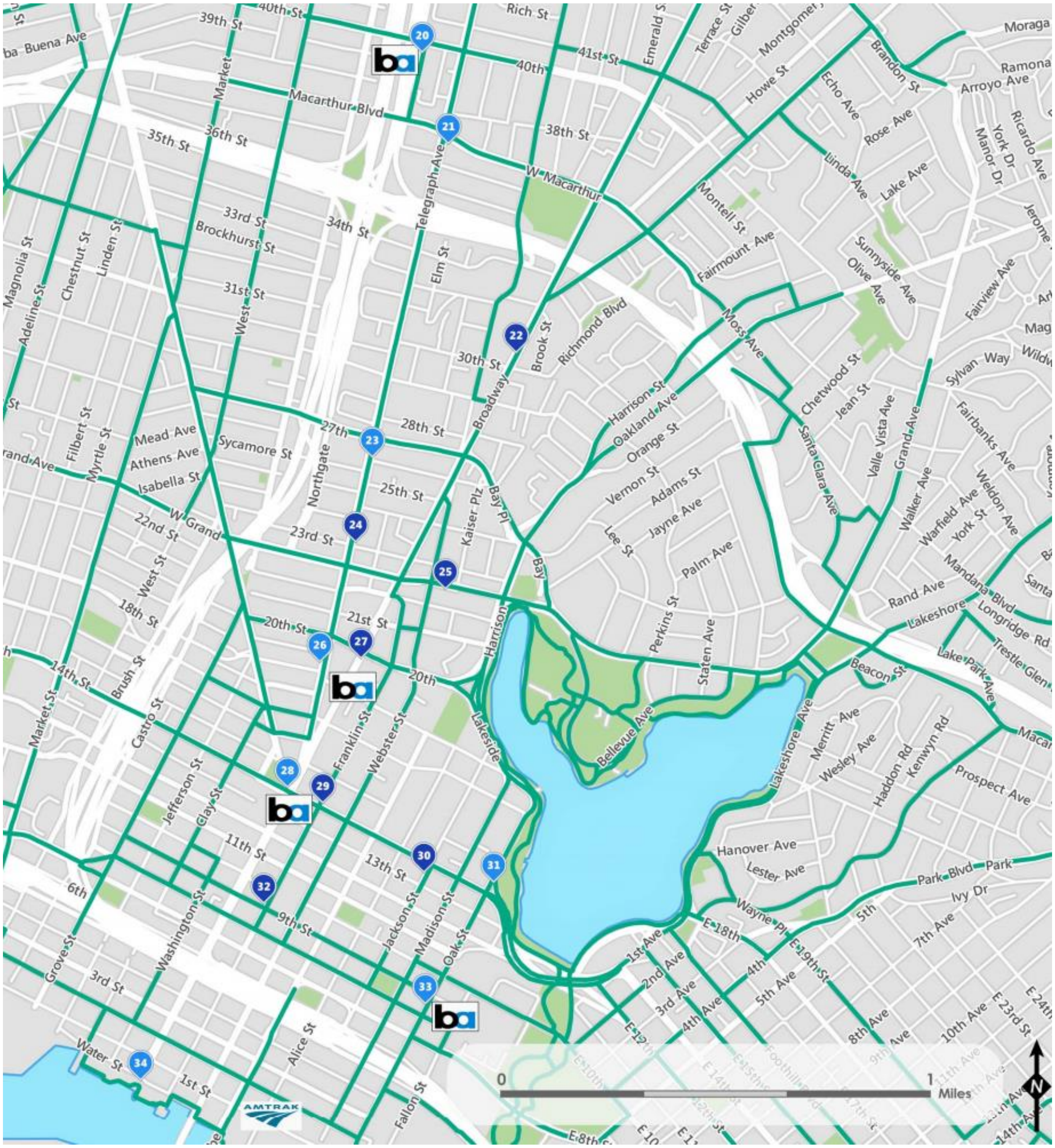
Source: City of Oakland: Nelson\Nygaard, 2016.

The project currently proposes 175 long-term bicycle parking spaces including a bike lounge on the second floor of the building. The 15 short-term bicycle parking spaces would be located within the sidewalk areas on Webster, Harrison, and 19th streets. The proposed project would be in compliance with the minimum number of bicycle parking spaces. Moreover, the proposed project would exceed the minimum long- and short-term bicycle parking requirement per the City's *Planning Code*.

Note that although the proposed project would result in an increase in the number of vehicles in the vicinity of the project site, this anticipated increase would not be substantial enough to create potentially safety hazards for bicyclists. Further, the proposed project would not otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

In May 2015, Bay Area Bike Share (BABS) announced a ten-fold system expansion from 700 to 7,000 bikes. Over the next two years, there will be 800 BABS bikes deployed in Oakland. **Figure 24** presents proposed bikeshare locations in and around Downtown Oakland. There are several proposed bikeshare sites near the project site, such as one on 20th Street and Broadway Avenue, and 14th Street and Franklin Street.

Figure 24 Bay Area Bikeshare East Bay Proposed Locations



Source: Bay Area Bike Share 2016

Recommendation #2: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies:

- Ensure adequate bicycle parking in the building that follows bicycle parking guidelines set forth by the Association of Pedestrian and Bicycle Professionals (APBP). Bicycle parking should be safe and secure.
- Consider secure bicycle parking options of the ground floor, instead of the second floor. Bicyclists are more likely to use bicycle parking facilities that are safe and secure on the ground level, than to carry their bicycles upstairs to the second floor.
- Ensure that the short-term bicycle parking spaces on sidewalks do not block pedestrian circulation.
- Install two short-term bicycle parking spaces outside of proposed retail area.
- Consider implementing a bicycle parking corral on 19th Street to support short-term bicycle parking in the retail area.
- Consider providing funds to upgrade bicycle facilities on Webster Street to create a parking-protected bicycle lane as part of Transportation Demand Management Plan.
- Consider sponsoring a Bay Area Bike Share station near the project site as part of a Transportation Demand Management Plan.

5.3 Bus Rider

Existing Conditions, Project Conditions, and Policy Considerations

There are no bus stops directly adjacent to the project site. However, there are bus stops and AC Transit service one block north on Thomas L. Berkley Way (20th Street), and three blocks west along Broadway. AC Transit Routes 1, 1R, 11, 12, 18, 51A, 58L, 72, 72M, 651, 800, 802, 805, 851, NL, and Broadway Shuttle are all within a quarter mile of the project site.

The proposed project would not result in any proposed changes and/or modifications to the bus routes operating in the vicinity of the project nor would the proposed project modify and/or create new access routes between the project site and these bus stops.

The proposed project would not result in permanent substantial decrease in vehicle, bicycle and pedestrian safety. Based on these findings, the proposed project would result in a less-than-significant impact and no mitigation measures are required.

6. CONSISTENCY WITH CITY POLICIES, PLANS, AND PROGRAMS

Significant threshold #15 considers adopted City policies, plans, and programs regarding public transit, bicycle, and pedestrian facilities as they relate to the project.

The City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets policies, state a strong preference for encouraging the use of non-automobile transportation modes, such as walking, bicycling, and transit. The proposed project supports these goals by providing residential and retail uses in a walkable urban environment with quality transit and bike infrastructure nearby.

6.1 Parking and Transportation Demand Management Plan

The City of Oakland requires a Parking and Transportation Demand Management Plan for all developments involving 50 or more new residential units. Prior to issuance of a final inspection of the building permit, the TDM plan will contain 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 developer will implement the approved TDM plan, which shall include strategies to increase pedestrian, bicycle, transit, and carpool/vanpool use. All four modes of travel shall be considered. Actions include the following:

- *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, and shower and locker facilities in commercial developments that exceed the requirement.*
- *Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, onsite signage and bike lane striping.*
- *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.*
- *Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.*
- *Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.*
- *Direct onsite 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).*
- *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*
- *Provision of shuttle service between the development and nearest mass transit station, or ongoing contribution to existing shuttle or public transit services*
- *Guaranteed ride home program for employees, either through 511.org or through separate program*
- *Pre-tax commuter benefits (commuter checks) for employees*
- *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.*

- *On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.*
- *Distribution of information concerning alternative transportation options*
- *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*
- *Parking management strategies; including attendant/valet parking and shared parking spaces*
- *Requiring tenants to provide opportunities and the ability to work off-site*
- *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*
- *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 developer will submit an annual compliance report for review and approval by the City. Nelson\Nygaard will work with the developer and the City to develop this Parking and TDM Plan.

7. OTHER IMPACTS

This section addresses CEQA significance criteria #16-18. In addition, while CEQA evaluation does not require a discussion of parking, a brief overview of parking supply and demand is provided for informational purposes.

7.1 Project Construction Impacts

During construction, temporary and intermittent transportation impacts may occur. Construction-related vehicles may temporarily reduce capacities of roadways in the project vicinity. Additionally, construction activity, especially along 19th Street and Harrison Street, may result in temporary closure of sidewalks and prohibition of on-street parking.

The City of Oakland's CEQA Standard Conditions of Approval requires a construction management plan if the project would result in a substantial, though temporary, adverse effect on the circulation system during construction of the project. Based on these findings, construction-related activities and potential impacts would be less than significant and no mitigation measures are required.

Recommendation #3: While not required to address a CEQA impact, the following should be considered during construction as standard city practices that support adopted city policies:

It is recommended that if there are temporary closures of sidewalks, the Project Sponsors shall work with the City to provide temporary walkways for pedestrians. Additionally, with temporary prohibition of on-street parking, the Project Sponsor shall work with the City to ensure adequate advance notice for motorists.

7.2 Changes in Air Traffic Patterns

The Oakland International Airport is located approximately eight miles south of the project site. The project would increase density and building heights, but the building heights are not expected to interfere with current flight patterns at Oakland International Airport or other nearby airports. The proposed project would not result in changes in air traffic patterns. Based on these findings, the proposed project would result in a less-than-significant impact to air traffic and no mitigation measures are required.

7.3 Cumulative Impacts

The project's contribution to cumulative impacts is not considered "considerable" (i.e. significant), so no mitigation measures are required.

7.4 Parking Considerations

Project Parking Supply

Based on project plans dated March 2016, the project would provide a maximum of 240 garage parking spaces over two floors. The ground floor parking would be accessible via a driveway on Harrison Street. The second floor parking would be accessible via a driveway on Webster Street. No existing on-street parking would be removed.

The streets adjacent to the project site provide metered on-street parking, as shown below.

Figure 25 On-Street Parking Supply

Street	No. of Regular Parking Spaces	No. of Other Parking Spaces	Regulations
19th Street (North)	6	1 loading	▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Mon, Wed, and Fri
19th Street (South)	10	-	▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Tue, Thu, and Sat
17th Street (North)	11	-	▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Mon, Wed, and Fri
17th Street (South)	8	1 ADA 2 loading	▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Tue, Thu, and Sat
Webster Street (West)	14		▪ 1 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Tue, Thu, and Sat
Webster Street (East)	14		▪ 1 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Mon, Wed, and Fri
Harrison Street (West)	9		▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Tue, Thu, and Sat
Harrison Street (East)	12	1 loading	▪ 2 hour Mon-Sat from 8am-6pm ▪ No parking 3am-6am Mon, Wed, and Fri

Source: Nelson\Nygaard, 2016.

City Code Automobile Parking Requirements

The City of Oakland Municipal Code requirements of zone CBD-C apply to the apartment and commercial components of the proposed project. According to Sections 17.116.060 and 17.116.080, CBD-C zoning requires one parking space per residential unit and no space requirement for retail. Figure 26 presents the off-street automobile parking requirements for the proposed project. The proposed project would meet the requirement to provide 240 spaces (all spaces for residential units and no spaces are required for commercial retail space).

Figure 26 Automobile Parking Requirements

Land Use	Size	Required Parking Supply	Provided Parking Supply	Difference
Apartment	240 units	240	240	0
Retail	8,000 square feet	0	0	0
Total	**--**	**240**	**240**	**0**

Source: City of Oakland, 2016.

Parking Demand

Parking demand is determined by examining average vehicle ownership rates from Census data, parking demand rates published in *ITE Parking Generation, 4th Edition,* and *ULI Shared Parking* book. This analysis shows that there is a surplus of parking provided at the proposed project site. **Figure 27** outlines project parking supply and demand.

According to American Community Survey estimates, average vehicle ownership in the downtown area is 0.52 vehicles per multi-family dwelling unit. Based on the census data, the peak residential parking demand would be 125 parking spaces. Based on the ITE data for retail, such as a convenience market, the peak commercial parking demand would be 25 parking spaces. Residential visitor demand is estimated using an adjusted ULI shared parking rate of 0.05, resulting in a visitor demand of 12 spaces.

Figure 27 Project Parking Supply and Demand

Land Use	Units	Demand Rate	Weekday Demand
Apartments (Residents)	240 DU	0.52[a]	125
Apartments (Visitors)	240 DU	0.05[b]	12
Retail	8.0 KSF	3.11[c]	25
Parking Demand			162
Parking Supply			240
Parking Surplus			78

Source:

a) Based on 2013 ACS average automobile ownership of 0.52 vehicles per residential unit in downtown Oakland

b) Based on adjusted rate of 0.05 spaces per DU using *ULI Shared Parking*.

c) Based on *ITE Parking Generation (4th Edition)* land use category 851 (convenience market open 24 hours)

Nelson\Nygaard 2016

Recommendation #4: While not required to address a CEQA impact, the following should be considered as part of the final design for the project as they are standard city practices that support adopted city policies:

- Given the project site's location near transit and bicycle facilities, and other neighborhood-serving uses, among other transportation facilities, the Project Sponsor could consider unbundling parking and any reserved parking spaces for residents could be leased separately from the housing.
- Consider dedicated parking spaces for carsharing services such as Zipcar and/or provide discounted or free carsharing memberships to residents as part of the TDM.

7.5 Truck Access and Circulation

City Municipal Code Section 17.116.140 requires off-street loading facilities for residential and commercial uses. The requirement for residential facilities that have between 150,000 and 249,999 square feet of floor area is two (2) off-street loading berths. The Code does not require loading berths for commercial uses with less than 10,000 square feet of floor area. Based on City Code, the proposed project must provide two off-street loading berths for the residential component of the project.

The proposed project would include one off-street loading space in the parking garage, which can be access via the planned Webster Street driveway. Although the project would not be in compliance with the Code, the Project Sponsor may seek a variance from the City to exempt the development from requiring two loading spaces. Based on the land-use types proposed, the provision of one loading space would be adequate for purposes of residential move-in/move-out operations, which it is reasonable to assume such operations would be properly scheduled with building management staff. In addition, the retail use would likely not generate a considerable amount of freight deliveries that would require the on-site loading space. Most deliveries would comprise passenger vans and small trucks that could utilize on-street parking spaces; however, any freight/loading deliveries that would require the on-site loading space would likely be scheduled with the property management.

Attachments:

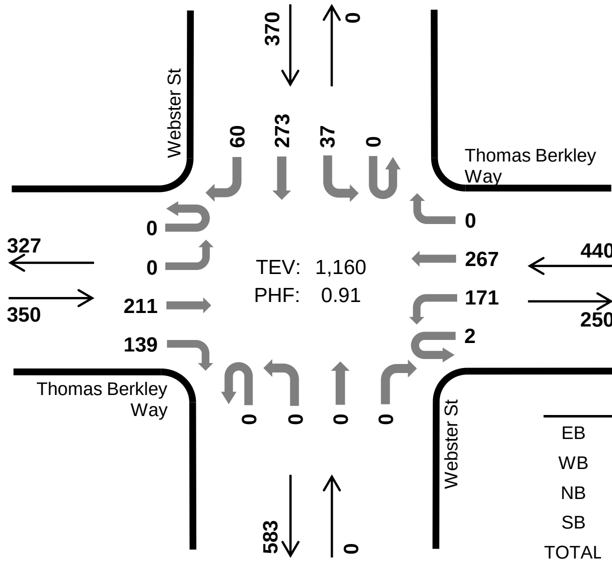
- Appendix A –Intersection Turning Movement Count Data
- Appendix B –Intersection Level of Service Calculation Outputs

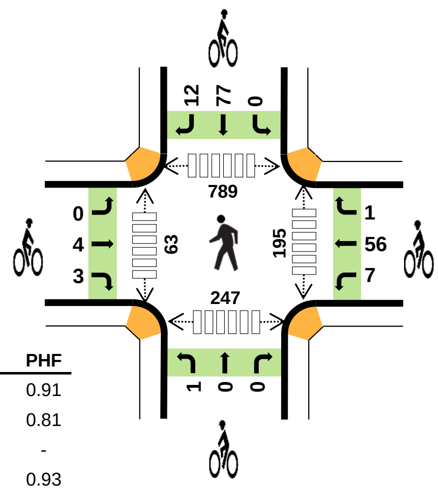
Appendix A Intersection Turning Movement Count Data

Webster St
Thomas Berkley Way

Date:	04/05/2016
Count Period:	7:00 AM to 9:00 AM
Peak Hour:	8:00 AM to 9:00 AM

Peak Hour





	HV %:	PHF
EB	2.9%	0.91
WB	2.7%	0.81
NB	-	-
SB	3.5%	0.93
TOTAL	3.0%	0.91

Two-Hour Count Summaries

Interval Start		Thomas Berkley Way				Thomas Berkley Way				Webster St				Webster St				15-min Total	Rolling One Hour
		Eastbound				Westbound				Northbound				Southbound					
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM		0	0	14	11	2	24	28	0	0	0	0	0	0	10	22	13	124	0
7:15 AM		1	0	29	13	1	19	44	0	0	0	0	0	0	6	32	13	158	0
7:30 AM		0	0	34	19	1	18	42	0	0	0	0	0	0	9	45	19	187	0
7:45 AM		0	0	49	23	2	40	63	0	0	0	0	0	0	9	40	16	242	711
8:00 AM		**0**	**0**	**60**	**31**	**0**	**34**	**53**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	**71**	**13**	**277**	864
8:15 AM		**0**	**0**	**41**	**28**	**0**	**42**	**60**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**73**	**12**	**262**	968
8:30 AM		**0**	**0**	**55**	**39**	**2**	**49**	**85**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**63**	**19**	**319**	1,100
8:45 AM		**0**	**0**	**55**	**41**	**0**	**46**	**69**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**66**	**16**	**302**	**1,160**
Count Total		1	0	337	205	8	272	444	0	0	0	0	0	0	71	412	121	1,871	0
Peak Hour	**All**	**0**	**0**	**211**	**139**	**2**	**171**	**267**	**0**	**0**	**0**	**0**	**0**	**0**	**37**	**273**	**60**	**1,160**	**0**
	HV	**0**	**0**	**6**	**4**	**0**	**2**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**7**	**35**	**0**
	HV%	**-**	**-**	**3%**	**3%**	**0%**	**1%**	**4%**	**-**	**-**	**-**	**-**	**-**	**-**	**0%**	**2%**	**12%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	3	1	0	4	*8*	0	8	0	8	*16*	18	9	80	23	*130*
7:15 AM	2	2	0	4	*8*	0	9	0	6	*15*	34	10	113	21	*178*
7:30 AM	2	2	0	2	*6*	1	8	0	12	*21*	30	11	162	42	*245*
7:45 AM	2	2	0	1	*5*	4	11	0	12	*27*	36	9	172	32	*249*
8:00 AM	**2**	**0**	**0**	**1**	***3***	**1**	**13**	**0**	**13**	***27***	**47**	**11**	**191**	**50**	*299*
8:15 AM	**1**	**3**	**0**	**3**	***7***	**0**	**23**	**1**	**30**	***54***	**54**	**29**	**200**	**67**	*350*
8:30 AM	**6**	**3**	**0**	**5**	***14***	**3**	**13**	**0**	**22**	***38***	**47**	**9**	**234**	**73**	*363*
8:45 AM	**1**	**6**	**0**	**4**	***11***	**3**	**15**	**0**	**24**	***42***	**47**	**14**	**164**	**57**	*282*
Count Total	19	19	0	24	*62*	12	100	1	127	*240*	313	102	1,316	365	*2,096*
Peak Hour	**10**	**12**	**0**	**13**	***35***	**7**	**64**	**1**	**89**	***161***	**195**	**63**	**789**	**247**	***1,294***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Thomas Berkley Way				Thomas Berkley Way				Webster St				Webster St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	2	1	0	0	1	0	0	0	0	0	0	1	0	3	8	0
7:15 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	3	1	8	0
7:30 AM	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	2	6	0
7:45 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	1	5	27
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	22
8:15 AM	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**7**	21
8:30 AM	**0**	**0**	**3**	**3**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**14**	29
8:45 AM	**0**	**0**	**1**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**11**	**35**
Count Total	0	0	13	6	0	2	17	0	0	0	0	0	0	1	9	14	62	0
Peak Hour	**0**	**0**	**6**	**4**	**0**	**2**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**7**	**35**	**0**

Two-Hour Count Summaries - Bikes

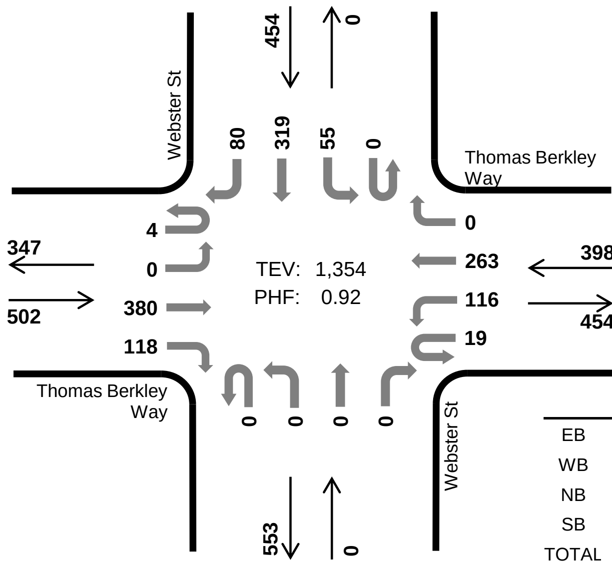
Interval Start	Thomas Berkley Way			Thomas Berkley Way			Webster St			Webster St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	0	0	0	8	0	0	0	0	0	5	3	16	0
7:15 AM	0	0	0	0	9	0	0	0	0	0	4	2	15	0
7:30 AM	0	1	0	0	8	0	0	0	0	0	11	1	21	0
7:45 AM	0	2	2	2	9	0	0	0	0	0	9	3	27	79
8:00 AM	**0**	**0**	**1**	**1**	**12**	**0**	**0**	**0**	**0**	**0**	**11**	**2**	**27**	90
8:15 AM	**0**	**0**	**0**	**3**	**20**	**0**	**1**	**0**	**0**	**0**	**25**	**5**	**54**	129
8:30 AM	**0**	**2**	**1**	**0**	**13**	**0**	**0**	**0**	**0**	**0**	**19**	**3**	**38**	146
8:45 AM	**0**	**2**	**1**	**3**	**11**	**1**	**0**	**0**	**0**	**0**	**22**	**2**	**42**	**161**
Count Total	0	7	5	9	90	1	1	0	0	0	106	21	240	0
Peak Hour	**0**	**4**	**3**	**7**	**56**	**1**	**1**	**0**	**0**	**0**	**77**	**12**	**161**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

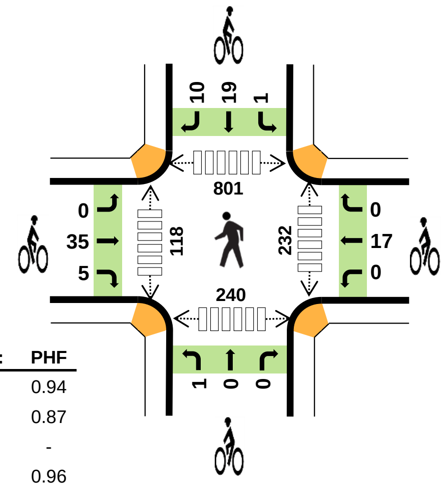
Webster St
Thomas Berkley Way

Date: 04/05/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour



	HV %:	PHF
EB	2.6%	0.94
WB	2.5%	0.87
NB	-	-
SB	4.0%	0.96
TOTAL	3.0%	0.92



Two-Hour Count Summaries

Interval Start	Thomas Berkley Way Eastbound UT	LT	TH	RT	Thomas Berkley Way Westbound UT	LT	TH	RT	Webster St Northbound UT	LT	TH	RT	Webster St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	62	34	2	26	53	0	0	0	0	0	0	11	71	27	286	0
4:15 PM	0	0	70	34	2	18	55	0	0	0	0	0	0	10	68	18	275	0
4:30 PM	0	0	87	34	2	27	64	0	0	0	0	0	0	11	73	22	320	0
4:45 PM	**2**	**0**	**90**	**32**	**3**	**20**	**64**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**80**	**21**	**323**	1,204
5:00 PM	**0**	**0**	**101**	**32**	**6**	**33**	**76**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**84**	**20**	**366**	1,284
5:15 PM	**0**	**0**	**86**	**30**	**5**	**27**	**52**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**77**	**19**	**310**	1,319
5:30 PM	**2**	**0**	**103**	**24**	**5**	**36**	**71**	**0**	**0**	**0**	**0**	**0**	**0**	**16**	**78**	**20**	**355**	**1,354**
5:45 PM	0	0	77	32	4	20	57	0	0	0	0	0	0	9	73	27	299	1,330
Count Total	4	0	676	252	29	207	492	0	0	0	0	0	0	96	604	174	2,534	0
Peak Hour All	**4**	**0**	**380**	**118**	**19**	**116**	**263**	**0**	**0**	**0**	**0**	**0**	**0**	**55**	**319**	**80**	**1,354**	**0**
Peak Hour HV	**0**	**0**	**8**	**5**	**0**	**3**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**6**	**7**	**41**	**0**
Peak Hour HV%	**0%**	**-**	**2%**	**4%**	**0%**	**3%**	**3%**	**-**	**-**	**-**	**-**	**-**	**-**	**9%**	**2%**	**9%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	6	2	0	3	*11*	3	3	0	1	*7*	51	25	156	60	*292*
4:15 PM	3	4	0	3	*10*	3	1	0	4	*8*	58	28	144	37	*267*
4:30 PM	5	2	0	3	*10*	4	2	0	3	*9*	39	32	173	37	*281*
4:45 PM	**4**	**1**	**0**	**3**	***8***	**6**	**3**	**0**	**2**	***11***	**47**	**22**	**185**	**53**	*307*
5:00 PM	**4**	**1**	**0**	**3**	***8***	**6**	**5**	**1**	**4**	***16***	**66**	**28**	**247**	**61**	*402*
5:15 PM	**2**	**4**	**0**	**4**	***10***	**14**	**5**	**0**	**10**	***29***	**63**	**33**	**185**	**57**	*338*
5:30 PM	**3**	**4**	**0**	**8**	***15***	**14**	**4**	**0**	**14**	***32***	**56**	**35**	**184**	**69**	*344*
5:45 PM	3	2	0	2	*7*	18	3	0	6	*27*	64	23	180	63	*330*
Count Total	30	20	0	29	*79*	68	26	1	44	*139*	444	226	1,454	437	*2,561*
Peak Hour	**13**	**10**	**0**	**18**	***41***	**40**	**17**	**1**	**30**	***88***	**232**	**118**	**801**	**240**	***1,391***

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Thomas Berkley Way				Thomas Berkley Way				Webster St				Webster St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	3	3	0	0	2	0	0	0	0	0	0	1	1	1	11	0
4:15 PM	0	0	3	0	0	0	4	0	0	0	0	0	0	1	0	2	10	0
4:30 PM	0	0	4	1	0	0	2	0	0	0	0	0	0	1	0	2	10	0
4:45 PM	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**8**	39
5:00 PM	**0**	**0**	**1**	**3**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**8**	36
5:15 PM	**0**	**0**	**2**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**1**	**10**	36
5:30 PM	**0**	**0**	**1**	**2**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**3**	**15**	**41**
5:45 PM	0	0	3	0	0	0	2	0	0	0	0	0	0	1	0	1	7	40
Count Total	0	0	21	9	0	3	17	0	0	0	0	0	0	9	7	13	79	0
Peak Hour	**0**	**0**	**8**	**5**	**0**	**3**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**6**	**7**	**41**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Thomas Berkley Way			Thomas Berkley Way			Webster St			Webster St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	3	0	0	3	0	0	0	0	0	1	0	7	0
4:15 PM	0	3	0	0	1	0	0	0	0	0	4	0	8	0
4:30 PM	0	4	0	0	2	0	0	0	0	0	2	1	9	0
4:45 PM	**0**	**6**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**11**	35
5:00 PM	**0**	**6**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**0**	**3**	**1**	**16**	44
5:15 PM	**0**	**12**	**2**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**8**	**2**	**29**	65
5:30 PM	**0**	**11**	**3**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**7**	**6**	**32**	**88**
5:45 PM	0	17	1	1	2	0	0	0	0	0	5	1	27	104
Count Total	0	62	6	1	25	0	1	0	0	1	31	12	139	0
Peak Hour	**0**	**35**	**5**	**0**	**17**	**0**	**1**	**0**	**0**	**1**	**19**	**10**	**88**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

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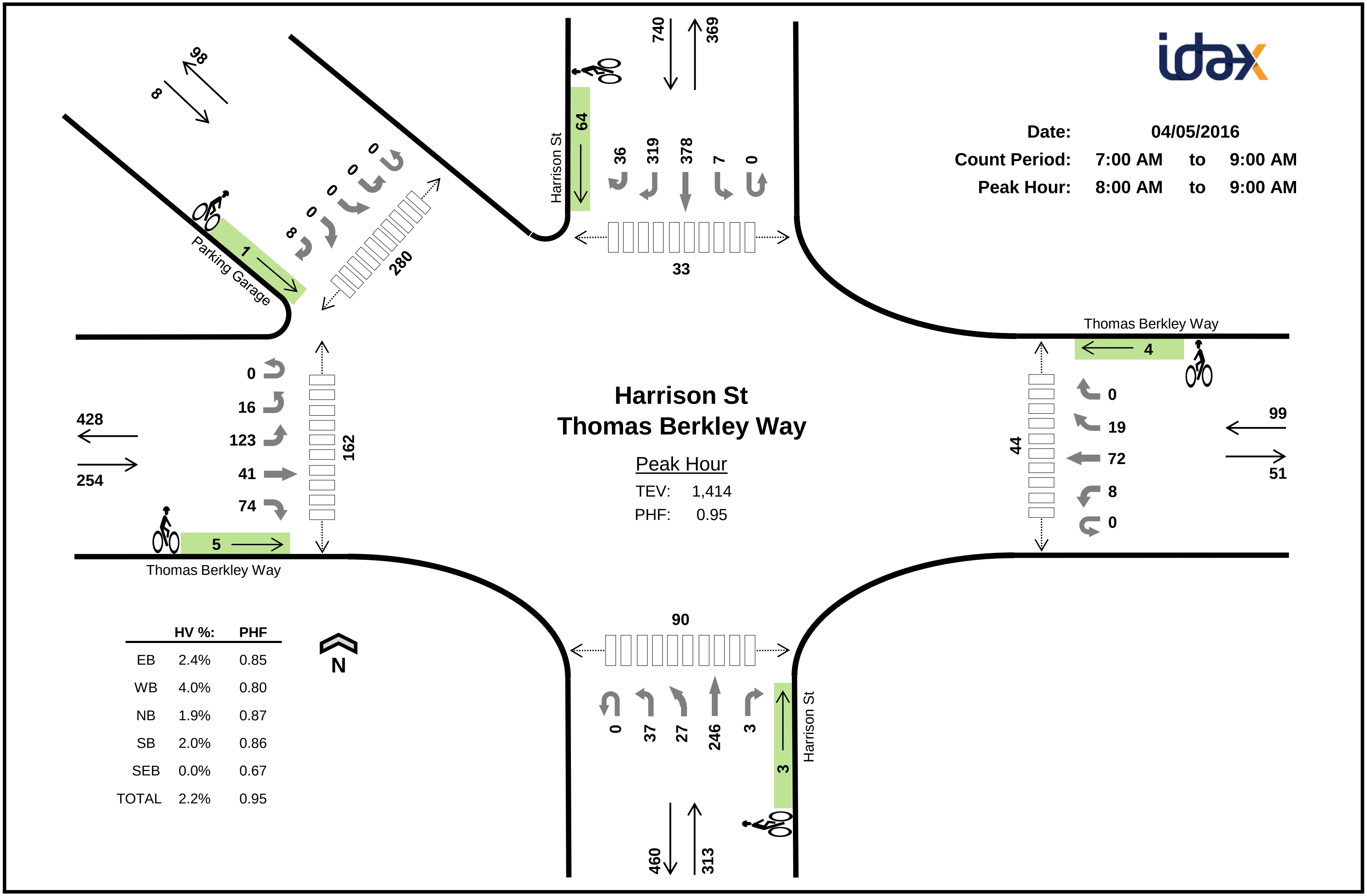

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Two-Hour Count Summaries

Interval Start	Thomas Berkley Way Eastbound					Thomas Berkley Way Westbound					Harrison St Northbound					Harrison St Southbound					Parking Garage Southeastbound					15-min Total	Rolling One Hour
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM	0	1	5	4	13	0	3	7	4	0	0	3	0	25	0	0	0	39	46	5	0	0	0	0	0	155	0
7:15 AM	0	2	12	8	12	0	0	11	2	0	0	6	1	34	0	0	0	59	42	2	0	0	0	0	0	191	0
7:30 AM	0	2	12	7	19	0	2	13	2	0	0	9	4	50	0	0	0	57	40	3	0	0	0	0	0	220	0
7:45 AM	0	5	22	13	20	0	2	15	4	0	0	11	2	38	0	0	0	88	85	7	0	0	0	0	0	312	878
8:00 AM	**0**	**6**	**35**	**14**	**20**	**0**	**3**	**16**	**2**	**0**	**0**	**12**	**8**	**63**	**2**	**0**	**0**	**87**	**59**	**10**	**0**	**0**	**0**	**0**	**1**	**338**	1,061
8:15 AM	**0**	**2**	**30**	**9**	**11**	**0**	**3**	**13**	**9**	**0**	**0**	**6**	**3**	**56**	**0**	**0**	**6**	**112**	**78**	**3**	**0**	**0**	**0**	**0**	**2**	**343**	1,213
8:30 AM	**0**	**6**	**30**	**7**	**17**	**0**	**1**	**17**	**4**	**0**	**0**	**9**	**11**	**52**	**1**	**0**	**0**	**90**	**111**	**14**	**0**	**0**	**0**	**0**	**2**	**372**	1,365
8:45 AM	**0**	**2**	**28**	**11**	**26**	**0**	**1**	**26**	**4**	**0**	**0**	**10**	**5**	**75**	**0**	**0**	**1**	**89**	**71**	**9**	**0**	**0**	**0**	**0**	**3**	**361**	**1,414**
Count Total	0	26	174	73	138	0	15	118	31	0	0	66	34	393	3	0	7	621	532	53	0	0	0	0	8	2,292	0
Peak Hour All	**0**	**16**	**123**	**41**	**74**	**0**	**8**	**72**	**19**	**0**	**0**	**37**	**27**	**246**	**3**	**0**	**7**	**378**	**319**	**36**	**0**	**0**	**0**	**0**	**8**	**1,414**	**0**
Peak Hour HV	**0**	**0**	**5**	**0**	**1**	**0**	**1**	**2**	**1**	**0**	**0**	**1**	**1**	**4**	**0**	**0**	**2**	**6**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**
Peak Hour HV%	**-**	**0%**	**4%**	**0%**	**1%**	**-**	**13%**	**3%**	**5%**	**-**	**-**	**3%**	**4%**	**2%**	**0%**	**-**	**29%**	**2%**	**2%**	**0%**	**-**	**-**	**-**	**-**	**0%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SEB	Total	EB	WB	NB	SB	SEB	Total	East	West	North	South	Northwest	Total
7:00 AM	3	0	0	3	0	*6*	1	1	0	5	0	*7*	8	10	3	14	27	*62*
7:15 AM	2	0	0	4	0	*6*	2	4	1	4	0	*11*	5	13	6	14	30	*68*
7:30 AM	0	0	0	5	0	*5*	0	1	1	6	0	*8*	6	34	3	17	46	*106*
7:45 AM	2	0	0	4	0	*6*	3	0	1	5	0	*9*	11	29	9	11	62	*122*
8:00 AM	**2**	**0**	**0**	**2**	**0**	***4***	**1**	**1**	**0**	**10**	**0**	***12***	**5**	**34**	**9**	**22**	**64**	***134***
8:15 AM	**0**	**2**	**1**	**6**	**0**	***9***	**0**	**1**	**0**	**21**	**0**	***22***	**10**	**42**	**7**	**23**	**75**	***157***
8:30 AM	**2**	**2**	**2**	**2**	**0**	***8***	**3**	**0**	**0**	**17**	**0**	***20***	**14**	**32**	**11**	**24**	**78**	***159***
8:45 AM	**2**	**0**	**3**	**5**	**0**	***10***	**1**	**2**	**3**	**16**	**1**	***23***	**15**	**54**	**6**	**21**	**63**	***159***
Count Total	13	4	6	31	0	*54*	11	10	6	84	1	*112*	74	248	54	146	445	*967*
Peak Hr	**6**	**4**	**6**	**15**	**0**	***31***	**5**	**4**	**3**	**64**	**1**	***77***	**44**	**162**	**33**	**90**	**280**	*609*

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Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Thomas Berkley Way					Thomas Berkley Way					Harrison St					Harrison St					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	6	0
7:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	6	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	5	0
7:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0	6	23
8:00 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	21
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	24
8:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	27
8:45 AM	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**31**
Count Total	0	0	10	0	3	0	1	2	1	0	0	1	1	4	0	0	2	14	15	0	0	0	0	0	0	54	0
Peak Hour	**0**	**0**	**5**	**0**	**1**	**0**	**1**	**2**	**1**	**0**	**0**	**1**	**1**	**4**	**0**	**0**	**2**	**6**	**7**	**0**	**0**	**0**	**0**	**0**	**0**	31	**0**

Two-Hour Count Summaries - Bikes

Interval Start	Thomas Berkley Way					Thomas Berkley Way					Harrison St					Harrison St					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
7:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	7	0
7:15 AM	0	0	1	0	1	0	0	2	2	0	0	1	0	0	0	0	0	1	3	0	0	0	0	0	0	11	0
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	5	0	0	0	0	0	0	8	0
7:45 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	2	3	0	0	0	0	0	0	9	35
8:00 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	40
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	51
8:30 AM	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**14**	**1**	**0**	**0**	**0**	**0**	**0**	**20**	63
8:45 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**1**	**15**	**0**	**0**	**0**	**0**	**0**	**1**	**23**	**77**
Count Total	0	0	3	0	8	0	0	7	3	0	0	1	1	4	0	0	0	10	73	1	0	0	0	0	1	112	0
Peak Hour	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**5**	**58**	**1**	**0**	**0**	**0**	**0**	**1**	77	**0**

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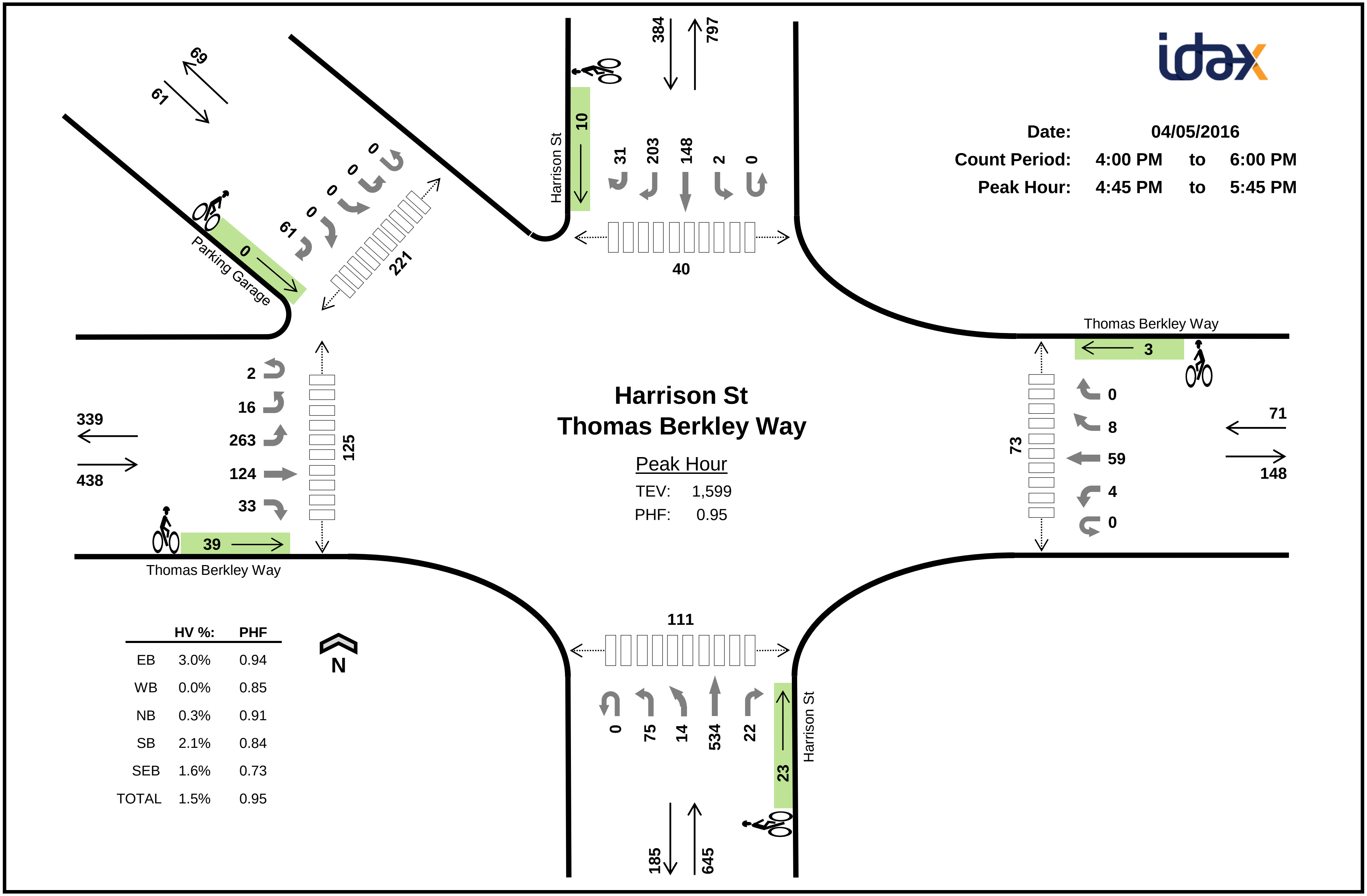

	HV %:	PHF
EB	3.0%	0.94
WB	0.0%	0.85
NB	0.3%	0.91
SB	2.1%	0.84
SEB	1.6%	0.73
TOTAL	1.5%	0.95

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Two-Hour Count Summaries

Interval Start		Thomas Berkley Way Eastbound					Thomas Berkley Way Westbound					Harrison St Northbound					Harrison St Southbound					Parking Garage Southeastbound					15-min Total	Rolling One Hour
		UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM		0	1	46	18	11	0	4	16	0	0	0	14	1	105	8	0	0	34	39	6	0	0	0	0	7	310	0
4:15 PM		0	4	53	28	6	0	3	18	0	0	0	20	5	127	3	0	1	32	29	5	0	0	0	0	10	344	0
4:30 PM		0	1	60	26	17	0	4	20	0	0	0	29	7	144	3	0	0	30	38	12	0	0	0	0	13	404	0
4:45 PM		**0**	**3**	**69**	**22**	**9**	**0**	**0**	**18**	**0**	**0**	**0**	**16**	**7**	**118**	**5**	**0**	**0**	**45**	**53**	**3**	**0**	**0**	**0**	**0**	**13**	**381**	1,439
5:00 PM		**1**	**3**	**66**	**35**	**11**	**0**	**1**	**15**	**3**	**0**	**0**	**21**	**2**	**147**	**7**	**0**	**0**	**29**	**47**	**10**	**0**	**0**	**0**	**0**	**21**	**419**	1,548
5:15 PM		**0**	**4**	**66**	**25**	**7**	**0**	**1**	**17**	**3**	**0**	**0**	**15**	**3**	**146**	**2**	**0**	**1**	**30**	**43**	**9**	**0**	**0**	**0**	**0**	**9**	**381**	1,585
5:30 PM		**1**	**6**	**62**	**42**	**6**	**0**	**2**	**9**	**2**	**0**	**0**	**23**	**2**	**123**	**8**	**0**	**1**	**44**	**60**	**9**	**0**	**0**	**0**	**0**	**18**	**418**	**1,599**
5:45 PM		0	1	62	29	6	0	0	23	2	0	0	6	0	133	2	0	1	36	47	17	0	0	0	0	10	375	1,593
Count Total		2	23	484	225	73	0	15	136	10	0	0	144	27	1,043	38	0	4	280	356	71	0	0	0	0	101	3,032	0
Peak Hour	**All**	**2**	**16**	**263**	**124**	**33**	**0**	**4**	**59**	**8**	**0**	**0**	**75**	**14**	**534**	**22**	**0**	**2**	**148**	**203**	**31**	**0**	**0**	**0**	**0**	**61**	**1,599**	**0**
	HV	**0**	**0**	**7**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**1**	**24**	**0**
	HV%	**0%**	**0%**	**3%**	**1%**	**15%**	**-**	**0%**	**0%**	**0%**	**-**	**-**	**1%**	**7%**	**0%**	**0%**	**-**	**50%**	**0%**	**3%**	**0%**	**-**	**-**	**-**	**-**	**2%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals						Bicycles						Pedestrians (Crossing Leg)					
	EB	WB	NB	SB	SEB	Total	EB	WB	NB	SB	SEB	Total	East	West	North	South	Northwest	Total
4:00 PM	3	0	0	1	0	*4*	1	0	2	0	0	*3*	18	40	8	33	38	*137*
4:15 PM	4	0	1	3	0	*8*	0	0	5	1	0	*6*	8	25	13	27	48	*121*
4:30 PM	4	0	0	2	0	*6*	4	0	2	0	0	*6*	13	35	9	29	47	*133*
4:45 PM	**5**	**0**	**0**	**1**	**0**	***6***	**5**	**0**	**7**	**3**	**0**	***15***	**18**	**27**	**5**	**28**	**46**	***124***
5:00 PM	**1**	**0**	**0**	**1**	**0**	***2***	**10**	**1**	**9**	**0**	**0**	***20***	**13**	**39**	**7**	**33**	**57**	***149***
5:15 PM	**5**	**0**	**0**	**4**	**1**	***10***	**11**	**2**	**4**	**3**	**0**	***20***	**28**	**32**	**13**	**30**	**50**	***153***
5:30 PM	**2**	**0**	**2**	**2**	**0**	***6***	**13**	**0**	**3**	**4**	**0**	***20***	**14**	**27**	**15**	**20**	**68**	***144***
5:45 PM	4	1	2	3	0	*10*	18	0	5	3	0	*26*	16	24	16	36	82	*174*
Count Total	28	1	5	17	1	*52*	62	3	37	14	0	*116*	128	249	86	236	436	*1,135*
Peak Hr	**13**	**0**	**2**	**8**	**1**	***24***	**39**	**3**	**23**	**10**	**0**	***75***	**73**	**125**	**40**	**111**	**221**	*570*

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	Thomas Berkley Way					Thomas Berkley Way					Harrison St					Harrison St					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0
4:15 PM	0	0	3	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	8	0
4:30 PM	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	6	0
4:45 PM	**0**	**0**	**3**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	24
5:00 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	22
5:15 PM	**0**	**0**	**3**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**10**	24
5:30 PM	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**24**
5:45 PM	0	0	3	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	2	1	0	0	0	0	0	10	28
Count Total	0	0	16	2	10	0	0	0	1	0	0	2	1	2	0	0	1	0	15	1	0	0	0	0	1	52	0
Peak Hour	**0**	**0**	**7**	**1**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**0**	**1**	24	**0**

Two-Hour Count Summaries - Bikes

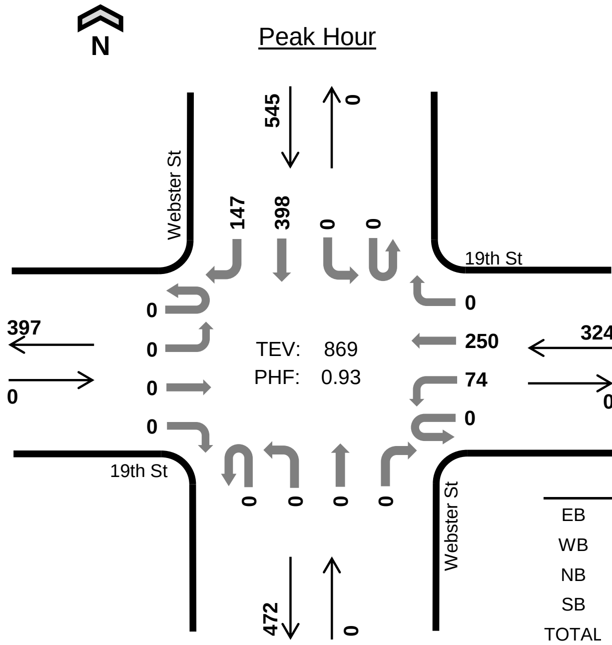
Interval Start	Thomas Berkley Way					Thomas Berkley Way					Harrison St					Harrison St					n/a					15-min Total	Rolling One Hour
	Eastbound					Westbound					Northbound					Southbound					Southeastbound						
	UT	HL	LT	TH	RT	UT	LT	TH	BR	RT	UT	LT	BL	TH	RT	UT	LT	TH	RT	HR	UT	HL	BL	BR	HR		
4:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	1	0	0	0	0	0	0	0	6	0
4:30 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6	0
4:45 PM	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**15**	30
5:00 PM	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	47
5:15 PM	**0**	**0**	**10**	**1**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**20**	61
5:30 PM	**0**	**0**	**12**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**20**	**75**
5:45 PM	0	0	17	0	1	0	0	0	0	0	0	0	1	4	0	0	0	2	1	0	0	0	0	0	0	26	86
Count Total	0	0	59	2	1	0	1	2	0	0	0	4	1	32	0	0	1	4	8	1	0	0	0	0	0	116	0
Peak Hour	**0**	**0**	**37**	**2**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**2**	**0**	**21**	**0**	**0**	**1**	**1**	**7**	**1**	**0**	**0**	**0**	**0**	**0**	75	**0**

Webster St
19th St

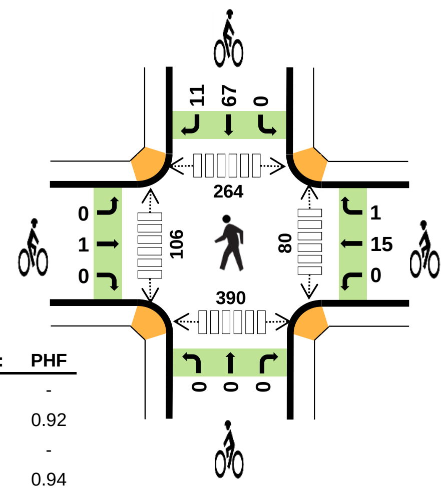
idax

Peak Hour

Date: 04/05/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM



	HV %:	PHF
EB	-	-
WB	4.3%	0.92
NB	-	-
SB	2.0%	0.94
TOTAL	2.9%	0.93



Two-Hour Count Summaries

Interval Start	19th St Eastbound UT	LT	TH	RT	19th St Westbound UT	LT	TH	RT	Webster St Northbound UT	LT	TH	RT	Webster St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	6	40	0	0	0	0	0	0	0	34	14	94	0
7:15 AM	0	0	0	0	0	10	35	0	0	0	0	0	0	0	44	16	105	0
7:30 AM	0	0	0	0	0	18	49	0	0	0	0	0	0	0	57	23	147	0
7:45 AM	0	0	0	0	0	9	55	0	0	0	0	0	0	0	71	27	162	508
8:00 AM	**0**	**0**	**0**	**0**	**0**	**17**	**71**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**30**	**218**	632
8:15 AM	**0**	**0**	**0**	**0**	**0**	**13**	**63**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**93**	**39**	**208**	735
8:30 AM	**0**	**0**	**0**	**0**	**0**	**21**	**51**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100**	**38**	**210**	798
8:45 AM	**0**	**0**	**0**	**0**	**0**	**23**	**65**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**105**	**40**	**233**	**869**
Count Total	0	0	0	0	0	117	429	0	0	0	0	0	0	0	604	227	1,377	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**74**	**250**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**398**	**147**	**869**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**3**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**3**	**25**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**4%**	**4%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2%**	**2%**	**3%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	3	0	1	*4*	1	1	0	5	*7*	2	9	26	38	*75*
7:15 AM	0	2	0	4	*6*	0	3	0	5	*8*	9	6	39	51	*105*
7:30 AM	0	1	0	1	*2*	0	1	0	10	*11*	13	12	43	79	*147*
7:45 AM	0	3	0	1	*4*	0	6	0	14	*20*	14	21	33	67	*135*
8:00 AM	**0**	**5**	**0**	**1**	***6***	**0**	**2**	**0**	**15**	***17***	**23**	**14**	**30**	**87**	*154*
8:15 AM	**0**	**2**	**0**	**2**	***4***	**0**	**9**	**0**	**22**	***31***	**19**	**22**	**68**	**81**	*190*
8:30 AM	**0**	**4**	**0**	**4**	***8***	**0**	**2**	**0**	**19**	***21***	**18**	**26**	**45**	**113**	*202*
8:45 AM	**0**	**3**	**0**	**4**	***7***	**1**	**3**	**0**	**22**	***26***	**20**	**44**	**121**	**109**	***294***
Count Total	0	23	0	18	*41*	2	27	0	112	*141*	118	154	405	625	*1,302*
Peak Hour	**0**	**14**	**0**	**11**	***25***	**1**	**16**	**0**	**78**	***95***	**80**	**106**	**264**	**390**	***840***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	19th St Eastbound UT	LT	TH	RT	19th St Westbound UT	LT	TH	RT	Webster St Northbound UT	LT	TH	RT	Webster St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	4	0
7:15 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4	0	6	0
7:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0
7:45 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	4	16
8:00 AM	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**6**	18
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**4**	16
8:30 AM	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**8**	22
8:45 AM	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**7**	**25**
Count Total	0	0	0	0	0	4	19	0	0	0	0	0	0	0	14	4	41	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**3**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**3**	**25**	**0**

Two-Hour Count Summaries - Bikes

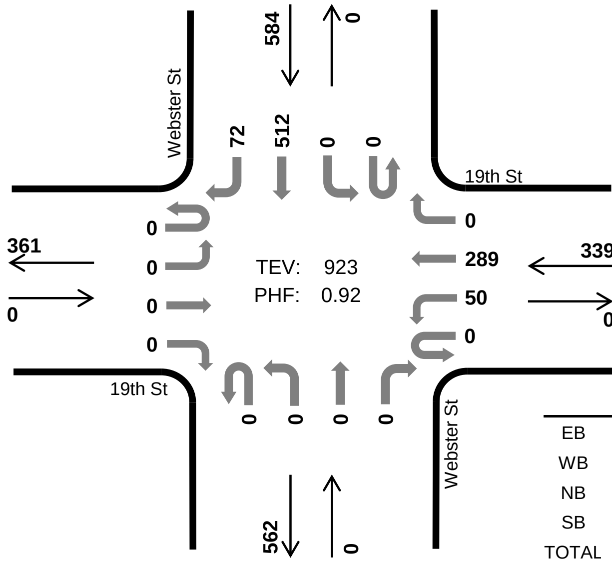
Interval Start	19th St Eastbound LT	TH	RT	19th St Westbound LT	TH	RT	Webster St Northbound LT	TH	RT	Webster St Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	1	0	0	0	1	0	0	0	0	4	1	7	0
7:15 AM	0	0	0	0	3	0	0	0	0	0	4	1	8	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	7	3	11	0
7:45 AM	0	0	0	0	6	0	0	0	0	0	13	1	20	46
8:00 AM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**15**	**0**	**17**	56
8:15 AM	**0**	**0**	**0**	**0**	**8**	**1**	**0**	**0**	**0**	**0**	**18**	**4**	**31**	79
8:30 AM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**17**	**2**	**21**	89
8:45 AM	**0**	**1**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**17**	**5**	**26**	**95**
Count Total	0	2	0	0	25	2	0	0	0	0	95	17	141	0
Peak Hour	**0**	**1**	**0**	**0**	**15**	**1**	**0**	**0**	**0**	**0**	**67**	**11**	**95**	**0**

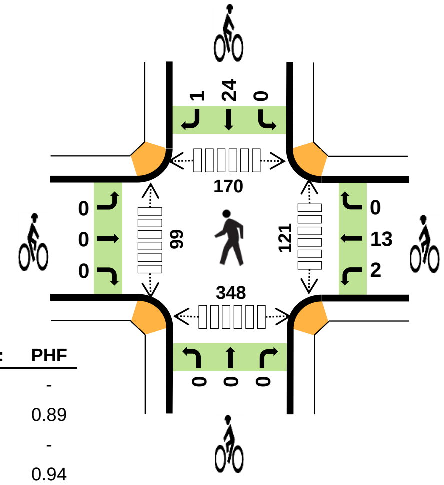
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Webster St
19th St

Date: 04/05/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Peak Hour





	HV %:	PHF
EB	-	-
WB	2.7%	0.89
NB	-	-
SB	2.2%	0.94
TOTAL	2.4%	0.92

Two-Hour Count Summaries

Interval Start		19th St Eastbound UT	LT	TH	RT	19th St Westbound UT	LT	TH	RT	Webster St Northbound UT	LT	TH	RT	Webster St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	0	0	0	0	9	74	0	0	0	0	0	0	0	106	18	207	0
4:15 PM		0	0	0	0	0	20	56	0	0	0	0	0	0	0	116	16	208	0
4:30 PM		0	0	0	0	0	11	70	0	0	0	0	0	0	0	107	22	210	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**16**	**69**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**115**	**18**	**218**	843
5:00 PM		**0**	**0**	**0**	**0**	**0**	**14**	**81**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**138**	**17**	**250**	886
5:15 PM		**0**	**0**	**0**	**0**	**0**	**8**	**71**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**131**	**20**	**230**	908
5:30 PM		**0**	**0**	**0**	**0**	**0**	**12**	**68**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**128**	**17**	**225**	923
5:45 PM		0	0	0	0	0	6	67	0	0	0	0	0	0	0	110	14	197	902
Count Total		0	0	0	0	0	96	556	0	0	0	0	0	0	0	951	142	1,745	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**50**	**289**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**512**	**72**	**923**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**1**	**22**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**3%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**2%**	**1%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	2	0	3	*5*	1	6	0	1	*8*	24	24	34	80	*162*
4:15 PM	0	1	0	1	*2*	0	5	0	4	*9*	38	33	26	87	*184*
4:30 PM	0	2	0	2	*4*	1	4	0	2	*7*	34	28	41	108	*211*
4:45 PM	**0**	**2**	**0**	**1**	***3***	**0**	**2**	**0**	**1**	***3***	**20**	**28**	**40**	**52**	*140*
5:00 PM	**0**	**3**	**0**	**1**	***4***	**0**	**5**	**0**	**3**	***8***	**37**	**24**	**69**	**106**	*236*
5:15 PM	**0**	**2**	**0**	**4**	***6***	**0**	**4**	**0**	**11**	***15***	**33**	**26**	**32**	**96**	*187*
5:30 PM	**0**	**2**	**0**	**7**	***9***	**0**	**4**	**0**	**10**	***14***	**31**	**21**	**29**	**94**	***175***
5:45 PM	0	2	0	0	*2*	1	4	0	9	*14*	27	13	30	57	*127*
Count Total	0	16	0	19	*35*	3	34	0	41	*78*	244	197	301	680	*1,422*
Peak Hour	**0**	**9**	**0**	**13**	***22***	**0**	**15**	**0**	**25**	***40***	**121**	**99**	**170**	**348**	***738***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	19th St				19th St				Webster St				Webster St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	1	5	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0
4:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	4	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	14
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**4**	13
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**6**	17
5:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**1**	**9**	**22**
5:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	21
Count Total	0	0	0	0	0	1	15	0	0	0	0	0	0	0	16	3	35	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**12**	**1**	**22**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	19th St			19th St			Webster St			Webster St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	2	4	0	0	0	0	0	1	0	8	0
4:15 PM	0	0	0	0	5	0	0	0	0	0	3	1	9	0
4:30 PM	0	0	1	1	3	0	0	0	0	0	2	0	7	0
4:45 PM	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	27
5:00 PM	**0**	**0**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**8**	27
5:15 PM	**0**	**0**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**15**	33
5:30 PM	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**9**	**1**	**14**	**40**
5:45 PM	0	0	1	1	3	0	0	0	0	0	9	0	14	51
Count Total	0	1	2	6	28	0	0	0	0	0	39	2	78	0
Peak Hour	**0**	**0**	**0**	**2**	**13**	**0**	**0**	**0**	**0**	**0**	**24**	**1**	**40**	**0**

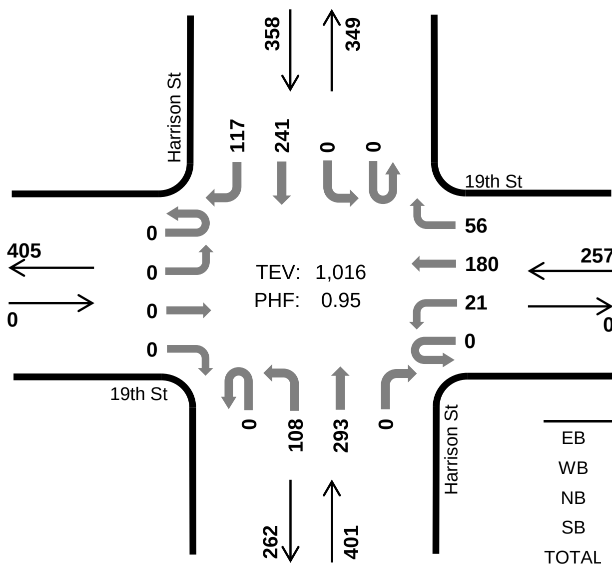
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

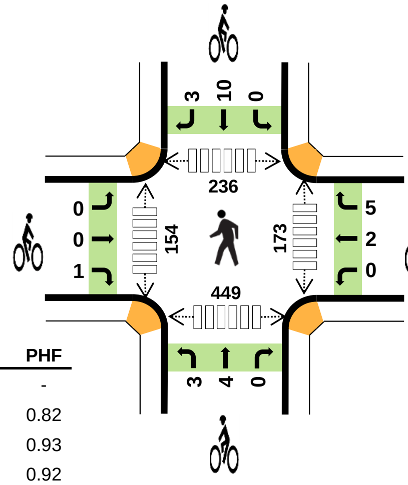
Harrison St
19th St

Date: 04/05/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

N

Peak Hour





	HV %:	PHF
EB	-	-
WB	2.7%	0.82
NB	1.7%	0.93
SB	2.8%	0.92
TOTAL	2.4%	0.95

Two-Hour Count Summaries

Interval Start	19th St Eastbound UT	LT	TH	RT	19th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	3	24	6	0	17	32	0	0	0	30	20	132	0
7:15 AM	0	0	0	0	0	2	21	5	0	19	31	0	0	0	29	17	124	0
7:30 AM	0	0	0	0	0	4	33	10	0	24	57	0	0	0	35	17	180	0
7:45 AM	0	0	0	0	0	9	35	10	0	32	49	0	0	0	64	20	219	655
8:00 AM	**0**	**0**	**0**	**0**	**0**	**7**	**54**	**16**	**0**	**30**	**78**	**0**	**0**	**0**	**60**	**20**	**265**	788
8:15 AM	**0**	**0**	**0**	**0**	**0**	**4**	**36**	**12**	**0**	**35**	**59**	**0**	**0**	**0**	**62**	**29**	**237**	901
8:30 AM	**0**	**0**	**0**	**0**	**0**	**4**	**34**	**12**	**0**	**21**	**78**	**0**	**0**	**0**	**65**	**32**	**246**	967
8:45 AM	**0**	**0**	**0**	**0**	**0**	**6**	**56**	**16**	**0**	**22**	**78**	**0**	**0**	**0**	**54**	**36**	**268**	**1,016**
Count Total	0	0	0	0	0	39	293	87	0	200	462	0	0	0	399	191	1,671	0
Peak Hour All	**0**	**0**	**0**	**0**	**0**	**21**	**180**	**56**	**0**	**108**	**293**	**0**	**0**	**0**	**241**	**117**	**1,016**	**0**
Peak Hour HV	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**2**	**0**	**3**	**4**	**0**	**0**	**0**	**4**	**6**	**24**	**0**
Peak Hour HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**3%**	**4%**	**-**	**3%**	**1%**	**-**	**-**	**-**	**2%**	**5%**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	0	4	*4*	1	0	0	3	*4*	9	16	8	57	*90*
7:15 AM	0	1	1	1	*3*	0	3	2	3	*8*	13	18	13	59	*103*
7:30 AM	0	1	0	2	*3*	0	2	0	2	*4*	24	23	26	75	*148*
7:45 AM	0	1	1	3	*5*	0	6	1	3	*10*	23	41	21	97	*182*
8:00 AM	**0**	**3**	**1**	**2**	***6***	**0**	**1**	**0**	**4**	***5***	**25**	**21**	**19**	**99**	*164*
8:15 AM	**0**	**0**	**0**	**2**	***2***	**0**	**1**	**2**	**4**	***7***	**31**	**32**	**44**	**96**	*203*
8:30 AM	**0**	**2**	**3**	**2**	***7***	**0**	**2**	**2**	**3**	***7***	**40**	**45**	**70**	**122**	*277*
8:45 AM	**0**	**2**	**3**	**4**	***9***	**1**	**3**	**3**	**2**	***9***	**77**	**56**	**103**	**132**	***368***
Count Total	0	10	9	20	*39*	2	18	10	24	*54*	242	252	304	737	*1,535*
Peak Hour	**0**	**7**	**7**	**10**	***24***	**1**	**7**	**7**	**13**	***28***	**173**	**154**	**236**	**449**	***1,012***

Deon Fouche: 415 - 757 - 7714
deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	19th St Eastbound				19th St Westbound				Harrison St Northbound				Harrison St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	0
7:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	3	0
7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	3	0
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	2	5	15
8:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**1**	**6**	17
8:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	16
8:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**2**	**7**	20
8:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**3**	**1**	**9**	**24**
Count Total	0	0	0	0	0	1	7	2	0	4	5	0	0	0	7	13	39	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**2**	**0**	**3**	**4**	**0**	**0**	**0**	**4**	**6**	**24**	**0**

Two-Hour Count Summaries - Bikes

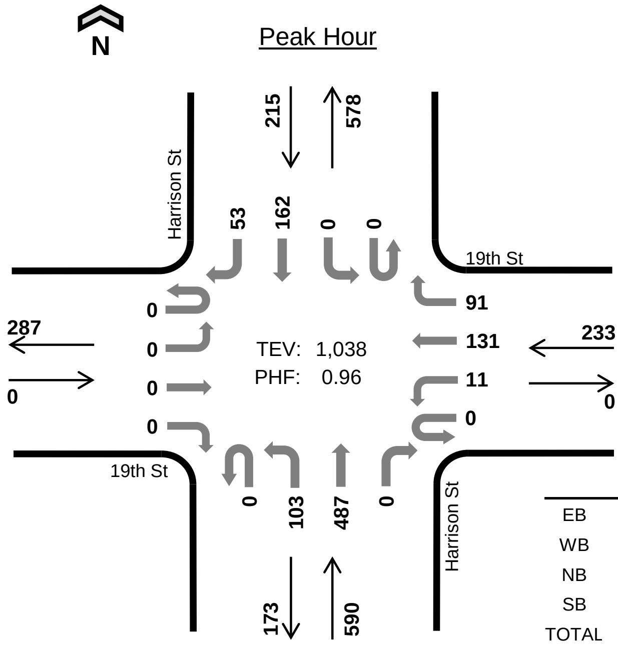
Interval Start	19th St Eastbound			19th St Westbound			Harrison St Northbound			Harrison St Southbound			15-min Total	Rolling One Hour
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
7:00 AM	0	1	0	0	0	0	0	0	0	0	3	0	4	0
7:15 AM	0	0	0	0	3	0	0	2	0	0	2	1	8	0
7:30 AM	0	0	0	0	1	1	0	0	0	0	2	0	4	0
7:45 AM	0	0	0	0	5	1	0	1	0	0	2	1	10	26
8:00 AM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**5**	27
8:15 AM	**0**	**0**	**0**	**0**	**0**	**1**	**2**	**0**	**0**	**0**	**4**	**0**	**7**	26
8:30 AM	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**3**	**0**	**7**	29
8:45 AM	**0**	**0**	**1**	**0**	**1**	**2**	**1**	**2**	**0**	**0**	**1**	**1**	**9**	**28**
Count Total	0	1	1	0	11	7	3	7	0	0	19	5	54	0
Peak Hour	**0**	**0**	**1**	**0**	**2**	**5**	**3**	**4**	**0**	**0**	**10**	**3**	**28**	**0**

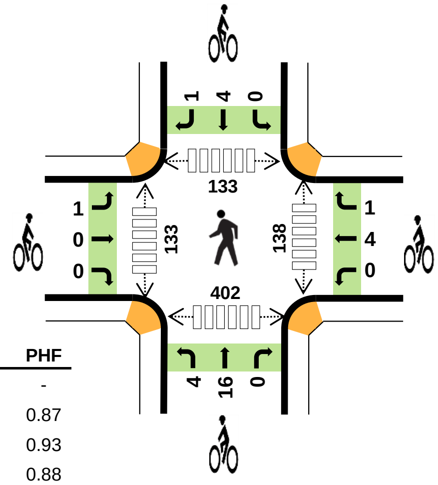
Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Harrison St
19th St

idax

Date: 04/05/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM





	HV %:	PHF
EB	-	-
WB	0.0%	0.87
NB	0.7%	0.93
SB	3.3%	0.88
TOTAL	1.1%	0.96

Two-Hour Count Summaries

Interval Start		19th St Eastbound UT	LT	TH	RT	19th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	0	0	0	0	4	36	16	0	22	95	0	0	0	38	12	223	0
4:15 PM		0	0	0	0	0	1	28	24	0	23	100	0	0	0	32	12	220	0
4:30 PM		**0**	**0**	**0**	**0**	**0**	**1**	**41**	**25**	**0**	**25**	**124**	**0**	**0**	**0**	**41**	**12**	**269**	0
4:45 PM		**0**	**0**	**0**	**0**	**0**	**6**	**28**	**19**	**0**	**24**	**105**	**0**	**0**	**0**	**40**	**15**	**237**	949
5:00 PM		**0**	**0**	**0**	**0**	**0**	**2**	**26**	**24**	**0**	**27**	**126**	**0**	**0**	**0**	**44**	**17**	**266**	992
5:15 PM		**0**	**0**	**0**	**0**	**0**	**2**	**36**	**23**	**0**	**27**	**132**	**0**	**0**	**0**	**37**	**9**	**266**	**1,038**
5:30 PM		0	0	0	0	0	5	30	18	0	16	133	0	0	0	40	15	257	1,026
5:45 PM		0	0	0	0	0	3	33	10	0	22	120	0	0	0	40	9	237	1,026
Count Total		0	0	0	0	0	24	258	159	0	186	935	0	0	0	312	101	1,975	0
Peak Hour	**All**	**0**	**0**	**0**	**0**	**0**	**11**	**131**	**91**	**0**	**103**	**487**	**0**	**0**	**0**	**162**	**53**	**1,038**	**0**
	HV	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**7**	**11**	**0**
	HV%	**-**	**-**	**-**	**-**	**-**	**0%**	**0%**	**0%**	**-**	**3%**	**0%**	**-**	**-**	**-**	**0%**	**13%**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	2	1	*3*	1	3	1	0	*5*	34	33	39	89	*195*
4:15 PM	0	1	0	1	*2*	0	1	7	2	*10*	19	28	22	93	*162*
4:30 PM	**0**	**0**	**0**	**3**	***3***	**0**	**2**	**4**	**0**	***6***	**26**	**39**	**40**	**110**	*215*
4:45 PM	**0**	**0**	**1**	**1**	***2***	**0**	**0**	**9**	**1**	***10***	**31**	**26**	**27**	**65**	*149*
5:00 PM	**0**	**0**	**1**	**2**	***3***	**1**	**2**	**3**	**2**	***8***	**42**	**43**	**43**	**121**	*249*
5:15 PM	**0**	**0**	**2**	**1**	***3***	**0**	**1**	**4**	**2**	***7***	**39**	**25**	**23**	**106**	***193***
5:30 PM	0	0	2	1	*3*	0	6	1	1	*8*	27	34	27	94	*182*
5:45 PM	0	2	2	1	*5*	0	6	4	2	*12*	16	14	27	58	*115*
Count Total	0	3	10	11	*24*	2	21	33	10	*66*	234	242	248	736	*1,460*
Peak Hour	**0**	**0**	**4**	**7**	***11***	**1**	**5**	**20**	**5**	***31***	**138**	**133**	**133**	**402**	***806***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	19th St				19th St				Harrison St				Harrison St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	3	0
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2	0
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**3**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**2**	10
5:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**3**	10
5:15 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**11**
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	3	11
5:45 PM	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	1	5	14
Count Total	0	0	0	0	0	0	2	1	0	4	6	0	0	0	0	11	24	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**7**	**11**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	19th St			19th St			Harrison St			Harrison St			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
4:00 PM	0	1	0	0	2	1	0	1	0	0	0	0	5	0
4:15 PM	0	0	0	0	1	0	2	5	0	0	2	0	10	0
4:30 PM	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**3**	**0**	**0**	**0**	**0**	**6**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**1**	**0**	**10**	31
5:00 PM	**1**	**0**	**0**	**0**	**1**	**1**	**2**	**1**	**0**	**0**	**2**	**0**	**8**	34
5:15 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**4**	**0**	**0**	**1**	**1**	**7**	**31**
5:30 PM	0	0	0	0	4	2	0	1	0	0	1	0	8	33
5:45 PM	0	0	0	0	3	3	1	3	0	0	2	0	12	35
Count Total	1	1	0	0	14	7	7	26	0	0	9	1	66	0
Peak Hour	**1**	**0**	**0**	**0**	**4**	**1**	**4**	**16**	**0**	**0**	**4**	**1**	**31**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7251-001 Webster Street-17th Street.ppd
Date : 3/26/2015

Unshifted Count = All Vehicles

	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturn Total
07:00	5	28	0	0	33	0	0	0	0	0	0	0	0	0	0	0	34	28	0	62	95	0
07:15	4	38	0	0	42	0	0	0	0	0	0	0	0	0	0	0	31	21	0	52	94	0
07:30	3	62	0	0	65	0	0	0	0	0	0	0	0	0	0	0	36	43	0	79	144	0
07:45	11	82	0	0	93	0	0	0	0	0	0	0	0	0	0	0	61	40	0	101	194	0
Total	23	210	0	0	233	0	0	0	0	0	0	0	0	0	0	0	162	132	0	294	527	0
08:00	9	78	0	0	87	0	0	0	0	0	0	0	0	0	0	0	57	50	0	107	194	0
08:15	14	86	0	0	100	0	0	0	0	0	0	0	0	0	0	0	66	70	0	136	236	0
08:30	13	90	0	0	103	0	0	0	0	0	0	0	0	0	0	0	77	46	0	123	226	0
08:45	12	89	0	0	101	0	0	0	0	0	0	0	0	0	0	0	62	57	0	119	220	0
Total	48	343	0	0	391	0	0	0	0	0	0	0	0	0	0	0	262	223	0	485	876	0
16:00	29	133	0	0	162	0	0	0	0	0	0	0	0	0	0	0	62	56	0	118	280	0
16:15	17	140	0	0	157	0	0	0	0	0	0	0	0	0	0	0	77	52	0	129	286	0
16:30	19	131	0	0	150	0	0	0	0	0	0	0	0	0	0	0	81	49	0	130	280	0
16:45	17	138	0	0	155	0	0	0	0	0	0	0	0	0	0	0	60	43	0	103	258	0
Total	82	542	0	0	624	0	0	0	0	0	0	0	0	0	0	0	280	200	0	480	1104	0
17:00	35	148	0	0	183	0	0	0	0	0	0	0	0	0	0	0	73	61	0	134	317	0
17:15	16	146	0	0	162	0	0	0	0	0	0	0	0	0	0	0	62	53	0	115	277	0
17:30	25	132	0	0	157	0	0	0	0	0	0	0	0	0	0	0	70	67	0	137	294	0
17:45	20	116	0	0	136	0	0	0	0	0	0	0	0	0	0	0	61	57	0	118	254	0
Total	96	542	0	0	638	0	0	0	0	0	0	0	0	0	0	0	266	238	0	504	1142	0
Grand Total	249	1637	0	0	1886	0	0	0	0	0	0	0	0	0	0	0	970	793	0	1763	3649	0
Apprch %	13.2%	86.8%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	55.0%	45.0%	0.0%			
Total %	6.8%	44.9%	0.0%	0.0%	51.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	26.6%	21.7%	0.0%	48.3%	100.0%	

AM PEAK HOUR	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	9	78	0	0	87	0	0	0	0	0	0	0	0	0	0	0	57	50	0	107	194
08:15	14	86	0	0	100	0	0	0	0	0	0	0	0	0	0	0	66	70	0	136	236
08:30	13	90	0	0	103	0	0	0	0	0	0	0	0	0	0	0	77	46	0	123	226
08:45	12	89	0	0	101	0	0	0	0	0	0	0	0	0	0	0	62	57	0	119	220
Total Volume	48	343	0	0	391	0	0	0	0	0	0	0	0	0	0	0	262	223	0	485	876
% App Total	12.3%	87.7%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	54.0%	46.0%	0.0%		
PHF	.857	.953	.000	.000	.949	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.851	.796	.000	.892	.928

PM PEAK HOUR	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	17	138	0	0	155	0	0	0	0	0	0	0	0	0	0	0	60	43	0	103	258
17:00	35	148	0	0	183	0	0	0	0	0	0	0	0	0	0	0	73	61	0	134	317
17:15	16	146	0	0	162	0	0	0	0	0	0	0	0	0	0	0	62	53	0	115	277
17:30	25	132	0	0	157	0	0	0	0	0	0	0	0	0	0	0	70	67	0	137	294
Total Volume	93	564	0	0	657	0	0	0	0	0	0	0	0	0	0	0	265	224	0	489	1146
% App Total	14.2%	85.8%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	54.2%	45.8%	0.0%		
PHF	.664	.953	.000	.000	.898	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.908	.836	.000	.892	.904

ALL TRAFFIC DATA

City of Oakland
All Vehicles on Unshifted
Peds & Bikes on Bank 1
Nothing on Bank 2

(916) 771-8700
orders@atdtraffic.com

File Name : 15-7251-001 Webster Street-17th Street.ppd
Date : 3/26/2015

Bank 1 Count = Peds & Bikes

	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Ped Total
07:00	0	5	0	11	5	0	1	0	5	1	0	0	0	9	0	0	0	0	3	0	6	28
07:15	0	7	0	17	7	0	1	0	2	1	0	0	0	18	0	0	0	0	4	0	8	41
07:30	0	9	0	17	9	0	0	0	4	0	0	0	0	15	0	0	0	0	5	0	9	41
07:45	0	10	0	32	10	0	1	0	2	1	0	0	0	18	0	0	0	0	9	0	11	61
Total	0	31	0	77	31	0	3	0	13	3	0	0	0	60	0	0	0	0	21	0	34	171
08:00	0	13	1	38	14	0	0	0	13	0	0	0	0	16	0	0	2	1	11	3	17	78
08:15	1	13	1	48	15	0	1	0	10	1	0	1	0	13	1	0	4	1	10	5	22	81
08:30	2	20	1	35	23	0	1	0	18	1	0	0	0	25	0	0	2	3	10	5	29	88
08:45	2	15	0	28	17	0	1	0	14	1	1	0	0	19	1	1	0	1	5	2	21	66
Total	5	61	3	149	69	0	3	0	55	3	1	1	0	73	2	1	8	6	36	15	89	313
16:00	1	4	0	24	5	0	2	0	20	2	0	0	0	35	0	0	9	1	17	10	17	96
16:15	1	1	0	22	2	0	3	0	12	3	0	0	0	19	0	0	2	2	18	4	9	71
16:30	0	2	0	37	2	0	0	0	22	0	0	1	0	31	1	0	8	0	15	8	11	105
16:45	1	3	0	32	4	0	0	0	16	0	0	0	0	26	0	0	1	1	13	2	6	87
Total	3	10	0	115	13	0	5	0	70	5	0	1	0	111	1	0	20	4	63	24	43	359
17:00	0	8	0	26	8	0	0	0	13	0	0	0	1	24	1	0	3	1	20	4	13	83
17:15	1	7	1	23	9	0	0	0	11	0	0	1	0	24	1	0	3	1	14	4	14	72
17:30	1	4	0	16	5	0	1	0	12	1	0	0	0	39	0	0	8	1	14	9	15	81
17:45	1	5	0	26	6	0	0	0	11	0	0	0	1	39	1	1	8	0	13	9	16	89
Total	3	24	1	91	28	0	1	0	47	1	0	1	2	126	3	1	22	3	61	26	58	325
Grand Total	11	126	4	432	141	0	12	0	185	12	1	3	2	370	6	2	50	13	181	65	224	1168
Apprch %	7.8%	89.4%	2.8%			0.0%	100.0%	0.0%			16.7%	50.0%	33.3%			3.1%	76.9%	20.0%				
Total %	4.9%	56.3%	1.8%		62.9%	0.0%	5.4%	0.0%		5.4%	0.4%	1.3%	0.9%		2.7%	0.9%	22.3%	5.8%		29.0%	100.0%	

AM PEAK HOUR	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
08:00	0	13	1	38	14	0	0	0	13	0	0	0	0	16	0	0	2	1	11	3	17
08:15	1	13	1	48	15	0	1	0	10	1	0	1	0	13	1	0	4	1	10	5	22
08:30	2	20	1	35	23	0	1	0	18	1	0	0	0	25	0	0	2	3	10	5	29
08:45	2	15	0	28	17	0	1	0	14	1	1	0	0	19	1	1	0	1	5	2	21
Total Volume	5	61	3	149	69	0	3	0	55	3	1	1	0	73	2	1	8	6	36	15	89
% App Total	7.2%	88.4%	4.3%			0.0%	100.0%	0.0%			50.0%	50.0%	0.0%			6.7%	53.3%	40.0%			
PHF	.625	.763	.750		.750	.000	.750	.000		.750	.250	.250	.000		.500	.250	.500	.500		.750	.767

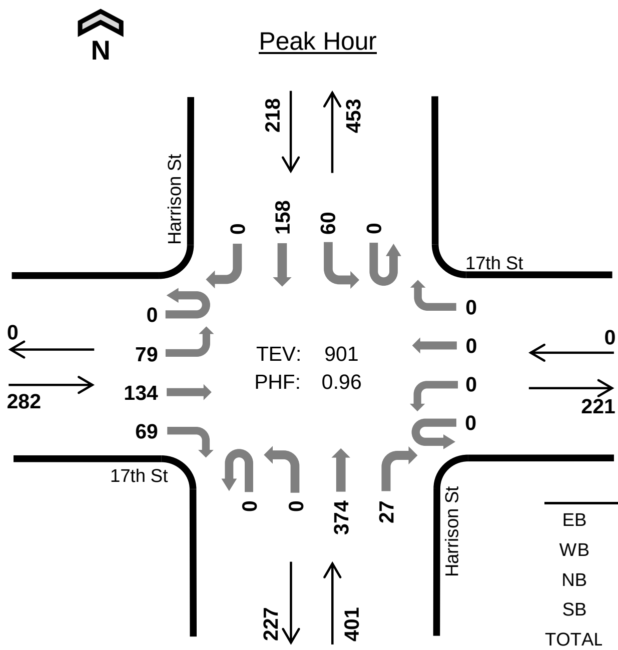
PM PEAK HOUR	Webster Street Southbound					17th Street Westbound					Webster Street Northbound					17th Street Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	3	0	32	4	0	0	0	16	0	0	0	0	26	0	0	1	1	13	2	6
17:00	0	8	0	26	8	0	0	0	13	0	0	0	1	24	1	0	3	1	20	4	13
17:15	1	7	1	23	9	0	0	0	11	0	0	1	0	24	1	0	3	1	14	4	14
17:30	1	4	0	16	5	0	1	0	12	1	0	0	0	39	0	0	8	1	14	9	15
Total Volume	3	22	1	97	26	0	1	0	52	1	0	1	1	113	2	0	15	4	61	19	48
% App Total	11.5%	84.6%	3.8%			0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	78.9%	21.1%			
PHF	.750	.688	.250		.722	.000	.250	.000		.250	.000	.250	.250		.500	.000	.469	1.000		.528	.800

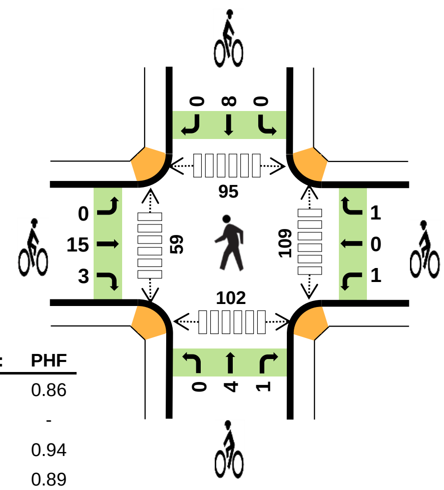
Harrison St
17th St

idax

Date: 04/20/2016
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

Peak Hour





	HV %:	PHF
EB	2.5%	0.86
WB	-	-
NB	1.5%	0.94
SB	0.5%	0.89
TOTAL	1.6%	0.96

Two-Hour Count Summaries

Interval Start	17th St Eastbound UT	LT	TH	RT	17th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	8	14	7	0	0	0	0	0	0	36	5	0	4	17	0	91	0
7:15 AM	0	8	16	14	0	0	0	0	0	0	76	8	0	6	27	0	155	0
7:30 AM	0	16	33	16	0	0	0	0	0	0	53	6	0	10	28	0	162	0
7:45 AM	0	9	26	20	0	0	0	0	0	0	78	9	0	9	40	0	191	599
8:00 AM	**0**	**23**	**38**	**21**	**0**	**0**	**0**	**0**	**0**	**0**	**84**	**6**	**0**	**16**	**37**	**0**	**225**	**733**
8:15 AM	**0**	**19**	**33**	**24**	**0**	**0**	**0**	**0**	**0**	**0**	**98**	**4**	**0**	**13**	**41**	**0**	**232**	**810**
8:30 AM	**0**	**21**	**27**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**93**	**9**	**0**	**12**	**38**	**0**	**209**	**857**
8:45 AM	**0**	**16**	**36**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**99**	**8**	**0**	**19**	**42**	**0**	**235**	**901**
Count Total	0	120	223	126	0	0	0	0	0	0	617	55	0	89	270	0	1,500	0
Peak Hour All	**0**	**79**	**134**	**69**	**0**	**0**	**0**	**0**	**0**	**0**	**374**	**27**	**0**	**60**	**158**	**0**	**901**	**0**
Peak Hour HV	**0**	**4**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**1**	**0**	**14**	**0**
Peak Hour HV%	**-**	**5%**	**1%**	**1%**	**-**	**-**	**-**	**-**	**-**	**-**	**2%**	**0%**	**-**	**0%**	**1%**	**-**	**2%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
7:00 AM	0	0	1	0	*1*	1	0	2	4	*7*	12	7	12	10	*41*
7:15 AM	2	0	1	1	*4*	5	0	0	1	*6*	16	6	25	16	*63*
7:30 AM	0	0	2	0	*2*	3	0	1	0	*4*	11	8	13	9	*41*
7:45 AM	1	0	1	1	*3*	1	1	3	2	*7*	24	23	23	22	*92*
8:00 AM	**3**	**0**	**0**	**0**	***3***	**2**	**0**	**1**	**0**	***3***	**19**	**8**	**20**	**28**	*75*
8:15 AM	**1**	**0**	**2**	**0**	***3***	**6**	**0**	**1**	**3**	***10***	**34**	**18**	**29**	**25**	*106*
8:30 AM	**1**	**0**	**3**	**0**	***4***	**8**	**1**	**2**	**3**	***14***	**36**	**18**	**26**	**23**	*103*
8:45 AM	**2**	**0**	**1**	**1**	***4***	**2**	**1**	**1**	**2**	***6***	**20**	**15**	**20**	**26**	***81***
Count Total	10	0	11	3	*24*	28	3	11	15	*57*	172	103	168	159	*602*
Peak Hour	**7**	**0**	**6**	**1**	***14***	**18**	**2**	**5**	**8**	***33***	**109**	**59**	**95**	**102**	***365***

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	17th St Eastbound UT	LT	TH	RT	17th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
7:15 AM	0	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	4	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	2	0
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	3	10
8:00 AM	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	12
8:15 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**3**	11
8:30 AM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**4**	13
8:45 AM	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**4**	**14**
Count Total	0	5	4	1	0	0	0	0	0	0	8	3	0	0	3	0	24	0
Peak Hour	**0**	**4**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**1**	**0**	**14**	**0**

Two-Hour Count Summaries - Bikes

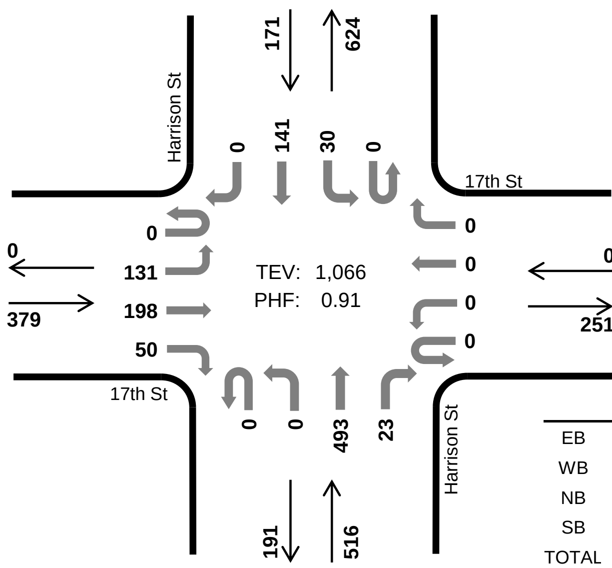
Interval Start	17th St Eastbound LT	TH	RT	17th St Westbound LT	TH	RT	Harrison St Northbound LT	TH	RT	Harrison St Southbound LT	TH	RT	15-min Total	Rolling One Hour
7:00 AM	0	1	0	0	0	0	0	2	0	1	3	0	7	0
7:15 AM	2	2	1	0	0	0	0	0	0	0	1	0	6	0
7:30 AM	0	2	1	0	0	0	0	0	1	0	0	0	4	0
7:45 AM	0	1	0	0	1	0	0	1	2	0	2	0	7	24
8:00 AM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	20
8:15 AM	**0**	**5**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**10**	24
8:30 AM	**0**	**7**	**1**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**3**	**0**	**14**	34
8:45 AM	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**2**	**0**	**6**	**33**
Count Total	2	21	5	1	1	1	0	7	4	1	14	0	57	0
Peak Hour	**0**	**15**	**3**	**1**	**0**	**1**	**0**	**4**	**1**	**0**	**8**	**0**	**33**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

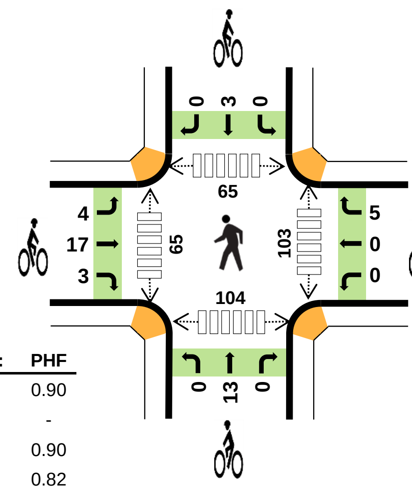
Harrison St
17th St

Date: 04/20/2016
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Peak Hour



	HV %:	PHF
EB	0.8%	0.90
WB	-	-
NB	0.8%	0.90
SB	0.6%	0.82
TOTAL	0.8%	0.91



Two-Hour Count Summaries

Interval Start		17th St Eastbound UT	LT	TH	RT	17th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM		0	31	42	11	0	0	0	0	0	0	100	7	0	6	38	0	235	0
4:15 PM		0	28	44	16	0	0	0	0	0	0	82	2	0	6	27	0	205	0
4:30 PM		**0**	**38**	**54**	**13**	**0**	**0**	**0**	**0**	**0**	**0**	**119**	**5**	**0**	**7**	**32**	**0**	**268**	0
4:45 PM		**0**	**25**	**43**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**118**	**8**	**0**	**13**	**33**	**0**	**250**	958
5:00 PM		**0**	**43**	**43**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**139**	**5**	**0**	**9**	**43**	**0**	**292**	1,015
5:15 PM		**0**	**25**	**58**	**17**	**0**	**0**	**0**	**0**	**0**	**0**	**117**	**5**	**0**	**1**	**33**	**0**	**256**	**1,066**
5:30 PM		0	30	53	17	0	0	0	0	0	0	112	5	0	7	37	0	261	1,059
5:45 PM		0	26	62	10	0	0	0	0	0	0	117	4	0	6	27	0	252	1,061
Count Total		0	246	399	104	0	0	0	0	0	0	904	41	0	55	270	0	2,019	0
Peak Hour	**All**	**0**	**131**	**198**	**50**	**0**	**0**	**0**	**0**	**0**	**0**	**493**	**23**	**0**	**30**	**141**	**0**	**1,066**	**0**
	HV	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**8**	**0**
	HV%	**-**	**1%**	**1%**	**2%**	**-**	**-**	**-**	**-**	**-**	**-**	**1%**	**0%**	**-**	**0%**	**1%**	**-**	**1%**	**0**

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals EB	WB	NB	SB	Total	Bicycles EB	WB	NB	SB	Total	Pedestrians (Crossing Leg) East	West	North	South	Total
4:00 PM	0	0	0	0	*0*	3	0	4	1	*8*	13	10	13	21	*57*
4:15 PM	0	0	0	1	*1*	3	0	1	1	*5*	21	5	10	17	*53*
4:30 PM	**1**	**0**	**1**	**0**	***2***	**7**	**0**	**6**	**1**	***14***	**21**	**20**	**16**	**20**	*77*
4:45 PM	**0**	**0**	**1**	**1**	***2***	**2**	**0**	**0**	**1**	***3***	**19**	**15**	**13**	**29**	*76*
5:00 PM	**1**	**0**	**1**	**0**	***2***	**4**	**4**	**3**	**1**	***12***	**33**	**15**	**20**	**25**	*93*
5:15 PM	**1**	**0**	**1**	**0**	***2***	**11**	**1**	**4**	**0**	***16***	**30**	**15**	**16**	**30**	***91***
5:30 PM	0	0	1	0	*1*	7	3	5	0	*15*	10	16	18	28	*72*
5:45 PM	3	0	1	0	*4*	7	0	7	2	*16*	12	21	18	32	*83*
Count Total	6	0	6	2	*14*	44	8	30	7	*89*	159	117	124	202	*602*
Peak Hour	**3**	**0**	**4**	**1**	***8***	**24**	**5**	**13**	**3**	***45***	**103**	**65**	**65**	**104**	***337***

Deon Fouche: 415 - 757 - 7714

deon.fouche@idaxdata.com

Two-Hour Count Summaries - Heavy Vehicles

Interval Start	17th St Eastbound UT	LT	TH	RT	17th St Westbound UT	LT	TH	RT	Harrison St Northbound UT	LT	TH	RT	Harrison St Southbound UT	LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
4:30 PM	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	0
4:45 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**2**	5
5:00 PM	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	7
5:15 PM	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**8**
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	7
5:45 PM	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	4	9
Count Total	0	2	3	1	0	0	0	0	0	0	6	0	0	0	2	0	14	0
Peak Hour	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**1**	**0**	**8**	**0**

Two-Hour Count Summaries - Bikes

Interval Start	17th St Eastbound LT	TH	RT	17th St Westbound LT	TH	RT	Harrison St Northbound LT	TH	RT	Harrison St Southbound LT	TH	RT	15-min Total	Rolling One Hour
4:00 PM	0	2	1	0	0	0	0	4	0	0	1	0	8	0
4:15 PM	0	3	0	0	0	0	0	1	0	0	1	0	5	0
4:30 PM	**2**	**3**	**2**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**1**	**0**	**14**	0
4:45 PM	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	30
5:00 PM	**1**	**3**	**0**	**0**	**0**	**4**	**0**	**3**	**0**	**0**	**1**	**0**	**12**	34
5:15 PM	**1**	**9**	**1**	**0**	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**16**	**45**
5:30 PM	2	5	0	2	0	1	0	4	1	0	0	0	15	46
5:45 PM	0	7	0	0	0	0	0	6	1	0	2	0	16	59
Count Total	6	34	4	2	0	6	0	28	2	0	7	0	89	0
Peak Hour	**4**	**17**	**3**	**0**	**0**	**5**	**0**	**13**	**0**	**0**	**3**	**0**	**45**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Appendix B Intersection Level of Service Calculation Outputs

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	211	139	2	171	267	0	0	0	0	37	273
Future Volume (vph)	0	211	139	2	171	267	0	0	0	0	37	273
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.78		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	0.99						0.94
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	0.99						0.99
Satd. Flow (prot)		3505	1224		1595	3294						3258
Flt Permitted		1.00	1.00		0.95	0.93						0.99
Satd. Flow (perm)		3505	1224		1595	3079						3258
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)	0	232	153	2	188	293	0	0	0	0	41	300
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	232	40	0	156	327	0	0	0	0	0	341
Confl. Peds. (#/hr)	789		247		247		789			195	1958	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		21.0	21.0		16.0	41.0						31.0
Effective Green, g (s)		21.0	21.0		16.0	41.0						31.0
Actuated g/C Ratio		0.26	0.26		0.20	0.51						0.39
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		920	321		319	1620						1262
v/s Ratio Prot		c0.07			c0.10	0.04						
v/s Ratio Perm			0.03			0.06						0.10
v/c Ratio		0.25	0.13		0.49	0.20						0.27
Uniform Delay, d1		23.3	22.5		28.4	10.6						16.8
Progression Factor		1.00	1.00		0.94	0.81						1.00
Incremental Delay, d2		0.7	0.8		4.9	0.3						0.5
Delay (s)		24.0	23.3		31.5	8.8						17.3
Level of Service		C	C		C	A						B
Approach Delay (s)		23.7				16.2			0.0			17.0
Approach LOS		C				B			A			B

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	60
Future Volume (vph)	60
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.94
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1472
Flt Permitted	1.00
Satd. Flow (perm)	1472
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	66
RTOR Reduction (vph)	40
Lane Group Flow (vph)	26
Confl. Peds. (#/hr)	63
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	31.0
Effective Green, g (s)	31.0
Actuated g/C Ratio	0.39
Clearance Time (s)	4.0
Lane Grp Cap (vph)	570
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.04
Uniform Delay, d1	15.3
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	15.4
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	123	41	74	8	72	19	37	27	246	3	7	378
Future Volume (vph)	123	41	74	8	72	19	37	27	246	3	7	378
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.94		1.00	1.00			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	0.93		1.00	0.97			0.91	0.85		1.00	0.99
Flt Protected	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	2908		1770	3429			1592	1504		1770	1735
Flt Permitted	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	2908		1770	3429			1592	1504		1770	1735
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)	129	43	78	8	76	20	39	28	259	3	7	398
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	87	0	0	0
Lane Group Flow (vph)	85	105	0	8	96	0	0	168	74	0	7	432
Confl. Peds. (#/hr)	33		90	90			162			44	44	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	18.2	18.2		4.8	4.8			23.2	23.2		17.8	17.8
Effective Green, g (s)	18.2	18.2		4.8	4.8			23.2	23.2		17.8	17.8
Actuated g/C Ratio	0.23	0.23		0.06	0.06			0.29	0.29		0.22	0.22
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	366	661		106	205			461	436		393	386
v/s Ratio Prot	0.05	0.04		0.00	c0.03			c0.11	0.05		0.00	c0.25
v/s Ratio Perm												
v/c Ratio	0.23	0.16		0.08	0.47			0.36	0.17		0.02	1.12
Uniform Delay, d1	25.2	24.8		35.5	36.4			22.5	21.2		24.3	31.1
Progression Factor	1.40	2.14		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.1		0.3	1.7			0.5	0.2		0.1	82.2
Delay (s)	35.7	53.1		35.8	38.1			23.0	21.4		24.4	113.3
Level of Service	D	D		D	D			C	C		C	F
Approach Delay (s)		47.2			37.9			22.2				69.2
Approach LOS		D			D			C				E

Intersection Summary			
HCM 2000 Control Delay	52.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	319	36
Future Volume (vph)	319	36
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	336	38
RTOR Reduction (vph)	0	29
Lane Group Flow (vph)	302	9
Confl. Peds. (#/hr)	162	280
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	40.0	18.2
Effective Green, g (s)	40.0	18.2
Actuated g/C Ratio	0.50	0.23
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	752	360
v/s Ratio Prot	c0.20	0.01
v/s Ratio Perm		
v/c Ratio	0.40	0.02
Uniform Delay, d1	12.5	24.0
Progression Factor	1.00	1.00
Incremental Delay, d2	0.4	0.0
Delay (s)	12.9	24.0
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	74	250	0	0	0	0	0	398	147
Future Volume (vph)	0	0	0	74	250	0	0	0	0	0	398	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					0.93						1.00	
Frt					1.00						0.96	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3233						4715	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3233						4715	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	80	269	0	0	0	0	0	428	158
RTOR Reduction (vph)	0	0	0	0	46	0	0	0	0	0	88	0
Lane Group Flow (vph)	0	0	0	0	303	0	0	0	0	0	498	0
Confl. Peds. (#/hr)				390								106
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1365						2095	
v/s Ratio Prot											c0.11	
v/s Ratio Perm					0.09							
v/c Ratio					0.22						0.24	
Uniform Delay, d1					8.3						7.8	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.4						0.3	
Delay (s)					8.7						8.0	
Level of Service					A						A	
Approach Delay (s)		0.0			8.7			0.0			8.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	21	180	56	108	293	0	0	241	117
Future Volume (vph)	0	0	0	21	180	56	108	293	0	0	241	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.93			1.00			0.96	
Flpb, ped/bikes					0.97			0.98			1.00	
Frt					0.97			1.00			0.95	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					3089			3422			3217	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					3089			2671			3217	
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)	0	0	0	22	189	59	114	308	0	0	254	123
RTOR Reduction (vph)	0	0	0	0	42	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	228	0	0	422	0	0	366	0
Confl. Peds. (#/hr)				449		236	154		173			154
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					746			1624			1957	
v/s Ratio Prot											0.11	
v/s Ratio Perm					0.07			c0.16				
v/c Ratio					0.31			0.26			0.19	
Uniform Delay, d1					18.6			5.5			5.2	
Progression Factor					1.00			0.55			1.00	
Incremental Delay, d2					1.1			0.4			0.2	
Delay (s)					19.7			3.4			5.4	
Level of Service					B			A			A	
Approach Delay (s)		0.0			19.7			3.4			5.4	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	262	223	0	0	0	0	0	0	49	347	0
Future Volume (vph)	0	262	223	0	0	0	0	0	0	49	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3260									5054	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3260									5054	
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.92
Adj. Flow (vph)	0	282	240	0	0	0	0	0	0	53	373	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	32	0
Lane Group Flow (vph)	0	459	0	0	0	0	0	0	0	0	394	0
Confl. Peds. (#/hr)			15									149
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1521									2021	
v/s Ratio Prot		c0.14										
v/s Ratio Perm											0.08	
v/c Ratio		0.30									0.20	
Uniform Delay, d1		7.4									8.8	
Progression Factor		1.00									0.76	
Incremental Delay, d2		0.5									0.2	
Delay (s)		8.0									6.9	
Level of Service		A									A	
Approach Delay (s)		8.0			0.0			0.0			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	134	69	0	0	0	0	374	27	60	158	0
Future Volume (vph)	79	134	69	0	0	0	0	374	27	60	158	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.97						0.99			1.00	
Flpb, ped/bikes		0.97						1.00			0.98	
Frt		0.96						0.99			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3150						3478			3438	
Flt Permitted		0.99						1.00			0.79	
Satd. Flow (perm)		3150						3478			2760	
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)	82	140	72	0	0	0	0	390	28	62	165	0
RTOR Reduction (vph)	0	45	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	249	0	0	0	0	0	409	0	0	228	0
Confl. Peds. (#/hr)	95		102	102		95	59		109	109		59
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		22.5						28.5			28.5	
Effective Green, g (s)		22.5						28.5			28.5	
Actuated g/C Ratio		0.38						0.48			0.48	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1181						1652			1311	
v/s Ratio Prot								c0.12				
v/s Ratio Perm		0.08									0.08	
v/c Ratio		0.21						0.25			0.17	
Uniform Delay, d1		12.7						9.4			9.0	
Progression Factor		1.00						1.00			0.78	
Incremental Delay, d2		0.4						0.4			0.3	
Delay (s)		13.1						9.7			7.4	
Level of Service		B						A			A	
Approach Delay (s)		13.1			0.0			9.7			7.4	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	380	118	19	116	263	0	0	0	0	55	319
Future Volume (vph)	0	380	118	19	116	263	0	0	0	0	55	319
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.79		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00						0.97
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	1.00						0.99
Satd. Flow (prot)		3505	1233		1595	3336						3384
Flt Permitted		1.00	1.00		0.95	0.95						0.99
Satd. Flow (perm)		3505	1233		1595	3161						3384
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	413	128	21	126	286	0	0	0	0	60	347
RTOR Reduction (vph)	0	0	83	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	413	45	0	134	299	0	0	0	0	0	407
Confl. Peds. (#/hr)	801		240		240		801			232	232	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		28.0	28.0		10.0	42.0						30.0
Effective Green, g (s)		28.0	28.0		10.0	42.0						30.0
Actuated g/C Ratio		0.35	0.35		0.12	0.52						0.38
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1226	431		199	1681						1269
v/s Ratio Prot		c0.12			c0.08	0.02						
v/s Ratio Perm			0.04			0.07						0.12
v/c Ratio		0.34	0.10		0.67	0.18						0.32
Uniform Delay, d1		19.2	17.5		33.4	10.0						17.8
Progression Factor		1.00	1.00		1.04	0.90						1.00
Incremental Delay, d2		0.7	0.5		16.2	0.2						0.7
Delay (s)		19.9	18.0		51.1	9.2						18.4
Level of Service		B	B		D	A						B
Approach Delay (s)		19.5				22.1			0.0			18.1
Approach LOS		B				C			A			B

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	80
Future Volume (vph)	80
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.90
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1404
Flt Permitted	1.00
Satd. Flow (perm)	1404
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	87
RTOR Reduction (vph)	43
Lane Group Flow (vph)	45
Confl. Peds. (#/hr)	118
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	30.0
Effective Green, g (s)	30.0
Actuated g/C Ratio	0.38
Clearance Time (s)	4.0
Lane Grp Cap (vph)	526
v/s Ratio Prot	
v/s Ratio Perm	0.03
v/c Ratio	0.08
Uniform Delay, d1	16.1
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	16.5
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	263	124	33	4	59	8	75	14	534	22	2	148
Future Volume (vph)	263	124	33	4	59	8	75	14	534	22	2	148
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.89	0.85		1.00	0.97
Flt Protected	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	3195		1770	3479			1558	1504		1770	1740
Flt Permitted	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	3195		1770	3479			1558	1504		1770	1740
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)	277	131	35	4	62	8	79	15	562	23	2	156
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	87	0	0	0
Lane Group Flow (vph)	147	284	0	4	70	0	0	347	245	0	2	192
Confl. Peds. (#/hr)	40		111	111			125			73	73	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	17.6	17.6		5.1	5.1			23.5	23.5		17.8	17.8
Effective Green, g (s)	17.6	17.6		5.1	5.1			23.5	23.5		17.8	17.8
Actuated g/C Ratio	0.22	0.22		0.06	0.06			0.29	0.29		0.22	0.22
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	354	702		112	221			457	441		393	387
v/s Ratio Prot	c0.09	0.09		0.00	c0.02			c0.22	0.16		0.00	c0.11
v/s Ratio Perm												
v/c Ratio	0.42	0.40		0.04	0.32			0.76	0.56		0.01	0.50
Uniform Delay, d1	26.8	26.7		35.1	35.8			25.7	23.8		24.2	27.2
Progression Factor	0.69	0.73		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.4		0.1	0.8			7.1	1.5		0.0	4.5
Delay (s)	19.2	19.8		35.3	36.6			32.8	25.4		24.2	31.7
Level of Service	B	B		D	D			C	C		C	C
Approach Delay (s)		19.6			36.5			29.2				22.3
Approach LOS		B			D			C				C

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	203	31
Future Volume (vph)	203	31
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	214	33
RTOR Reduction (vph)	0	26
Lane Group Flow (vph)	178	7
Confl. Peds. (#/hr)		221
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	39.4	17.6
Effective Green, g (s)	39.4	17.6
Actuated g/C Ratio	0.49	0.22
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	740	348
v/s Ratio Prot	0.12	0.00
v/s Ratio Perm		
v/c Ratio	0.24	0.02
Uniform Delay, d1	11.7	24.4
Progression Factor	1.00	1.00
Incremental Delay, d2	0.2	0.0
Delay (s)	11.9	24.5
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	289	0	0	0	0	0	512	72
Future Volume (vph)	0	0	0	50	289	0	0	0	0	0	512	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.99	
Flpb, ped/bikes					0.96						1.00	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3379						4940	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3379						4940	
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	54	314	0	0	0	0	0	557	78
RTOR Reduction (vph)	0	0	0	0	31	0	0	0	0	0	40	0
Lane Group Flow (vph)	0	0	0	0	337	0	0	0	0	0	595	0
Confl. Peds. (#/hr)				348								99
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1426						2195	
v/s Ratio Prot											c0.12	
v/s Ratio Perm					0.10							
v/c Ratio					0.24						0.27	
Uniform Delay, d1					8.3						7.9	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.4						0.3	
Delay (s)					8.7						8.2	
Level of Service					A						A	
Approach Delay (s)		0.0			8.7			0.0			8.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	11	131	91	103	487	0	0	162	53
Future Volume (vph)	0	0	0	11	131	91	103	487	0	0	162	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.93			1.00			0.97	
Flpb, ped/bikes					0.98			0.99			1.00	
Frt					0.94			1.00			0.96	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					3041			3460			3310	
Flt Permitted					1.00			0.85			1.00	
Satd. Flow (perm)					3041			2977			3310	
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)	0	0	0	11	136	95	107	507	0	0	169	55
RTOR Reduction (vph)	0	0	0	0	72	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	170	0	0	614	0	0	202	0
Confl. Peds. (#/hr)				402		133	133		138			133
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					734			1811			2013	
v/s Ratio Prot											0.06	
v/s Ratio Perm					0.06			c0.21				
v/c Ratio					0.23			0.34			0.10	
Uniform Delay, d1					18.3			5.8			4.9	
Progression Factor					1.00			0.58			1.00	
Incremental Delay, d2					0.7			0.5			0.1	
Delay (s)					19.0			3.9			5.0	
Level of Service					B			A			A	
Approach Delay (s)		0.0			19.0			3.9			5.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	265	224	0	0	0	0	0	0	86	522	0
Future Volume (vph)	0	265	224	0	0	0	0	0	0	86	522	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.97									1.00	
Flpb, ped/bikes		1.00									0.99	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3210									4989	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3210									4989	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.92
Adj. Flow (vph)	0	294	249	0	0	0	0	0	0	96	580	0
RTOR Reduction (vph)	0	86	0	0	0	0	0	0	0	0	50	0
Lane Group Flow (vph)	0	457	0	0	0	0	0	0	0	0	626	0
Confl. Peds. (#/hr)			61							113		
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1498									1995	
v/s Ratio Prot		c0.14										
v/s Ratio Perm											0.13	
v/c Ratio		0.30									0.31	
Uniform Delay, d1		7.5									9.3	
Progression Factor		1.00									0.70	
Incremental Delay, d2		0.5									0.4	
Delay (s)		8.0									6.9	
Level of Service		A									A	
Approach Delay (s)		8.0			0.0			0.0			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	198	50	0	0	0	0	493	23	30	141	0
Future Volume (vph)	131	198	50	0	0	0	0	493	23	30	141	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.98						1.00			1.00	
Flpb, ped/bikes		0.97						1.00			0.99	
Frt		0.98						0.99			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3260						3499			3483	
Flt Permitted		0.98						1.00			0.84	
Satd. Flow (perm)		3260						3499			2960	
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)	142	215	54	0	0	0	0	536	25	33	153	0
RTOR Reduction (vph)	0	20	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	391	0	0	0	0	0	555	0	0	186	0
Confl. Peds. (#/hr)	65		104	104		65	65		103	103		65
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		22.5						28.5			28.5	
Effective Green, g (s)		22.5						28.5			28.5	
Actuated g/C Ratio		0.38						0.48			0.48	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1222						1662			1406	
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.12									0.06	
v/c Ratio		0.32						0.33			0.13	
Uniform Delay, d1		13.3						9.8			8.8	
Progression Factor		1.00						1.00			0.84	
Incremental Delay, d2		0.7						0.5			0.2	
Delay (s)		14.0						10.4			7.6	
Level of Service		B						B			A	
Approach Delay (s)		14.0			0.0			10.4			7.6	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	211	139	2	171	267	0	0	0	0	37	273
Future Volume (vph)	0	211	139	2	171	267	0	0	0	0	37	273
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.78		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	0.99						0.94
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	0.99						0.99
Satd. Flow (prot)		3505	1224		1595	3294						3258
Flt Permitted		1.00	1.00		0.95	0.93						0.99
Satd. Flow (perm)		3505	1224		1595	3079						3258
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)	0	232	153	2	188	293	0	0	0	0	41	300
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	232	40	0	156	327	0	0	0	0	0	341
Confl. Peds. (#/hr)	789		247		247		789			195	1958	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		21.0	21.0		16.0	41.0						31.0
Effective Green, g (s)		21.0	21.0		16.0	41.0						31.0
Actuated g/C Ratio		0.26	0.26		0.20	0.51						0.39
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		920	321		319	1620						1262
v/s Ratio Prot		c0.07			c0.10	0.04						
v/s Ratio Perm			0.03			0.06						0.10
v/c Ratio		0.25	0.13		0.49	0.20						0.27
Uniform Delay, d1		23.3	22.5		28.4	10.6						16.8
Progression Factor		1.00	1.00		0.94	0.81						1.00
Incremental Delay, d2		0.7	0.8		4.9	0.3						0.5
Delay (s)		24.0	23.3		31.5	8.8						17.3
Level of Service		C	C		C	A						B
Approach Delay (s)		23.7				16.2			0.0			17.0
Approach LOS		C				B			A			B

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	60
Future Volume (vph)	60
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.94
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1472
Flt Permitted	1.00
Satd. Flow (perm)	1472
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	66
RTOR Reduction (vph)	40
Lane Group Flow (vph)	26
Confl. Peds. (#/hr)	63
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	31.0
Effective Green, g (s)	31.0
Actuated g/C Ratio	0.39
Clearance Time (s)	4.0
Lane Grp Cap (vph)	570
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.04
Uniform Delay, d1	15.3
Progression Factor	1.00
Incremental Delay, d2	0.1
Delay (s)	15.4
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SWL2	SWL	SWR
Lane Configurations												
Traffic Volume (vph)	123	41	74	8	72	19	37	27	260	7	385	319
Future Volume (vph)	123	41	74	8	72	19	37	27	260	7	385	319
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	4.0
Lane Util. Factor	0.91	0.91		1.00	0.95			0.95	0.95	1.00	1.00	0.95
Frpb, ped/bikes	1.00	0.94		1.00	1.00			1.00	1.00	1.00	0.99	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.97			0.91	0.85	1.00	0.99	0.85
Flt Protected	0.95	0.99		0.95	1.00			0.99	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1610	2908		1770	3429			1589	1504	1770	1736	1504
Flt Permitted	0.95	0.99		0.95	1.00			0.99	1.00	0.95	0.96	1.00
Satd. Flow (perm)	1610	2908		1770	3429			1589	1504	1770	1736	1504
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)	129	43	78	8	76	20	39	28	274	7	405	336
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	85	105	0	8	96	0	0	174	167	7	439	302
Confl. Peds. (#/hr)	33		90	90			162			44		162
Turn Type	Split	NA		Split	NA		Split	NA	Prot	Prot	Prot	pt+ov
Protected Phases	1	1		7	7		8	8	8	6	6	6 1
Permitted Phases												
Actuated Green, G (s)	18.2	18.2		4.8	4.8			23.2	23.2	17.8	17.8	40.0
Effective Green, g (s)	18.2	18.2		4.8	4.8			23.2	23.2	17.8	17.8	40.0
Actuated g/C Ratio	0.23	0.23		0.06	0.06			0.29	0.29	0.22	0.22	0.50
Clearance Time (s)	4.0	4.0		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	3.0	3.0	
Lane Grp Cap (vph)	366	661		106	205			460	436	393	386	752
v/s Ratio Prot	0.05	0.04		0.00	c0.03			0.11	c0.11	0.00	c0.25	c0.20
v/s Ratio Perm												
v/c Ratio	0.23	0.16		0.08	0.47			0.38	0.38	0.02	1.14	0.40
Uniform Delay, d1	25.2	24.8		35.5	36.4			22.6	22.7	24.3	31.1	12.5
Progression Factor	1.40	2.14		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1		0.3	1.7			0.5	0.6	0.1	88.7	0.4
Delay (s)	35.7	53.1		35.8	38.1			23.2	23.2	24.4	119.8	12.9
Level of Service	D	D		D	D			C	C	C	F	B
Approach Delay (s)		47.2			37.9			23.2			73.2	
Approach LOS		D			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR2
Lane Configurations	
Traffic Volume (vph)	36
Future Volume (vph)	36
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1583
Flt Permitted	1.00
Satd. Flow (perm)	1583
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	38
RTOR Reduction (vph)	29
Lane Group Flow (vph)	9
Confl. Peds. (#/hr)	280
Turn Type	Prot
Protected Phases	1
Permitted Phases	
Actuated Green, G (s)	18.2
Effective Green, g (s)	18.2
Actuated g/C Ratio	0.23
Clearance Time (s)	4.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	360
v/s Ratio Prot	0.01
v/s Ratio Perm	
v/c Ratio	0.02
Uniform Delay, d1	24.0
Progression Factor	1.00
Incremental Delay, d2	0.0
Delay (s)	24.0
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	74	272	0	0	0	0	0	398	147
Future Volume (vph)	0	0	0	74	272	0	0	0	0	0	398	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					0.94						1.00	
Frt					1.00						0.96	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3249						4715	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3249						4715	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	80	292	0	0	0	0	0	428	158
RTOR Reduction (vph)	0	0	0	0	46	0	0	0	0	0	88	0
Lane Group Flow (vph)	0	0	0	0	326	0	0	0	0	0	498	0
Confl. Peds. (#/hr)				390								106
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1371						2095	
v/s Ratio Prot											c0.11	
v/s Ratio Perm					0.10							
v/c Ratio					0.24						0.24	
Uniform Delay, d1					8.3						7.8	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.4						0.3	
Delay (s)					8.8						8.0	
Level of Service					A						A	
Approach Delay (s)		0.0			8.8			0.0			8.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	33	180	56	130	307	0	0	246	117
Future Volume (vph)	0	0	0	33	180	56	130	307	0	0	246	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.94			1.00			0.96	
Flpb, ped/bikes					0.96			0.98			1.00	
Frt					0.97			1.00			0.95	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					3049			3410			3221	
Flt Permitted					0.99			0.75			1.00	
Satd. Flow (perm)					3049			2583			3221	
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)	0	0	0	35	189	59	137	323	0	0	259	123
RTOR Reduction (vph)	0	0	0	0	39	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	244	0	0	460	0	0	371	0
Confl. Peds. (#/hr)				449		236	154		173			154
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					736			1571			1959	
v/s Ratio Prot											0.12	
v/s Ratio Perm					0.08			c0.18				
v/c Ratio					0.33			0.29			0.19	
Uniform Delay, d1					18.8			5.6			5.2	
Progression Factor					1.00			0.59			1.00	
Incremental Delay, d2					1.2			0.5			0.2	
Delay (s)					20.0			3.8			5.4	
Level of Service					B			A			A	
Approach Delay (s)		0.0			20.0			3.8			5.4	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	269	223	0	0	0	0	0	0	81	347	0
Future Volume (vph)	0	269	223	0	0	0	0	0	0	81	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3264									5038	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3264									5038	
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.92
Adj. Flow (vph)	0	289	240	0	0	0	0	0	0	87	373	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	52	0
Lane Group Flow (vph)	0	466	0	0	0	0	0	0	0	0	408	0
Confl. Peds. (#/hr)			15									149
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1523									2015	
v/s Ratio Prot		c0.14										
v/s Ratio Perm											0.08	
v/c Ratio		0.31									0.20	
Uniform Delay, d1		7.5									8.8	
Progression Factor		1.00									0.74	
Incremental Delay, d2		0.5									0.2	
Delay (s)		8.0									6.8	
Level of Service		A									A	
Approach Delay (s)		8.0			0.0			0.0			6.8	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	166	69	0	0	0	0	374	27	60	158	0
Future Volume (vph)	86	166	69	0	0	0	0	374	27	60	158	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.97						0.99			1.00	
Flpb, ped/bikes		0.97						1.00			0.98	
Frt		0.97						0.99			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3183						3478			3438	
Flt Permitted		0.99						1.00			0.79	
Satd. Flow (perm)		3183						3478			2760	
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)	90	173	72	0	0	0	0	390	28	62	165	0
RTOR Reduction (vph)	0	41	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	294	0	0	0	0	0	409	0	0	228	0
Confl. Peds. (#/hr)	95		102	102		95	59		109	109		59
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		22.5						28.5			28.5	
Effective Green, g (s)		22.5						28.5			28.5	
Actuated g/C Ratio		0.38						0.48			0.48	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1193						1652			1311	
v/s Ratio Prot								c0.12				
v/s Ratio Perm		0.09									0.08	
v/c Ratio		0.25						0.25			0.17	
Uniform Delay, d1		12.9						9.4			9.0	
Progression Factor		1.00						1.00			0.78	
Incremental Delay, d2		0.5						0.4			0.3	
Delay (s)		13.4						9.7			7.4	
Level of Service		B						A			A	
Approach Delay (s)		13.4			0.0			9.7			7.4	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	380	118	19	116	263	0	0	0	0	55	319
Future Volume (vph)	0	380	118	19	116	263	0	0	0	0	55	319
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.79		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00						0.97
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	1.00						0.99
Satd. Flow (prot)		3505	1233		1595	3336						3384
Flt Permitted		1.00	1.00		0.95	0.95						0.99
Satd. Flow (perm)		3505	1233		1595	3161						3384
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	413	128	21	126	286	0	0	0	0	60	347
RTOR Reduction (vph)	0	0	83	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	413	45	0	134	299	0	0	0	0	0	407
Confl. Peds. (#/hr)	801		240		240		801			232	232	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		28.0	28.0		10.0	42.0						30.0
Effective Green, g (s)		28.0	28.0		10.0	42.0						30.0
Actuated g/C Ratio		0.35	0.35		0.12	0.52						0.38
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1226	431		199	1681						1269
v/s Ratio Prot		c0.12			c0.08	0.02						
v/s Ratio Perm			0.04			0.07						0.12
v/c Ratio		0.34	0.10		0.67	0.18						0.32
Uniform Delay, d1		19.2	17.5		33.4	10.0						17.8
Progression Factor		1.00	1.00		1.05	0.86						1.00
Incremental Delay, d2		0.7	0.5		16.2	0.2						0.7
Delay (s)		19.9	18.0		51.4	8.8						18.4
Level of Service		B	B		D	A						B
Approach Delay (s)		19.5				22.0			0.0			18.1
Approach LOS		B				C			A			B

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	80
Future Volume (vph)	80
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.90
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1404
Flt Permitted	1.00
Satd. Flow (perm)	1404
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	87
RTOR Reduction (vph)	43
Lane Group Flow (vph)	45
Confl. Peds. (#/hr)	118
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	30.0
Effective Green, g (s)	30.0
Actuated g/C Ratio	0.38
Clearance Time (s)	4.0
Lane Grp Cap (vph)	526
v/s Ratio Prot	
v/s Ratio Perm	0.03
v/c Ratio	0.08
Uniform Delay, d1	16.1
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	16.5
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	263	124	33	4	59	8	75	14	549	22	2	168
Future Volume (vph)	263	124	33	4	59	8	75	14	549	22	2	168
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.89	0.85		1.00	0.98
Flt Protected	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	3195		1770	3479			1557	1504		1770	1749
Flt Permitted	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	3195		1770	3479			1557	1504		1770	1749
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)	277	131	35	4	62	8	79	15	578	23	2	177
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	87	0	0	0
Lane Group Flow (vph)	147	284	0	4	70	0	0	354	254	0	2	205
Confl. Peds. (#/hr)	40		111	111			125			73	73	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	17.6	17.6		5.1	5.1			23.4	23.4		17.9	17.9
Effective Green, g (s)	17.6	17.6		5.1	5.1			23.4	23.4		17.9	17.9
Actuated g/C Ratio	0.22	0.22		0.06	0.06			0.29	0.29		0.22	0.22
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	354	702		112	221			455	439		396	391
v/s Ratio Prot	c0.09	0.09		0.00	c0.02			c0.23	0.17		0.00	c0.12
v/s Ratio Perm												
v/c Ratio	0.42	0.40		0.04	0.32			0.78	0.58		0.01	0.52
Uniform Delay, d1	26.8	26.7		35.1	35.8			25.9	24.1		24.1	27.3
Progression Factor	0.67	0.71		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	0.4		0.1	0.8			8.2	1.9		0.0	5.0
Delay (s)	18.7	19.3		35.3	36.6			34.1	26.0		24.2	32.3
Level of Service	B	B		D	D			C	C		C	C
Approach Delay (s)		19.1			36.5			30.1				22.7
Approach LOS		B			D			C				C

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	203	31
Future Volume (vph)	203	31
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	214	33
RTOR Reduction (vph)	0	26
Lane Group Flow (vph)	186	7
Confl. Peds. (#/hr)		221
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	39.5	17.6
Effective Green, g (s)	39.5	17.6
Actuated g/C Ratio	0.49	0.22
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	742	348
v/s Ratio Prot	0.12	0.00
v/s Ratio Perm		
v/c Ratio	0.25	0.02
Uniform Delay, d1	11.7	24.4
Progression Factor	1.00	1.00
Incremental Delay, d2	0.2	0.0
Delay (s)	11.9	24.5
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	50	311	0	0	0	0	0	512	72
Future Volume (vph)	0	0	0	50	311	0	0	0	0	0	512	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.99	
Flpb, ped/bikes					0.96						1.00	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3389						4940	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3389						4940	
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	54	338	0	0	0	0	0	557	78
RTOR Reduction (vph)	0	0	0	0	28	0	0	0	0	0	40	0
Lane Group Flow (vph)	0	0	0	0	364	0	0	0	0	0	595	0
Confl. Peds. (#/hr)				348								99
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1430						2195	
v/s Ratio Prot											c0.12	
v/s Ratio Perm					0.11							
v/c Ratio					0.25						0.27	
Uniform Delay, d1					8.4						7.9	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.4						0.3	
Delay (s)					8.8						8.2	
Level of Service					A						A	
Approach Delay (s)		0.0			8.8			0.0			8.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	131	91	125	502	0	0	182	53
Future Volume (vph)	0	0	0	60	131	91	125	502	0	0	182	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.94			1.00			0.97	
Flpb, ped/bikes					0.93			0.98			1.00	
Frt					0.95			1.00			0.97	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					2908			3450			3329	
Flt Permitted					0.99			0.83			1.00	
Satd. Flow (perm)					2908			2889			3329	
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)	0	0	0	62	136	95	130	523	0	0	190	55
RTOR Reduction (vph)	0	0	0	0	72	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	222	0	0	653	0	0	223	0
Confl. Peds. (#/hr)				402		133	133		138			133
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					702			1757			2025	
v/s Ratio Prot											0.07	
v/s Ratio Perm					0.08			c0.23				
v/c Ratio					0.32			0.37			0.11	
Uniform Delay, d1					18.7			5.9			4.9	
Progression Factor					1.00			0.64			1.00	
Incremental Delay, d2					1.2			0.6			0.1	
Delay (s)					19.9			4.4			5.0	
Level of Service					B			A			A	
Approach Delay (s)		0.0			19.9			4.4			5.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	294	224	0	0	0	0	0	0	123	522	0
Future Volume (vph)	0	294	224	0	0	0	0	0	0	123	522	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.98									1.00	
Flpb, ped/bikes		1.00									0.98	
Frt		0.94									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3228									4956	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3228									4956	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.92
Adj. Flow (vph)	0	327	249	0	0	0	0	0	0	137	580	0
RTOR Reduction (vph)	0	86	0	0	0	0	0	0	0	0	82	0
Lane Group Flow (vph)	0	490	0	0	0	0	0	0	0	0	635	0
Confl. Peds. (#/hr)			61							113		
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1506									1982	
v/s Ratio Prot		c0.15										
v/s Ratio Perm											0.13	
v/c Ratio		0.33									0.32	
Uniform Delay, d1		7.5									9.3	
Progression Factor		1.00									0.70	
Incremental Delay, d2		0.6									0.4	
Delay (s)		8.1									6.9	
Level of Service		A									A	
Approach Delay (s)		8.1			0.0			0.0			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	235	50	0	0	0	0	493	23	30	141	0
Future Volume (vph)	160	235	50	0	0	0	0	493	23	30	141	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.98						1.00			1.00	
Flpb, ped/bikes		0.97						1.00			0.99	
Frt		0.98						0.99			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3272						3499			3483	
Flt Permitted		0.98						1.00			0.84	
Satd. Flow (perm)		3272						3499			2960	
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)	174	255	54	0	0	0	0	536	25	33	153	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	467	0	0	0	0	0	555	0	0	186	0
Confl. Peds. (#/hr)	65		104	104		65	65		103	103		65
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		22.5						28.5			28.5	
Effective Green, g (s)		22.5						28.5			28.5	
Actuated g/C Ratio		0.38						0.48			0.48	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1227						1662			1406	
v/s Ratio Prot								c0.16				
v/s Ratio Perm		0.14									0.06	
v/c Ratio		0.38						0.33			0.13	
Uniform Delay, d1		13.7						9.8			8.8	
Progression Factor		1.00						1.00			0.84	
Incremental Delay, d2		0.9						0.5			0.2	
Delay (s)		14.6						10.4			7.6	
Level of Service		B						B			A	
Approach Delay (s)		14.6			0.0			10.4			7.6	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	247	163	2	200	313	0	0	0	0	43	320
Future Volume (vph)	0	247	163	2	200	313	0	0	0	0	43	320
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.68		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	0.98						0.94
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	0.99						0.99
Satd. Flow (prot)		3505	1066		1595	3281						3263
Flt Permitted		1.00	1.00		0.95	0.92						0.99
Satd. Flow (perm)		3505	1066		1595	3040						3263
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)	0	271	179	2	220	344	0	0	0	0	47	352
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	271	56	0	182	384	0	0	0	0	0	399
Confl. Peds. (#/hr)	789		247		247		789			195	1958	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		25.0	25.0		17.0	46.0						26.0
Effective Green, g (s)		25.0	25.0		17.0	46.0						26.0
Actuated g/C Ratio		0.31	0.31		0.21	0.58						0.32
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1095	333		338	1799						1060
v/s Ratio Prot		c0.08			c0.11	0.05						
v/s Ratio Perm			0.05			0.08						0.12
v/c Ratio		0.25	0.17		0.54	0.21						0.38
Uniform Delay, d1		20.5	20.0		28.0	8.2						20.8
Progression Factor		1.00	1.00		1.00	1.00						1.00
Incremental Delay, d2		0.5	1.1		6.0	0.3						1.0
Delay (s)		21.0	21.0		34.0	8.5						21.8
Level of Service		C	C		C	A						C
Approach Delay (s)		21.0				16.7			0.0			21.3
Approach LOS		C				B			A			C

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	70
Future Volume (vph)	70
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.93
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1460
Flt Permitted	1.00
Satd. Flow (perm)	1460
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	77
RTOR Reduction (vph)	46
Lane Group Flow (vph)	31
Confl. Peds. (#/hr)	63
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	26.0
Effective Green, g (s)	26.0
Actuated g/C Ratio	0.32
Clearance Time (s)	4.0
Lane Grp Cap (vph)	474
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.07
Uniform Delay, d1	18.6
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	18.9
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	144	48	87	9	84	22	53	39	352	4	10	540
Future Volume (vph)	144	48	87	9	84	22	53	39	352	4	10	540
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.93		1.00	1.00			1.00	1.00		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	0.93		1.00	0.97			0.91	0.85		1.00	0.99
Flt Protected	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	2882		1770	3429			1592	1504		1770	1733
Flt Permitted	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	2882		1770	3429			1592	1504		1770	1733
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)	152	51	92	9	88	23	56	41	371	4	11	568
RTOR Reduction (vph)	0	75	0	0	0	0	0	0	80	0	0	0
Lane Group Flow (vph)	102	118	0	9	111	0	0	242	150	0	11	616
Confl. Peds. (#/hr)	33		90	90			162			44	44	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	17.0	17.0		4.8	4.8			24.0	24.0		28.2	28.2
Effective Green, g (s)	17.0	17.0		4.8	4.8			24.0	24.0		28.2	28.2
Actuated g/C Ratio	0.19	0.19		0.05	0.05			0.27	0.27		0.31	0.31
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	304	544		94	182			424	401		554	543
v/s Ratio Prot	0.06	0.04		0.01	c0.03			c0.15	0.10		0.01	c0.36
v/s Ratio Perm												
v/c Ratio	0.34	0.22		0.10	0.61			0.57	0.37		0.02	1.13
Uniform Delay, d1	31.6	30.9		40.5	41.7			28.5	26.9		21.4	30.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.2		0.4	5.7			1.9	0.6		0.1	81.3
Delay (s)	32.3	31.1		41.0	47.4			30.4	27.5		21.4	112.2
Level of Service	C	C		D	D			C	C		C	F
Approach Delay (s)		31.5			46.9			29.0				69.0
Approach LOS		C			D			C				E

Intersection Summary			
HCM 2000 Control Delay	52.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	456	51
Future Volume (vph)	456	51
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	480	54
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	432	10
Confl. Peds. (#/hr)	162	280
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	49.2	17.0
Effective Green, g (s)	49.2	17.0
Actuated g/C Ratio	0.55	0.19
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	822	299
v/s Ratio Prot	c0.29	0.01
v/s Ratio Perm		
v/c Ratio	0.53	0.03
Uniform Delay, d1	13.0	29.8
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.0
Delay (s)	13.6	29.8
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	86	293	0	0	0	0	0	466	172
Future Volume (vph)	0	0	0	86	293	0	0	0	0	0	466	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					0.93						1.00	
Frt					1.00						0.96	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3237						4715	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3237						4715	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	92	315	0	0	0	0	0	501	185
RTOR Reduction (vph)	0	0	0	0	55	0	0	0	0	0	99	0
Lane Group Flow (vph)	0	0	0	0	352	0	0	0	0	0	587	0
Confl. Peds. (#/hr)				390								106
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					18.0						21.0	
Effective Green, g (s)					18.0						21.0	
Actuated g/C Ratio					0.40						0.47	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1294						2200	
v/s Ratio Prot											c0.12	
v/s Ratio Perm					0.11							
v/c Ratio					0.27						0.27	
Uniform Delay, d1					9.1						7.3	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.5						0.3	
Delay (s)					9.6						7.6	
Level of Service					A						A	
Approach Delay (s)		0.0			9.6			0.0			7.6	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	25	210	65	154	419	0	0	345	167
Future Volume (vph)	0	0	0	25	210	65	154	419	0	0	345	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.93			1.00			0.96	
Flpb, ped/bikes					0.97			0.98			1.00	
Frt					0.97			1.00			0.95	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					3091			3436			3217	
Flt Permitted					1.00			0.70			1.00	
Satd. Flow (perm)					3091			2453			3217	
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)	0	0	0	26	221	68	162	441	0	0	363	176
RTOR Reduction (vph)	0	0	0	0	42	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	273	0	0	603	0	0	533	0
Confl. Peds. (#/hr)				449		236	154		173			154
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					13.5			37.5			37.5	
Effective Green, g (s)					13.5			37.5			37.5	
Actuated g/C Ratio					0.22			0.62			0.62	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					695			1533			2010	
v/s Ratio Prot											0.17	
v/s Ratio Perm					0.09			c0.25				
v/c Ratio					0.39			0.39			0.27	
Uniform Delay, d1					19.8			5.6			5.1	
Progression Factor					1.00			0.50			1.00	
Incremental Delay, d2					1.7			0.7			0.3	
Delay (s)					21.4			3.5			5.4	
Level of Service					C			A			A	
Approach Delay (s)		0.0			21.4			3.5			5.4	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	307	261	0	0	0	0	0	0	79	441	0
Future Volume (vph)	0	307	261	0	0	0	0	0	0	79	441	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3260									5047	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3260									5047	
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.92
Adj. Flow (vph)	0	330	281	0	0	0	0	0	0	85	474	0
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	51	0
Lane Group Flow (vph)	0	566	0	0	0	0	0	0	0	0	508	0
Confl. Peds. (#/hr)			15									149
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1521									2018	
v/s Ratio Prot		c0.17										
v/s Ratio Perm											0.10	
v/c Ratio		0.37									0.25	
Uniform Delay, d1		7.7									9.0	
Progression Factor		1.00									0.76	
Incremental Delay, d2		0.7									0.3	
Delay (s)		8.4									7.1	
Level of Service		A									A	
Approach Delay (s)		8.4			0.0			0.0			7.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	157	81	0	0	0	0	535	39	86	226	0
Future Volume (vph)	93	157	81	0	0	0	0	535	39	86	226	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.97						0.99			1.00	
Flpb, ped/bikes		0.97						1.00			0.99	
Frt		0.96						0.99			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3150						3477			3450	
Flt Permitted		0.99						1.00			0.73	
Satd. Flow (perm)		3150						3477			2567	
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)	97	164	84	0	0	0	0	557	41	90	235	0
RTOR Reduction (vph)	0	51	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	294	0	0	0	0	0	589	0	0	325	0
Confl. Peds. (#/hr)	95		102	102		95	59		109	109		59
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		15.5						35.5			35.5	
Effective Green, g (s)		15.5						35.5			35.5	
Actuated g/C Ratio		0.26						0.59			0.59	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		813						2057			1518	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		0.09									0.13	
v/c Ratio		0.36						0.29			0.21	
Uniform Delay, d1		18.2						6.0			5.7	
Progression Factor		1.00						1.00			0.85	
Incremental Delay, d2		1.2						0.4			0.3	
Delay (s)		19.4						6.4			5.2	
Level of Service		B						A			A	
Approach Delay (s)		19.4			0.0			6.4			5.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	543	169	19	166	376	0	0	0	0	79	456
Future Volume (vph)	0	543	169	19	166	376	0	0	0	0	79	456
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.68		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00						0.97
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	1.00						0.99
Satd. Flow (prot)		3505	1070		1595	3338						3369
Flt Permitted		1.00	1.00		0.95	0.94						0.99
Satd. Flow (perm)		3505	1070		1595	3152						3369
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	590	184	21	180	409	0	0	0	0	86	496
RTOR Reduction (vph)	0	0	92	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	590	92	0	183	427	0	0	0	0	0	582
Confl. Peds. (#/hr)	801		240		240		801			232	232	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		28.0	28.0		14.0	46.0						26.0
Effective Green, g (s)		28.0	28.0		14.0	46.0						26.0
Actuated g/C Ratio		0.35	0.35		0.18	0.58						0.32
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1226	374		279	1844						1094
v/s Ratio Prot		c0.17			c0.11	0.04						
v/s Ratio Perm			0.09			0.09						0.17
v/c Ratio		0.48	0.25		0.66	0.23						0.53
Uniform Delay, d1		20.3	18.5		30.8	8.3						22.0
Progression Factor		1.00	1.00		1.00	1.00						1.00
Incremental Delay, d2		1.4	1.6		11.5	0.3						1.9
Delay (s)		21.7	20.0		42.2	8.6						23.9
Level of Service		C	C		D	A						C
Approach Delay (s)		21.3				18.7			0.0			23.2
Approach LOS		C				B			A			C

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	115
Future Volume (vph)	115
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.88
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1382
Flt Permitted	1.00
Satd. Flow (perm)	1382
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	125
RTOR Reduction (vph)	46
Lane Group Flow (vph)	79
Confl. Peds. (#/hr)	118
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	26.0
Effective Green, g (s)	26.0
Actuated g/C Ratio	0.32
Clearance Time (s)	4.0
Lane Grp Cap (vph)	449
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.18
Uniform Delay, d1	19.3
Progression Factor	1.00
Incremental Delay, d2	0.9
Delay (s)	20.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	376	177	47	6	84	11	107	20	763	31	3	212
Future Volume (vph)	376	177	47	6	84	11	107	20	763	31	3	212
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.89	0.85		1.00	0.97
Flt Protected	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	3189		1770	3476			1558	1504		1770	1739
Flt Permitted	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	3189		1770	3476			1558	1504		1770	1739
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)	396	186	49	6	88	12	113	21	803	33	3	223
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	72	0	0	0
Lane Group Flow (vph)	210	410	0	6	100	0	0	495	403	0	3	275
Confl. Peds. (#/hr)	40		111	111			125			73	73	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	18.8	18.8		4.8	4.8			30.4	30.4		20.0	20.0
Effective Green, g (s)	18.8	18.8		4.8	4.8			30.4	30.4		20.0	20.0
Actuated g/C Ratio	0.21	0.21		0.05	0.05			0.34	0.34		0.22	0.22
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	336	666		94	185			526	508		393	386
v/s Ratio Prot	c0.13	0.13		0.00	c0.03			c0.32	0.27		0.00	c0.16
v/s Ratio Perm												
v/c Ratio	0.62	0.62		0.06	0.54			0.94	0.79		0.01	0.71
Uniform Delay, d1	32.4	32.3		40.5	41.5			28.9	27.0		27.3	32.3
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.6	1.7		0.3	3.2			25.3	8.3		0.0	10.7
Delay (s)	36.0	34.0		40.8	44.7			54.2	35.3		27.3	43.0
Level of Service	D	C		D	D			D	D		C	D
Approach Delay (s)		34.7			44.5			44.9				29.6
Approach LOS		C			D			D				C

Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	290	44
Future Volume (vph)	290	44
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	305	46
RTOR Reduction (vph)	0	36
Lane Group Flow (vph)	253	10
Confl. Peds. (#/hr)		221
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	42.8	18.8
Effective Green, g (s)	42.8	18.8
Actuated g/C Ratio	0.48	0.21
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	715	330
v/s Ratio Prot	0.17	0.01
v/s Ratio Perm		
v/c Ratio	0.35	0.03
Uniform Delay, d1	14.9	28.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.0
Delay (s)	15.2	28.4
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	90	338	0	0	0	0	0	634	84
Future Volume (vph)	0	0	0	90	338	0	0	0	0	0	634	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.99	
Flpb, ped/bikes					0.94						1.00	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3310						4947	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3310						4947	
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	98	367	0	0	0	0	0	689	91
RTOR Reduction (vph)	0	0	0	0	53	0	0	0	0	0	37	0
Lane Group Flow (vph)	0	0	0	0	412	0	0	0	0	0	743	0
Confl. Peds. (#/hr)				348								99
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1397						2198	
v/s Ratio Prot											c0.15	
v/s Ratio Perm					0.12							
v/c Ratio					0.29						0.34	
Uniform Delay, d1					8.6						8.2	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.5						0.4	
Delay (s)					9.1						8.6	
Level of Service					A						A	
Approach Delay (s)		0.0			9.1			0.0			8.6	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	16	187	130	144	680	0	0	192	63
Future Volume (vph)	0	0	0	16	187	130	144	680	0	0	192	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.93			1.00			0.97	
Flpb, ped/bikes					0.98			0.99			1.00	
Frt					0.94			1.00			0.96	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					3040			3462			3307	
Flt Permitted					1.00			0.83			1.00	
Satd. Flow (perm)					3040			2898			3307	
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)	0	0	0	17	195	135	150	708	0	0	200	66
RTOR Reduction (vph)	0	0	0	0	98	0	0	0	0	0	26	0
Lane Group Flow (vph)	0	0	0	0	249	0	0	858	0	0	240	0
Confl. Peds. (#/hr)				402		133	133		138			133
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					734			1762			2011	
v/s Ratio Prot											0.07	
v/s Ratio Perm					0.08			c0.30				
v/c Ratio					0.34			0.49			0.12	
Uniform Delay, d1					18.8			6.5			5.0	
Progression Factor					1.00			0.52			1.00	
Incremental Delay, d2					1.3			0.9			0.1	
Delay (s)					20.0			4.3			5.1	
Level of Service					C			A			A	
Approach Delay (s)		0.0			20.0			4.3			5.1	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.0%	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												
Traffic Volume (vph)	0	311	262	0	0	0	0	0	0	103	616	0
Future Volume (vph)	0	311	262	0	0	0	0	0	0	103	616	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.97									1.00	
Flpb, ped/bikes		1.00									0.99	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3211									4988	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3211									4988	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.92
Adj. Flow (vph)	0	346	291	0	0	0	0	0	0	114	684	0
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	51	0
Lane Group Flow (vph)	0	577	0	0	0	0	0	0	0	0	747	0
Confl. Peds. (#/hr)			61							113		
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1498									1995	
v/s Ratio Prot		c0.18										
v/s Ratio Perm											0.15	
v/c Ratio		0.39									0.37	
Uniform Delay, d1		7.8									9.5	
Progression Factor		1.00									0.67	
Incremental Delay, d2		0.8									0.5	
Delay (s)		8.6									6.9	
Level of Service		A									A	
Approach Delay (s)		8.6			0.0			0.0			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	232	59	0	0	0	0	688	32	36	167	0
Future Volume (vph)	153	232	59	0	0	0	0	688	32	36	167	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.98						1.00			1.00	
Flpb, ped/bikes		0.97						1.00			1.00	
Frt		0.98						0.99			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3259						3499			3491	
Flt Permitted		0.98						1.00			0.81	
Satd. Flow (perm)		3259						3499			2842	
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)	166	252	64	0	0	0	0	748	35	39	182	0
RTOR Reduction (vph)	0	20	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	462	0	0	0	0	0	777	0	0	221	0
Confl. Peds. (#/hr)	65		104	104		65	65		103	103		65
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		19.5						31.5			31.5	
Effective Green, g (s)		19.5						31.5			31.5	
Actuated g/C Ratio		0.32						0.52			0.52	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1059						1836			1492	
v/s Ratio Prot								c0.22				
v/s Ratio Perm		0.14									0.08	
v/c Ratio		0.44						0.42			0.15	
Uniform Delay, d1		15.9						8.7			7.3	
Progression Factor		1.00						1.00			0.85	
Incremental Delay, d2		1.3						0.7			0.2	
Delay (s)		17.2						9.4			6.5	
Level of Service		B						A			A	
Approach Delay (s)		17.2			0.0			9.4			6.5	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	247	163	2	200	313	0	0	0	0	43	320
Future Volume (vph)	0	247	163	2	200	313	0	0	0	0	43	320
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.68		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	0.98						0.94
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	0.99						0.99
Satd. Flow (prot)		3505	1066		1595	3281						3263
Flt Permitted		1.00	1.00		0.95	0.92						0.99
Satd. Flow (perm)		3505	1066		1595	3040						3263
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)	0	271	179	2	220	344	0	0	0	0	47	352
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	271	56	0	182	384	0	0	0	0	0	399
Confl. Peds. (#/hr)	789		247		247		789			195	1958	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		25.0	25.0		17.0	46.0						26.0
Effective Green, g (s)		25.0	25.0		17.0	46.0						26.0
Actuated g/C Ratio		0.31	0.31		0.21	0.58						0.32
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1095	333		338	1799						1060
v/s Ratio Prot		c0.08			c0.11	0.05						
v/s Ratio Perm			0.05			0.08						0.12
v/c Ratio		0.25	0.17		0.54	0.21						0.38
Uniform Delay, d1		20.5	20.0		28.0	8.2						20.8
Progression Factor		1.00	1.00		1.00	1.00						1.00
Incremental Delay, d2		0.5	1.1		6.0	0.3						1.0
Delay (s)		21.0	21.0		34.0	8.5						21.8
Level of Service		C	C		C	A						C
Approach Delay (s)		21.0				16.7			0.0			21.3
Approach LOS		C				B			A			C

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	70
Future Volume (vph)	70
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.93
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1460
Flt Permitted	1.00
Satd. Flow (perm)	1460
Peak-hour factor, PHF	0.91
Adj. Flow (vph)	77
RTOR Reduction (vph)	46
Lane Group Flow (vph)	31
Confl. Peds. (#/hr)	63
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	26.0
Effective Green, g (s)	26.0
Actuated g/C Ratio	0.32
Clearance Time (s)	4.0
Lane Grp Cap (vph)	474
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.07
Uniform Delay, d1	18.6
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	18.9
Level of Service	B
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	144	48	87	9	84	22	53	38	368	4	10	559
Future Volume (vph)	144	48	87	9	84	22	53	38	368	4	10	559
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.93		1.00	1.00			1.00	1.00		1.00	0.97
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.93		1.00	0.97			0.91	0.85		1.00	0.99
Flt Protected	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	2882		1770	3429			1588	1504		1770	1716
Flt Permitted	0.95	0.99		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	2882		1770	3429			1588	1504		1770	1716
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)	152	51	92	9	88	23	56	40	387	4	11	588
RTOR Reduction (vph)	0	75	0	0	0	0	0	0	80	0	0	0
Lane Group Flow (vph)	102	118	0	9	111	0	0	251	156	0	11	636
Confl. Peds. (#/hr)	33		90	90			162			44	44	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	17.0	17.0		4.8	4.8			24.0	24.0		28.2	28.2
Effective Green, g (s)	17.0	17.0		4.8	4.8			24.0	24.0		28.2	28.2
Actuated g/C Ratio	0.19	0.19		0.05	0.05			0.27	0.27		0.31	0.31
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	304	544		94	182			423	401		554	537
v/s Ratio Prot	0.06	0.04		0.01	c0.03			c0.16	0.10		0.01	c0.37
v/s Ratio Perm												
v/c Ratio	0.34	0.22		0.10	0.61			0.59	0.39		0.02	1.18
Uniform Delay, d1	31.6	30.9		40.5	41.7			28.7	27.0		21.4	30.9
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.2		0.4	5.7			2.2	0.6		0.1	100.7
Delay (s)	32.3	31.1		41.0	47.4			31.0	27.6		21.4	131.6
Level of Service	C	C		D	D			C	C		C	F
Approach Delay (s)		31.5			46.9			29.4				80.7
Approach LOS		C			D			C				F

Intersection Summary			
HCM 2000 Control Delay	59.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	456	51
Future Volume (vph)	456	51
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	480	54
RTOR Reduction (vph)	0	44
Lane Group Flow (vph)	432	10
Confl. Peds. (#/hr)	162	280
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	49.2	17.0
Effective Green, g (s)	49.2	17.0
Actuated g/C Ratio	0.55	0.19
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	822	299
v/s Ratio Prot	c0.29	0.01
v/s Ratio Perm		
v/c Ratio	0.53	0.03
Uniform Delay, d1	13.0	29.8
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.0
Delay (s)	13.6	29.8
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	86	317	0	0	0	0	0	466	172
Future Volume (vph)	0	0	0	86	317	0	0	0	0	0	466	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					0.94						1.00	
Frt					1.00						0.96	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3252						4715	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3252						4715	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	0	0	92	341	0	0	0	0	0	501	185
RTOR Reduction (vph)	0	0	0	0	54	0	0	0	0	0	99	0
Lane Group Flow (vph)	0	0	0	0	379	0	0	0	0	0	587	0
Confl. Peds. (#/hr)				390								106
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					18.0						21.0	
Effective Green, g (s)					18.0						21.0	
Actuated g/C Ratio					0.40						0.47	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1300						2200	
v/s Ratio Prot											c0.12	
v/s Ratio Perm					0.12							
v/c Ratio					0.29						0.27	
Uniform Delay, d1					9.2						7.3	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.6						0.3	
Delay (s)					9.7						7.6	
Level of Service					A						A	
Approach Delay (s)		0.0			9.7			0.0			7.6	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	71	210	65	178	435	0	0	364	167
Future Volume (vph)	0	0	0	71	210	65	178	435	0	0	364	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.94			1.00			0.96	
Flpb, ped/bikes					0.93			0.98			1.00	
Frt					0.97			1.00			0.95	
Flt Protected					0.99			0.99			1.00	
Satd. Flow (prot)					2975			3430			3228	
Flt Permitted					0.99			0.68			1.00	
Satd. Flow (perm)					2975			2364			3228	
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)	0	0	0	75	221	68	187	458	0	0	383	176
RTOR Reduction (vph)	0	0	0	0	33	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	0	0	0	331	0	0	645	0	0	553	0
Confl. Peds. (#/hr)				449		236	154		173			154
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					13.5			37.5			37.5	
Effective Green, g (s)					13.5			37.5			37.5	
Actuated g/C Ratio					0.22			0.62			0.62	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					669			1477			2017	
v/s Ratio Prot											0.17	
v/s Ratio Perm					0.11			c0.27				
v/c Ratio					0.50			0.44			0.27	
Uniform Delay, d1					20.3			5.8			5.1	
Progression Factor					1.00			0.59			1.00	
Incremental Delay, d2					2.6			0.9			0.3	
Delay (s)					22.9			4.3			5.4	
Level of Service					C			A			A	
Approach Delay (s)		0.0			22.9			4.3			5.4	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	334	261	0	0	0	0	0	0	116	441	0
Future Volume (vph)	0	334	261	0	0	0	0	0	0	116	441	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3273									5033	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3273									5033	
Peak-hour factor, PHF	0.93	0.93	0.93	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.92
Adj. Flow (vph)	0	359	281	0	0	0	0	0	0	125	474	0
RTOR Reduction (vph)	0	45	0	0	0	0	0	0	0	0	75	0
Lane Group Flow (vph)	0	595	0	0	0	0	0	0	0	0	524	0
Confl. Peds. (#/hr)			15									149
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1527									2013	
v/s Ratio Prot		c0.18										
v/s Ratio Perm											0.10	
v/c Ratio		0.39									0.26	
Uniform Delay, d1		7.8									9.0	
Progression Factor		1.00									0.74	
Incremental Delay, d2		0.8									0.3	
Delay (s)		8.6									7.0	
Level of Service		A									A	
Approach Delay (s)		8.6			0.0			0.0			7.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	194	81	0	0	0	0	535	39	86	226	0
Future Volume (vph)	120	194	81	0	0	0	0	535	39	86	226	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.97						0.99			1.00	
Flpb, ped/bikes		0.97						1.00			0.99	
Frt		0.97						0.99			1.00	
Flt Protected		0.99						1.00			0.99	
Satd. Flow (prot)		3174						3477			3450	
Flt Permitted		0.99						1.00			0.73	
Satd. Flow (perm)		3174						3477			2567	
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	202	84	0	0	0	0	557	41	90	235	0
RTOR Reduction (vph)	0	38	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	373	0	0	0	0	0	589	0	0	325	0
Confl. Peds. (#/hr)	95		102	102		95	59		109	109		59
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		15.5						35.5			35.5	
Effective Green, g (s)		15.5						35.5			35.5	
Actuated g/C Ratio		0.26						0.59			0.59	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		819						2057			1518	
v/s Ratio Prot								c0.17				
v/s Ratio Perm		0.12									0.13	
v/c Ratio		0.46						0.29			0.21	
Uniform Delay, d1		18.7						6.0			5.7	
Progression Factor		1.00						1.00			0.78	
Incremental Delay, d2		1.8						0.4			0.3	
Delay (s)		20.5						6.4			4.8	
Level of Service		C						A			A	
Approach Delay (s)		20.5			0.0			6.4			4.8	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	0	543	169	19	166	376	0	0	0	0	79	456
Future Volume (vph)	0	543	169	19	166	376	0	0	0	0	79	456
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	1.00		0.91	0.91						0.95
Frpb, ped/bikes		1.00	0.68		1.00	1.00						1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00						0.97
Frt		1.00	0.85		1.00	1.00						1.00
Flt Protected		1.00	1.00		0.95	1.00						0.99
Satd. Flow (prot)		3505	1070		1595	3338						3369
Flt Permitted		1.00	1.00		0.95	0.94						0.99
Satd. Flow (perm)		3505	1070		1595	3152						3369
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	590	184	21	180	409	0	0	0	0	86	496
RTOR Reduction (vph)	0	0	92	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	590	92	0	183	427	0	0	0	0	0	582
Confl. Peds. (#/hr)	801		240		240		801			232	232	
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Turn Type		NA	Perm	Prot	Prot	NA					Perm	NA
Protected Phases		2		1	1	6						4
Permitted Phases			2								4	
Actuated Green, G (s)		28.0	28.0		14.0	46.0						26.0
Effective Green, g (s)		28.0	28.0		14.0	46.0						26.0
Actuated g/C Ratio		0.35	0.35		0.18	0.58						0.32
Clearance Time (s)		4.0	4.0		4.0	4.0						4.0
Lane Grp Cap (vph)		1226	374		279	1844						1094
v/s Ratio Prot		c0.17			c0.11	0.04						
v/s Ratio Perm			0.09			0.09						0.17
v/c Ratio		0.48	0.25		0.66	0.23						0.53
Uniform Delay, d1		20.3	18.5		30.8	8.3						22.0
Progression Factor		1.00	1.00		1.00	1.00						1.00
Incremental Delay, d2		1.4	1.6		11.5	0.3						1.9
Delay (s)		21.7	20.0		42.2	8.6						23.9
Level of Service		C	C		D	A						C
Approach Delay (s)		21.3				18.7			0.0			23.2
Approach LOS		C				B			A			C

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	115
Future Volume (vph)	115
Ideal Flow (vphpl)	1900
Total Lost time (s)	4.0
Lane Util. Factor	1.00
Frpb, ped/bikes	0.88
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1382
Flt Permitted	1.00
Satd. Flow (perm)	1382
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	125
RTOR Reduction (vph)	46
Lane Group Flow (vph)	79
Confl. Peds. (#/hr)	118
Heavy Vehicles (%)	3%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	26.0
Effective Green, g (s)	26.0
Actuated g/C Ratio	0.32
Clearance Time (s)	4.0
Lane Grp Cap (vph)	449
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.18
Uniform Delay, d1	19.3
Progression Factor	1.00
Incremental Delay, d2	0.9
Delay (s)	20.2
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SWL2	SWL
Lane Configurations												
Traffic Volume (vph)	376	177	47	6	84	11	107	20	776	31	3	218
Future Volume (vph)	376	177	47	6	84	11	107	20	776	31	3	218
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	0.91	0.91		1.00	0.95			0.95	0.95		1.00	1.00
Frpb, ped/bikes	1.00	0.98		1.00	1.00			1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.89	0.85		1.00	0.97
Flt Protected	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (prot)	1610	3189		1770	3476			1557	1504		1770	1742
Flt Permitted	0.95	0.98		0.95	1.00			0.99	1.00		0.95	0.96
Satd. Flow (perm)	1610	3189		1770	3476			1557	1504		1770	1742
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)	396	186	49	6	88	12	113	21	817	33	3	229
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	72	0	0	0
Lane Group Flow (vph)	210	410	0	6	100	0	0	502	410	0	3	278
Confl. Peds. (#/hr)	40		111	111			125			73	73	
Turn Type	Split	NA		Split	NA		Split	NA	Prot		Prot	Prot
Protected Phases	1	1		7	7		8	8	8		6	6
Permitted Phases												
Actuated Green, G (s)	18.8	18.8		4.8	4.8			30.5	30.5		19.9	19.9
Effective Green, g (s)	18.8	18.8		4.8	4.8			30.5	30.5		19.9	19.9
Actuated g/C Ratio	0.21	0.21		0.05	0.05			0.34	0.34		0.22	0.22
Clearance Time (s)	4.0	4.0		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		3.0	3.0
Lane Grp Cap (vph)	336	666		94	185			527	509		391	385
v/s Ratio Prot	c0.13	0.13		0.00	c0.03			c0.32	0.27		0.00	c0.16
v/s Ratio Perm												
v/c Ratio	0.62	0.62		0.06	0.54			0.95	0.81		0.01	0.72
Uniform Delay, d1	32.4	32.3		40.5	41.5			29.0	27.1		27.3	32.5
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	3.6	1.7		0.3	3.2			27.5	9.0		0.0	11.2
Delay (s)	36.0	34.0		40.8	44.7			56.6	36.1		27.4	43.6
Level of Service	D	C		D	D			E	D		C	D
Approach Delay (s)		34.7			44.5			46.5				29.9
Approach LOS		C			D			D				C

Intersection Summary			
HCM 2000 Control Delay	39.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SWR	SWR2
Lane Configurations		
Traffic Volume (vph)	290	44
Future Volume (vph)	290	44
Ideal Flow (vphpl)	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	0.85	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1504	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1504	1583
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	305	46
RTOR Reduction (vph)	0	36
Lane Group Flow (vph)	256	10
Confl. Peds. (#/hr)		221
Turn Type	pt+ov	Prot
Protected Phases	6 1	1
Permitted Phases		
Actuated Green, G (s)	42.7	18.8
Effective Green, g (s)	42.7	18.8
Actuated g/C Ratio	0.47	0.21
Clearance Time (s)		4.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)	713	330
v/s Ratio Prot	0.17	0.01
v/s Ratio Perm		
v/c Ratio	0.36	0.03
Uniform Delay, d1	15.0	28.3
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.0
Delay (s)	15.3	28.4
Level of Service	B	C
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	90	358	0	0	0	0	0	634	84
Future Volume (vph)	0	0	0	90	358	0	0	0	0	0	634	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					3.0						3.0	
Lane Util. Factor					0.95						0.91	
Frpb, ped/bikes					1.00						0.99	
Flpb, ped/bikes					0.95						1.00	
Frt					1.00						0.98	
Flt Protected					0.99						1.00	
Satd. Flow (prot)					3320						4947	
Flt Permitted					0.99						1.00	
Satd. Flow (perm)					3320						4947	
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	98	389	0	0	0	0	0	689	91
RTOR Reduction (vph)	0	0	0	0	50	0	0	0	0	0	37	0
Lane Group Flow (vph)	0	0	0	0	437	0	0	0	0	0	743	0
Confl. Peds. (#/hr)				348								99
Turn Type				Perm	NA						NA	
Protected Phases					8						6	
Permitted Phases				8								
Actuated Green, G (s)					19.0						20.0	
Effective Green, g (s)					19.0						20.0	
Actuated g/C Ratio					0.42						0.44	
Clearance Time (s)					3.0						3.0	
Lane Grp Cap (vph)					1401						2198	
v/s Ratio Prot											c0.15	
v/s Ratio Perm					0.13							
v/c Ratio					0.31						0.34	
Uniform Delay, d1					8.7						8.2	
Progression Factor					1.00						1.00	
Incremental Delay, d2					0.6						0.4	
Delay (s)					9.2						8.6	
Level of Service					A						A	
Approach Delay (s)		0.0			9.2			0.0			8.6	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	31	187	130	164	693	0	0	198	63
Future Volume (vph)	0	0	0	31	187	130	164	693	0	0	198	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.95			0.95			0.95	
Frpb, ped/bikes					0.93			1.00			0.97	
Flpb, ped/bikes					0.97			0.99			1.00	
Frt					0.94			1.00			0.96	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					3010			3456			3312	
Flt Permitted					1.00			0.81			1.00	
Satd. Flow (perm)					3010			2841			3312	
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)	0	0	0	32	195	135	171	722	0	0	206	66
RTOR Reduction (vph)	0	0	0	0	95	0	0	0	0	0	26	0
Lane Group Flow (vph)	0	0	0	0	267	0	0	893	0	0	246	0
Confl. Peds. (#/hr)				402		133	133		138			133
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			4			4	
Permitted Phases				6			4					
Actuated Green, G (s)					14.5			36.5			36.5	
Effective Green, g (s)					14.5			36.5			36.5	
Actuated g/C Ratio					0.24			0.61			0.61	
Clearance Time (s)					4.5			4.5			4.5	
Lane Grp Cap (vph)					727			1728			2014	
v/s Ratio Prot											0.07	
v/s Ratio Perm					0.09			c0.31				
v/c Ratio					0.37			0.52			0.12	
Uniform Delay, d1					18.9			6.7			5.0	
Progression Factor					1.00			0.54			1.00	
Incremental Delay, d2					1.4			1.0			0.1	
Delay (s)					20.4			4.7			5.1	
Level of Service					C			A			A	
Approach Delay (s)		0.0			20.4			4.7			5.1	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	66.3%	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												
Traffic Volume (vph)	0	320	262	0	0	0	0	0	0	135	616	0
Future Volume (vph)	0	320	262	0	0	0	0	0	0	135	616	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0									3.0	
Lane Util. Factor		0.95									0.91	
Frpb, ped/bikes		0.97									1.00	
Flpb, ped/bikes		1.00									0.98	
Frt		0.93									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3216									4963	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3216									4963	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.92	0.92	0.92	0.90	0.90	0.92
Adj. Flow (vph)	0	356	291	0	0	0	0	0	0	150	684	0
RTOR Reduction (vph)	0	61	0	0	0	0	0	0	0	0	77	0
Lane Group Flow (vph)	0	586	0	0	0	0	0	0	0	0	757	0
Confl. Peds. (#/hr)			61							113		
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		21.0									18.0	
Effective Green, g (s)		21.0									18.0	
Actuated g/C Ratio		0.47									0.40	
Clearance Time (s)		3.0									3.0	
Lane Grp Cap (vph)		1500									1985	
v/s Ratio Prot		c0.18										
v/s Ratio Perm											0.15	
v/c Ratio		0.39									0.38	
Uniform Delay, d1		7.8									9.6	
Progression Factor		1.00									0.67	
Incremental Delay, d2		0.8									0.5	
Delay (s)		8.6									6.9	
Level of Service		A									A	
Approach Delay (s)		8.6			0.0			0.0			6.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	162	254	59	0	0	0	0	688	32	36	167	0
Future Volume (vph)	162	254	59	0	0	0	0	688	32	36	167	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frpb, ped/bikes		0.98						1.00			1.00	
Flpb, ped/bikes		0.97						1.00			1.00	
Frt		0.98						0.99			1.00	
Flt Protected		0.98						1.00			0.99	
Satd. Flow (prot)		3269						3499			3491	
Flt Permitted		0.98						1.00			0.81	
Satd. Flow (perm)		3269						3499			2842	
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)	176	276	64	0	0	0	0	748	35	39	182	0
RTOR Reduction (vph)	0	18	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	498	0	0	0	0	0	777	0	0	221	0
Confl. Peds. (#/hr)	65		104	104		65	65		103	103		65
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		19.5						31.5			31.5	
Effective Green, g (s)		19.5						31.5			31.5	
Actuated g/C Ratio		0.32						0.52			0.52	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1062						1836			1492	
v/s Ratio Prot								c0.22				
v/s Ratio Perm		0.15									0.08	
v/c Ratio		0.47						0.42			0.15	
Uniform Delay, d1		16.1						8.7			7.3	
Progression Factor		1.00						1.00			0.84	
Incremental Delay, d2		1.5						0.7			0.2	
Delay (s)		17.6						9.4			6.4	
Level of Service		B						A			A	
Approach Delay (s)		17.6			0.0			9.4			6.4	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

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Attachment E:
Noise and Vibration Analysis

BASELINE ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: 3 August 2016 **Job No.:** 16206-00.02432

To: Hannah Young, Urban Planning Partners, Inc.

From: Lisa Luo and Monika Krupa, BASELINE Environmental Consulting

Subject: **Noise and Vibration Analysis – 19th and Harrison Project**

INTRODUCTION

BASELINE Environmental Consulting has prepared this memorandum to present the results of a noise and vibration analysis for a proposed mixed-use development at 19th and Harrison in the City of Oakland ("project"). The purpose of this analysis was to estimate and analyze potential noise and vibration impacts associated with the project's construction and operation to support environmental review of the project.

SETTING

General Information on Noise

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Technical terms used to describe noise are defined in Table 1.

It should be noted that because decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. For instance, if one noise source emits a sound level of 90 dBA, and a second source is placed beside the first and also emits a sound level of 90 dBA, the combined sound level is 93 dBA, not 180 dBA. When the difference between two co-located sources of noise is 10 dBA or more, the higher noise source dominates and the lower noise source makes no perceptible difference in what people can hear or measure. For example, if the noise level is 95 dBA, and another noise source is added that produces 80 dBA noise, the noise level will still be 95 dBA.

Table 1 Definition of Acoustical Terms

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise "level." This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Vibration Decibel (VdB)	A unit describing the amplitude of vibration on a logarithmic scale.
Frequency (Hz)	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
Equivalent Noise Level (Leq)	The average A-weighted noise level during the measurement period. For this CEQA evaluation, Leq refers to a one-hour period unless otherwise stated.
Community Noise Equivalent Level (CNEL)	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7 to 10 PM and after addition of 10 decibels to sound levels during the night between 10 PM and 7 AM.
Day/Night Noise Level (Ldn)	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10 PM and 7 AM.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

In an unconfined space, such as outdoors, noise attenuates with distance according to the inverse square law. Noise levels at a known distance from point sources are reduced by at least 6 dBA for every doubling of that distance over hard surfaces, such as asphalt, and 7.5 dBA for every doubling of that distance over soft surfaces, such as undeveloped land. Noise levels at a known distance from line sources, such as the noise from high-volume roadways, decrease at a rate of at least 3 dBA for every doubling of the distance over hard surfaces and 4.5 dBA over soft surfaces. A greater decrease in noise levels can result from the presence of intervening structures or buffers.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people:[1]

[1] Charles M. Salter Associates, 1998. *Acoustics – Architecture, Engineering, the Environment*.

- A change of 1 dBA cannot typically be perceived, except in carefully controlled laboratory experiments;
- A 3-dBA change is considered a just-perceivable difference;
- A minimum of a 5-dBA change is required before any noticeable change in community response is expected; and
- A 10-dBA change is subjectively perceived as approximately a doubling (or halving) in loudness.

General Information on 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. Several different methods are used to quantify vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment. Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is appropriate for evaluating potential damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. PPV and RMS are normally described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

Ambient Noise and Vibration Environment

The primary noise sources in the vicinity of the project site are: 1) traffic on 19th Street, which runs east to west adjacent to the northern border of the project site; 2) traffic on Webster Street, which runs north to south adjacent to the western border of the project site; and 3) traffic in both directions on Harrison Street, which runs north to south adjacent to the eastern border of the project site. The City of Oakland General Plan[2] notes that existing traffic noise levels are not expected to change substantially over the 20-year period between 2005 and 2025 (i.e., changes in noise levels would not be distinguishable) given the minor changes expected to occur in traffic levels. Therefore, noise levels at the project site and its vicinity from traffic along

[2] City of Oakland, 2005. *City of Oakland General Plan*. Noise Element. March.

the surrounding streets are assumed to be the same as what is indicated in the 2025 noise contour provided in the General Plan, ranging from 60 to 65 dBA Ldn.

As part of a noise study prepared for 1700 Webster Street in Oakland[3] (located adjacent to the project site), noise measurements were collected to characterize the ambient local noise levels. Given the proximity of the two projects, the results of the noise measurements in the 1700 Webster Street noise study can also be used to characterize ambient noise levels in the proposed project area. The study indicated that long-term (Ldn) noise levels in the project vicinity range from 59.2 to 66.8 dBA Ldn based on correlation of four short-term (15-minute) noise measurement with two long-term (24-hour) noise measurement. These site-specific noise measurement results are approximately consistent with the General Plan noise estimates discussed above.

There are no sources of ambient vibration at the project site or its vicinity.

REGULATORY SETTING

State

Section 5.507 of California Code of Regulations, Title 24, Part 11 (also called California 2013 Green Building Standards) specifies that buildings containing non-residential uses (e.g., retail spaces and offices) that are exposed to exterior noise levels at or above 65 dBA Leq or CNEL shall maintain interior noise level below 50 dBA Leq in occupied areas during any hour of operation. An acoustical analysis documenting compliance with this interior sound level is required.[4] Section 1207.4 of California Code of Regulations, Title 24, Supplement Part 2, Volume 1 restricts interior noise levels in any habitable room[5] attributable to exterior sources to 45 dBA Ldn or CNEL, consistent with the noise element of the local general plan.[6]

Sections 46000 to 46080 of the California Health and Safety Code codify the California Noise Control Act (CNCA) of 1973. This act established the Office of Noise Control under the California Department of Health Services. The CNCA requires that the Office of Noise Control adopt, in coordination with the Office of Planning and Research, guidelines for the preparation and content of noise elements for general plans. The most recent guidelines are contained in

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[3] Rosen Goldberg Der & Lewitz, Inc, 2015. *Environmental Noise Study for 1700 Webster Street, Oakland, CA*. May 22.
[4] California Building Standards Commission, 2014. *California 2013 Green Building Standards Code, California Code of Regulations Title 24, Part 11*. Effective January 1.
[5] Habitable space is a space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.
[6] California Building Standards Commission, 2015. *Revision Record for the State of California Supplement, 2013 Title 24, Part 2, Vol. 1, California Building Code*. July 1.

General Plan Guidelines, published by the California Office of Planning and Research in 2003.[7] The document provides land use compatibility guidelines for cities and counties to use in their general plans in order to reduce conflicts between land use and noise. The City of Oakland has adopted a modified version of the State's land use compatibility guidelines, as discussed below.

General Plan

The Noise Element of the City of Oakland General Plan[8] contains the following noise policies and action items that are applicable to the proposed project:

Policy 1: Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.

Action 1.1: Use the noise-land use compatibility matrix (Figure 6 of the Noise Element [Table 2 below]) in conjunction with the noise contour maps (especially for roadway traffic) to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.

Action 1.2: Continue using the City's zoning regulations and permit processes to limit the hours of operation of noise-producing activities which create conflicts with residential uses and to attach noise-abatement requirements to such activities.

Policy 2: Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.

Action 2.2: As resources permit, increase enforcement of noise-related complaints and also of vehicle speed limits and of operational noise from cars, trucks and motorcycles.

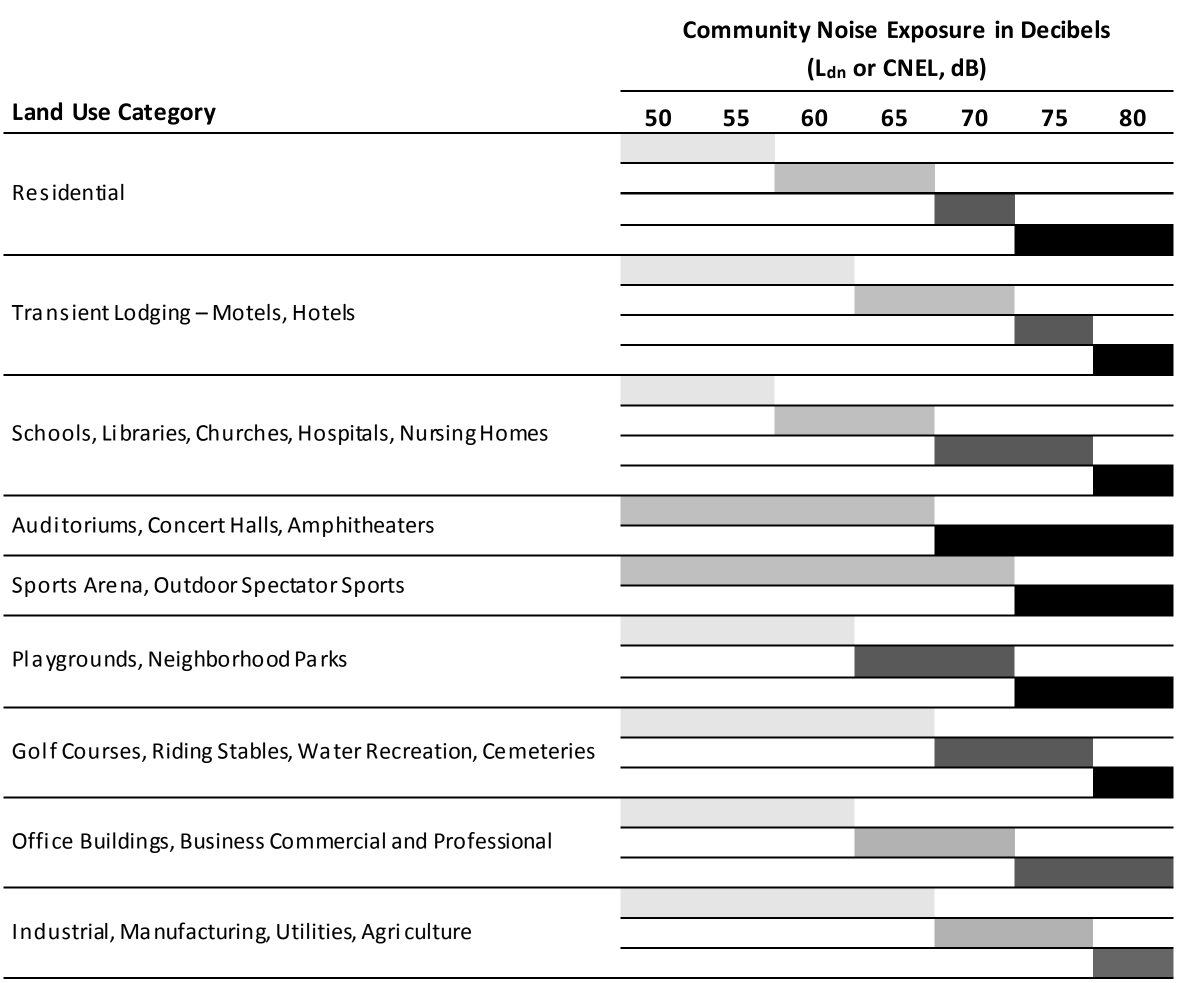
Policy 3: Reduce the community's exposure to noise by minimizing the noise levels that are *received* by Oakland residents and others in the City. (This policy addresses the *reception* of noise whereas Policy 2 addresses the *generation* of noise.)

Action 3.1: Continue to use the building-permit application process to enforce the California Noise Insulation Standards regulating the maximum allowable interior noise level in new multi-unit buildings.

Action 3.2: Review the City's noise performance standards and revise them as appropriate to be consistent with City Council policy.

[7] California Office of Planning and Research, 2003. *General Plan Guidelines.*
[8] City of Oakland, 2005. *Op.cit.*

Table 2 Oakland General Plan Noise Land Use Compatibility Matrix



Source: City of Oakland, 2005. *City of Oakland General Plan*. Noise Element, Figure 6.

Key:

NORMALLY ACCEPTABLE: Development may occur without an analysis of potential noise impacts *to the proposed development* (though it might still be necessary to analyze noise impacts that the project might have *on its surroundings*).

CONDITIONALLY ACCEPTABLE: Development should be undertaken only after an analysis of noise-reduction requirements is conducted, and if necessary noise-mitigating features are included in the design. Conventional construction will usually suffice as long as it incorporates air conditioning or forced-air-supply systems, though it will likely require that project occupants maintain their windows closed.

NORMALLY UNACCEPTABLE: Development should generally de discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise insulation, mitigation or abatement features are included in the design.

CLEARLY UNACCEPTABLE: Development should not be undertaken.

Policy N3.9: Orienting Residential Development. Residential developments should be encouraged to face the street and to orient their units to desirable sunlight and views, while avoiding unreasonably blocking sunlight and views for neighboring buildings, respecting the privacy needs of residents of the development and surrounding properties, providing for sufficient conveniently located on-site open space, and avoiding undue noise exposure.

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.

City of Oakland Municipal Code

Chapter 17.120.050 of the Municipal Code establishes performance standards to control dangerous or objectionable environmental effects of noise. The operational noise level standards for residential and commercial zones are presented in Table 3. The construction and demolition noise level standards for residential, commercial/industrial land uses are presented in Table 4. Noise from mechanical heating, ventilation, and air conditioning (HVAC) systems are prohibited from exceeding the nighttime noise levels presented in Table 3, and the systems are required to be housed within an enclosure if located within 200 feet of a residential zone. Chapter 17.120.060 prohibits activities from generating vibration that is perceptible without instruments by the average person at or beyond the lot line of the lot containing such activities. Vibration generated by motor vehicles, trains, and temporary construction or demolition work is exempt from this standard.

Chapter 8.18.010 of the Municipal Code defines nuisance noises and establishes noise enforcement procedures and penalties for excessive and annoying noises. Chapter 8.18.020 prohibits noises that would disturb the peace and comfort of any person from between the hours of 9:00 p.m. and 7:00 a.m. Additionally, the following construction noise control measures are required:

1. All construction equipment powered by internal combustion engines shall be properly muffled and maintained.

2. Unnecessary idling of internal combustion engines is prohibited.

3. All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.

4. Quiet construction equipment, particularly air compressors, are to be selected whenever possible.

5. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Table 3 City of Oakland Operational Noise Standards at Receiving Property Line, dBA

Receiving Land Use	Cumulative Number of Minutes in a 1-Hour Period	Maximum Allowable Noise Level (dBA)[a,b] Daytime 7:00 a.m.–10:00 p.m.	Maximum Allowable Noise Level (dBA)[a,b] Nighttime 10:00 p.m.–7:00 a.m.
Residential and Civic[c]	20	60	45
	10	65	50
	5	70	55
	1	75	60
	0 (L_{max}[d])	80	65
		Anytime	
Commercial	20	65	
	10	70	
	5	75	
	1	80	
	0 (L_{max}[d])	85	

Source: City of Oakland Municipal Code Section 17.120.050 Noise.
Notes: [a] These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise.
[b] If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.
[c] Legal residences, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses.
[d] L_{max} is the maximum instantaneous noise level.

Table 4 City of Oakland Construction Noise Standards at Receiving Property Line, dBA

	Daily 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Short-Term Operation[a]		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation[b]		
Residential	65	55
Commercial, Industrial	70	60

Source: City of Oakland Municipal Code Section 17.120.050 Noise.
Notes: If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level. Nighttime noise levels from construction and demolition between the hours of 7:00 p.m. to 7:00 a.m. on weekdays and 8:00 p.m. to 9:00 a.m. on weekends and federal holidays are prohibited from exceeding the applicable nighttime operational noise level standards (see Table 3).
[a] Short-term construction or demolition operation is less than 10 days.
[b] Long-term construction or demolition operation is 10 days or more.

City of Oakland Standard Conditions of Approval

Related SCAs are provided in Attachment A of the checklist document (for reference, these are SCA-NOI-1through SCA-NOI-8).

NOISE AND VIBRATION IMPACT ASSESSMENT

Significance Criteria

The City of Oakland CEQA Thresholds of Significance Guidelines state that the project would have a significant impact on the environment if it would:

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise (Table 4), <u>except</u> if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts.[9] During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and

[9] The acoustical analysis must identify, at a minimum, (a) the types of construction equipment expected to be used and the noise levels typically associated with the construction equipment and (b) the surrounding land uses including any sensitive land uses (e.g., schools and childcare facilities, health care and nursing homes, public open space). If sensitive land uses are present, the acoustical analysis must recommend measures to reduce potential impacts.

federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (Table 3);

2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;

3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise;

4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project).[10]

5. Expose persons to interior L_{dn} 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);

6. Expose the project to community noise in conflict with the land use compatibility guidelines of the City of Oakland General Plan (Table 2) after incorporation of all applicable Standard Conditions of Approval;[11]

7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]);

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[10] Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine if the project-related noise increases are cumulative considerable. Project-related noise should include both vehicle trips and project operations.

[11] The evaluation of land use compatibility should consider the following factors: type of noise source; the sensitivity of the noise receptor; the noise reduction likely to be provided by structures; the degree to which the noise source may interfere with speech, sleep or other activities characteristic of the land use; seasonal variations in noise source levels; existing outdoor ambient levels; general societal attitudes towards the noise source; prior history of the noise source; and tonal characteristics of the noise source. To the extent that any of these factors can be evaluated, the measured or computed noise exposure values may be adjusted in order to more accurately assess local sentiments towards acceptable noise exposure.

8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA);[12]

9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or

10. Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

Construction Noise (Criteria 1 and 2)

In accordance with the City of Oakland's Thresholds of Significance Guidelines, an acoustical analysis was performed to evaluate potential noise impacts during project construction. The findings of the acoustical analysis and draft site-specific noise attenuation measures for project construction are summarized below.

Construction is expected to occur over a period of roughly 26 months and would temporarily increase noise levels in the vicinity of the project site. Construction noise levels would vary from day to day, depending on the number and condition of the equipment being used, the types and duration of activity being performed, the distance between the noise source and the receptor, and the presence or absence of barriers, if any, between the noise source and receptor. Demolition, excavation/grading, and foundation work are typically the noisiest phases of construction, and would occur during the first phases of construction. The later phases of construction include activities that are typically quieter and that occur within the building under construction, thereby providing a barrier for noise between the construction activity and any nearby receptors. Although pile driving can generate extreme levels of noise, pile driving is not proposed as part of this project.

The nearest receptors that have line of sight to the project site, and that are located within 1 foot of the project site, are a commercial building located adjacent to the northern border of the project site and an apartment building located adjacent to the southern border of project site. Other nearby receptors that have line of sight to the project site include office buildings located within the same block as the project site, approximately 50 to 90 feet south of the southern border of the project site; office buildings located approximately 60 feet north of the project site across 19th Street; office buildings located approximately 70 feet east of the project site across Harrison Street; and retail stores located approximately 70 feet west of the project site across Webster Street. A parking garage is also located approximately 70 feet east of the project site across Harrison Street, but is not considered a sensitive noise receptor because

[12] The FTA criteria were developed to apply to transit-related groundborne vibration. However, these criteria may also be applied to non-transit-related sources of vibration.

neither noise-sensitive people nor noise-sensitive activities are located at a parking garage. All of the receptors described above have windows facing the project site, except for the commercial building located adjacent to the northern border of the project site and the office buildings located approximately 50 to 90 feet south of the project site, which have solid walls facing the project site.

Table 5 shows typical noise levels associated with various types of construction equipment that may be used during each phase of construction. Because noise increases at a rate of 6 dBA for each halving of distance, and because the adjacent commercial and apartment buildings are located within 1 foot of the project site, the noisiest heavy equipment used during construction of the proposed project could generate exterior noise levels greater than 100 dBA at these buildings when the heavy equipment is operating at its nearest point. However, it should be noted that a typical building facade with windows closed reduces noise by about 25 dBA, and a typical exterior wall with one layer of gypsum board on the interior and wood siding or stucco on the exterior reduces noise by about 40 dBA.[13] Therefore, as shown in Table 5, interior noise levels at nearby receptors would be substantially lower than exterior noise levels.

Also, it should be noted that the use of heavy construction equipment would occur at different locations across the site. Although the nearest boundary of the project site is located within one foot of the adjacent residential and commercial buildings, the furthest boundary of the project site is located more than 200 feet from these buildings. Due to the size of the project site, the duration and frequency that heavy construction equipment would operate within one foot of the adjacent receptors would be limited on any given day and would not be expected to last more than a few days at a time. In addition, once the external structure has been erected, the noisiest phases of construction would be complete and noise from heavy construction equipment inside of the structure would be attenuated by the structure itself.

Although construction generated noise could temporarily result in the exposure of the nearby receptors to noise levels in excess of the Noise Ordinance Standards, the implementation of the City of Oakland's SCAs would lessen the impacts of construction period noise, as described below.

SCA-NOI-1 provides limits on the days and hours of construction to avoid generating noise when it would be most objectionable to neighboring residences and commercial operations. These limitations, which specify that construction activities would be limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday (among other restrictions), would prevent the disturbance of sleep for a majority of residents located close to the project site. This SCA also requires any extension of these work hours to be approved in advance by the City and requires

[13] Charles M. Salter Associates, 1998. *Op. cit*.

property owners and occupants within 300 feet of the project site to be notified of such an extension.

SCA-NOI-2 requires all construction projects to implement basic noise reduction measures during construction. Since the construction of the proposed project could generate noise levels greater than 90 dBA at the adjacent commercial and residential buildings, SCA-NOI-3 requires that the project applicant prepare and implement a Construction Noise Management Plan that contains site-specific noise attenuation measures to reduce construction impacts associated with extreme noise generating activities. Based on the potential noise impacts from construction equipment to nearby sensitive receptors (Table 5), BASELINE recommends the following draft site-specific noise attenuation measures.

Draft Site-Specific Noise Attenuation Measures. In accordance with SCA-NOI-3, the following draft site-specific noise attenuation measures are recommended during project construction:

- Temporary noise barriers will be placed between the proposed construction activities and nearby receptors. The noise barriers may be constructed from plywood and installed on top of a portable concrete K-Rail system to be able to move and/or adjust the wall location during construction activities. A sound blanket system hung on scaffolding, or other noise reduction materials that result in an equivalent or greater noise reduction than plywood, may also be used. Due to the proximity of the commercial and apartment buildings located at the northern and southern borders of project site, respectively, the use of Sound Transmission Class (STC) rated materials, or other materials that could similarly provide high levels of noise reduction above what plywood or sound blankets alone could provide, should be incorporated into the design of the noise barriers installed at these borders. An STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide.[14] Therefore, using STC-rated materials could substantially increase the level of noise reduction provided by the barrier. The composition, location, height, and width of the barriers during different phases of construction will be determined by a qualified acoustical consultant and incorporated into the Construction Noise Management Plan for the project.

- Best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) will be used for project equipment and trucks during construction wherever feasible. For example, exhaust mufflers on pneumatic tools

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[14] U.S. Department of Housing and Urban Development, undated. Noise Notebook, Chapter 4 Supplement, Sound Transmission Class Guidance.

can lower noise levels by up to about 10 dBA and external jackets can lower noise levels by up to about 5 dBA.

- Noise control blankets will be utilized on the building structure as the building is erected to reduce noise emission from the site. The use of noise control blankets will particularly be targeted to cover the levels of the building that have line of sight with the windows of nearby receptors;

- Construction equipment will be positioned as far away from noise-sensitive receptors as possible. The project site is surrounded by hard surfaces, and therefore, for every doubling of the distance between a given receptor and construction equipment, noise will be reduced by approximately 6 dBA.

The incorporation of these draft noise attenuation measures into the Construction Noise Management Plan required by SCA-NOI-3 would substantially reduce the impact of construction generated noise on nearby receptors.

SCA-NOI-4 requires the draft site-specific noise attenuation measures recommended above to be incorporated into the Construction Noise Management Plan for the project. The measures must be finalized by a qualified acoustical consultant and submitted to the City for review prior to approval of construction-related permits. SCA-NOI-5 provides additional measures to respond to and track construction noise complaints during construction to allow sources of potentially disruptive construction noise to be quickly controlled or eliminated.

The proximity of the project site to sensitive receptors, and the type of construction equipment that would be used as part of the proposed project, are similar to other projects in downtown Oakland and other urban areas. Because the project site and its vicinity are part of an established, urbanized area, periodic exposure to construction-related noise and vibration are existing conditions. Implementation of the City of Oakland's SCAs will lessen the impacts of noise generated by construction to receptors in the vicinity of the project site. Therefore, with the implementation of the required SCAs, the impact of construction generated noise on nearby receptors would be reduced to a less-than-significant level.

Table 5 Reference and Calculated Noise Levels from Construction Equipment (dBA)

Equipment	Reference Noise Level at 50 Feet (dBA)	Calculated Interior Noise Level at 50 Feet (dBA) with Windows/Solid Walls
Bore/Drill Rig[b]	85	60/45
Concrete/Industrial Saw[a]	76	51/36
Crane[a]	83	58/43
Crawler Tractor[b]	84	59/44
Excavator[b]	85	60/45
Grader[a]	85	60/45
Off Highway Truck[a]	88	63/48
Paver[a]	89	64/49
Rollers[a]	74	49/34
Rubber Tired Dozer[a]	85	60/45
Rubber Tired Loader[a]	85	60/45
Scraper[a]	89	64/49
Trencher[b]	82	57/42

Sources: [a] FTA, 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.
[b] U.S. Department of Transportation, 2006. *FHWA Highway Construction Noise Handbook*. August.

Notes: Note that these noise levels do not take into account measures after the implementation of SCAs for future noise reductions.
A typical building facade with windows closed provides a noise level reduction of approximately 25 dBA, and a typical exterior wall with one layer of gypsum board on the interior and wood siding or stucco on the exterior reduces noise by about 40 dBA. Therefore, interior noise levels with windows closed were calculated by reducing exterior noise levels by 25 dBA, and interior noise levels with solid walls were calculated by reducing exterior noise levels by 40 dBA.

Groundborne Vibration (Criteria 8)

Construction activities can result in varying degrees of ground vibration, depending on the equipment, activity, and relative proximity to sensitive receptors. The vibration levels for construction equipment that could be used at the project site are summarized in Table 6. Although the table provides one vibration level for each piece of equipment, it should be noted that there is considerable variation in reported ground vibration levels from construction activities, primarily due to variation in soil characteristics. Since vibration effects are typically limited to land uses that are very close to the site, vibration levels are only calculated at 1 foot and 50 feet based on the reference levels at 25 feet (which is also shown in the Table 6). It should be noted that the project site's proximity to sensitive receptors, and the type of construction equipment that would be used as part of the proposed project, are similar to other projects in downtown Oakland and other urban areas. It is a common characteristic of urban infill projects.

Table 6 Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 Feet (in/sec)	PPV at 50 Feet (in/sec)	PPV at 1 Foot (in/sec)	RMS at 25 Feet (VdB)	RMS at 50 Feet (VdB)	RMS at 1 Foot (VdB)
Large bulldozer	0.089	0.031	11.125	87	78	129
Loaded trucks	0.076	0.027	9.500	86	77	128
Small bulldozer	0.003	0.001	0.375	58	49	100

Source: PPV and RMS vibration levels at 25 feet from the FTA (2006) *Transit Noise and Vibration Impact Assessment*.

Notes: Based on vibration levels at 25 feet, the following propagation adjustment was applied to estimate PPV vibration levels at 1foot and 50 feet assuming:

$PPV2 = PPV1 \times (D1/D2)^{1.5}$

Where: PPV1 is the reference vibration level at a specified distance.
PPV2 is the calculated vibration level.
D1 is the reference distance (in this case 25 feet).
D2 is the distance from the equipment to the receiver.

Based on vibration levels at 25 feet, the following propagation adjustment (FTA, 2006) was applied to estimate RMS vibration levels at 1foot and 50 feet assuming:

$RMS2 = RMS1 – 30 \, Log_{10} (D2/D1)$

Where: RMS1is the reference vibration level at a specified distance.
RMS2 is the calculated vibration level.
D1 is the reference distance (in this case 25 feet).
D2 is the distance from the equipment to the receiver.

Tables 7 and 8 summarize the vibration criteria to prevent disturbance of occupants and to prevent damage to structures, respectively. In this analysis, the "Infrequent Events" criterion is applied to construction equipment.

Table 7 Vibration Criteria to Prevent Disturbance – RMS (Vdb)

Land Use Category	Frequent Events [a]	Occasional Events [b]	Infrequent Events [c]
Residences and buildings where people normally sleep	72	75	80

Source: FTA, 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.

Notes: [a] More than 70 vibration events of the same kind per day or vibration generated by a long freight train.
[b] Between 30 and 70 vibration events of the same kind per day.
[c] Fewer than 30 vibration events of the same kind per day.

Table 8 Vibration Criteria to Prevent Damage to Structures

Building Category	PPV (in/sec)	RMS (VdB)
Reinforced-concrete, steel or timber (no plaster)	0.5	102
Engineered concrete and masonry (no plaster)	0.3	98
Non-engineered timber and masonry buildings	0.2	94
Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA, 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. May.

Based on the estimated construction equipment generated vibration levels in Table 6, construction-generated vibration levels may be as high as 129 RMS VdB at the adjacent receptors when the equipment is at its nearest point.

This vibration level could exceed the 80 RMS VdB Infrequent Events threshold (Table 7) and potentially disturb occupants of adjacent buildings. However, the vibration would be temporary since the locations of grading, soil compaction, and other construction activities that would require the use of construction equipment with the potential to exceed the 80 RMS VdB Infrequent Events threshold would vary over time across the site, and therefore the impacts of these activities on any given residence would not be expected to last more than a few days at a time. In addition, SCA-NOI-1 limits construction activities to the hours between 7 a.m. and 7 p.m. Monday through Friday, and limits construction with the potential to generate extreme noise (which is often correlated with the potential to generate high vibration) to the hours between 8 a.m. and 4 p.m. This restricts any impact to normal daytime hours, thereby reducing the likelihood of disturbance of residents (i.e. through interfering with sleep). For these reasons, the potential for construction generated vibration to disturb occupants of adjacent buildings is less than significant. Furthermore, construction vibration is exempt from the standard indicated in Chapter 17.120.060 of City of Oakland's Municipal Code, and therefore, the vibration generated by construction would not have the potential to exceed any regulatory standards.

Since the nearest adjacent residential and commercial buildings within 1 foot of the project site, vibration levels could exceed the 0.5 PPV in/sec threshold (Table 8) and potentially cause damage to buildings. In addition, both buildings are identified as historic structures according to a historic resource analysis prepared for a nearby project.[15]

The presence of nearby receptors, including historic buildings, and the relatively high project-generated vibration potential during construction would trigger implementation of SCA-NOI-8,

[15] Architecture+history, llc, 2015. *Historic Resource Analysis, 1700 Webster Street, Oakland, California*. May 26.

which would require preparation of a Vibration Analysis to establish pre-construction baseline conditions and threshold levels of vibration, and identify design means and methods of construction to protect adjacent historic structures or vibration-sensitive activities from being exposed to vibration that exceeds acceptable levels indicated in Table 8. Design considerations may include operating heavy-construction equipment as far away from vibration-sensitive sites as possible and not performing demolition, earth-moving, and other ground-impacting operations simultaneously. Implementation of the SCA would reduce the potential of construction-generated vibration to cause damage to adjacent buildings to a less-than-significant level.

Noise Exposure during Construction (Criteria 7)

Construction workers could be exposed to excessive noise from the heavy equipment used during construction of the proposed project (Table 5). However, noise exposure of construction workers is regulated by the California Division of Occupational Safety and Health (Cal/OSHA). Title 8, Subchapter 7, Group 15, Article 105 of the California Code of Regulations (Control of Noise Exposure) sets noise exposure limits for workers, and requires employers who have workers that may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing protectors available, and keep records of employee noise exposure measurements. The construction contractor for the proposed project would be subject to these regulations, and compliance with these Cal/OSHA regulations will ensure that the potential of construction workers to be exposed to excessive noise is less than significant.

Noise Exposure during Operation (Criteria 5 and 6)

Occupants of the completed project would be subject to the existing noise environment. The ambient noise levels at the project site range from 60 to 65 dBA Ldn.[16] This noise environment is regarded as "conditionally acceptable" community noise exposure levels for residential and business commercial (Table 2). The City of Oakland General Plan indicates that development within a "conditionally acceptable" environment requires an analysis of noise-reduction requirements, and if necessary, noise-mitigation features in the design. The implementation of the following SCA will enforce the compliance of the City of Oakland General Plan.

SCA-NOI-6 requires noise reduction measures to be incorporated into building design based upon the recommendations of a qualified acoustical engineer. The noise reduction measures would be required to reduce interior noise levels that are in compliance with this SCA and the interior noise standards in California Building Code. Sound-rated windows, exterior doors (such as balcony doors), and exterior walls are commonly used to control interior noise from exterior sources. As discussed above, an STC rating roughly equals the decibel reduction in noise volume that a wall, window, or door can provide. Given that the ambient noise environment at the

[16] City of Oakland, 2005. *Op. cit.*

project site currently ranges from about 60 to 65 dBA Ldn, the use of sound-rated windows, exterior doors, and exterior walls with STC ratings ranging from about STC 15 to about STC 20 would need to be used in order to reduce interior noise levels from exterior sources to about 45 dBA Ldn, thereby satisfying the interior noise standards for both residential and commercial spaces. The noise control measures are required to be submitted to the City of Oakland for review and approval prior to the issuance of a construction-related permit. Compliance with SCA-NOI-6 would therefore reduce the potential of future residents of the proposed development to be exposed to noise in excess of standards to a less-than-significant level.

Operational Noise (Criteria 3)

The primary noise generation from the long-term operation of the project would occur as a result of the use of mechanical heating, ventilation, and air conditioning (HVAC) systems. Other operational noise would include delivery trucks for retail components. SCA-NOI-7 would require all operational noise to comply with the performance standards of chapter 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. Therefore, with the implementation of SCA-NOI-7 the project would not violate the City of Oakland operational noise standards (Table 3) and the noise generated by the HVAC systems and delivery trucks at the project site would be less than significant.

Permanent Increases in Ambient Traffic Noise and Cumulative Noise Impact (Criteria 4)

As indicated in Significance Criteria 4, a project is considered to generate a significant increase in ambient traffic noise if it results in a 5 dBA permanent increase in noise levels in the project vicinity. A project is considered to contribute to a significant cumulative impact if (1) the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity, and (2) 3 dBA of the cumulative increase is attributable to the project.

The assessment of A.M. and P.M. Peak Period traffic volumes at four intersections surrounding the project site[17] indicates that traffic volumes increases in surrounding roadways would range from approximately 0 to 21 percent. The highest traffic volume increase of 21 percent would occur along 19th Street east of Harrison (P.M. Peak Period). The existing and existing plus project traffic volumes and predicted traffic noise for this roadway segment are summarized in Table 9 below. Traffic noise is expected to increase by about 0.8 Leq along 19th Street east of Harrison. As this is the roadway segment with the greatest predicted increase in traffic, traffic noise increase along other roadway segments would be less than 0.8 Leq. This is well below the 5 dBA significance threshold for project-generated traffic noise. Consequently, the

[17] Nelson\Nygaard Consulting Associates Inc., 2016. *Transportation Impact Analysis for 19th & Harrison Project*. July 6.

implementation of the proposed project would not result in a significant increase in traffic noise along local area roadways.

Table 9 Existing and Existing Plus Project Traffic Volumes and Predicted Traffic Noise

Roadway Segment	Existing Traffic Volume (Peak hour number of vehicles)	Existing Plus Project Traffic Volume (Peak hour number of vehicles)	Existing Traffic Noise (dBA Leq at 50 feet)	Existing Plus Project Traffic Noise (dBA Leq at 50 feet)	Estimated Increase in Noise (dBA Leq)
19th Street east of Harrison (PM Peak)	233	283	57.2	58.0	0.8

Note: Traffic noise model outputs are included in the Appendix. FHWA TNM Version 2.5 model was used for these results.

Under a cumulative scenario, which considers traffic generated by past, present, and probable future projects, including the proposed project, traffic volume increases in surrounding roadways would range from approximately 17 to 58 percent. The highest traffic volume increase of 58 percent would occur along Harrison south of 19th Street (A.M. Peak Period). The existing and cumulative traffic volumes and predicted traffic noise for this roadway segment are summarized in Table 10 below. Traffic noise is expected to increase by about 2.0 Leq. As this is the roadway segment with the greatest predicted increase in traffic, traffic noise increases along other roadway segments would be less than 2.0 Leq. This is well below the 5 dBA significance threshold for cumulative traffic noise. Consequently, the cumulative traffic noise increase along local area roadways is less-than-significant.

Table 10 Existing and Cumulative Traffic Volumes and Predicted Traffic Noise

Roadway Segment	Existing Traffic Volume (Peak hour number of vehicles)	Cumulative (including proposed project) Volume (Peak hour number of vehicles)	Existing Traffic Noise (dBA Leq at 50 feet)	Cumulative (including proposed project) Noise (dBA Leq at 50 feet)	Estimated Increase in Noise (dBA Leq)
Harrison south of 19th Street (AM Peak)	663	1,048	61.7	63.7	2.0

Note: Traffic noise model outputs are included in the Appendix. FHWA TNM Version 2.5 model was used for these results.

APPENDIX

TRAFFIC MODEL OUTPUTS

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

19th Street east of Harrison (PM Peak) Existing

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	219.0
Average automobile speed (mph):	25.0
Medium truck volume (v/h):	7.0
Average medium truck speed (mph):	25.0
Heavy truck volume (v/h):	5.0
Average heavy truck speed (mph):	25.0
Bus volume (v/h):	2.0
Average bus speed (mph):	25.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	57.2

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

19th Street east of Harrison (PM Peak) Existing+Project

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	266.0
Average automobile speed (mph):	25.0
Medium truck volume (v/h):	8.0
Average medium truck speed (mph):	25.0
Heavy truck volume (v/h):	6.0
Average heavy truck speed (mph):	25.0
Bus volume (v/h):	3.0
Average bus speed (mph):	25.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 58.0

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Harrison south of 19th Street (AM Peak) Existing

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	623.0
Average automobile speed (mph):	25.0
Medium truck volume (v/h):	20.0
Average medium truck speed (mph):	25.0
Heavy truck volume (v/h):	13.0
Average heavy truck speed (mph):	25.0
Bus volume (v/h):	7.0
Average bus speed (mph):	25.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft): 50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA): 61.7

* * * * CASE INFORMATION * * * *

* * * * Results calculated with TNM Version 2.5 * * * *

Harrison south of 19th Street (AM Peak) Cumulative+ Project

* * * * TRAFFIC VOLUME/SPEED INFORMATION * * * *

Automobile volume (v/h):	985.0
Average automobile speed (mph):	25.0
Medium truck volume (v/h):	31.0
Average medium truck speed (mph):	25.0
Heavy truck volume (v/h):	21.0
Average heavy truck speed (mph):	25.0
Bus volume (v/h):	11.0
Average bus speed (mph):	25.0
Motorcycle volume (v/h):	0.0
Average Motorcycle speed (mph):	0.0

* * * * TERRAIN SURFACE INFORMATION * * * *

Terrain surface: hard

* * * * RECEIVER INFORMATION * * * *

DESCRIPTION OF RECEIVER # 1

person

Distance from center of 12-ft wide, single lane roadway (ft):	50.0
A-weighted Hourly Equivalent Sound Level without Barrier (dBA):	63.7

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Attachment F:
Air Quality Analysis

BASELINE ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: 29 July 2016 **Job No.:** 16206-00.02426

To: Hannah Young, Urban Planning Partners, Inc.

From: Patrick Sutton, BASELINE Environmental Consulting

Subject: **Air Quality Analysis – 19th and Harrison Project**

INTRODUCTION

BASELINE Environmental Consulting has prepared this memorandum to present the results of an air quality analysis for a proposed mixed-use development at 19th and Harrison in the City of Oakland (the "project"). The purpose of this analysis was to estimate and analyze potential impacts associated with the project's emissions of criteria pollutants and toxic air contaminants (TACs) to support environmental review of the project.

CRITERIA POLLUTANT EMISSIONS

To assess potential air quality impacts related to criteria pollutants, the City of Oakland has adopted quantitative thresholds of significance for ozone precursors (reactive organic gases [ROG] and nitrogen oxides [NOx]) and particulate matter with aerodynamic resistance diameters equal to or less than 10 microns (PM10) and 2.5 microns (PM2.5). To be conservative, emissions of ROG, NOx, PM10, and PM2.5 were estimated for the maximum project development scenario.[1] The Bay Area Air Quality Management District (BAAQMD) recommends using the most current version of the California Emissions Estimator Model (CalEEMod) to estimate construction and operational emissions of pollutants for a proposed project. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data for a variety of land-use projects that can be used if site-specific information is not available. The primary input data used to estimate emissions associated with each of the project's land-use types are summarized in Table 1. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is included in the Attachment.

[1] The maximum development scenario identified by the project sponsor would include approximately 214,554 square feet of residential uses (240 residential units), 8,000 square feet of commercial/retail uses, and 90,000 square feet of parking space. The actual project proposed by the sponsor is anticipated to include 224 residential units, approximately 3,709 square feet of commercial/retail uses, and approximately 57,946 square feet of parking space. Therefore, this analysis is a conservative estimate of project air pollutant emissions.

Table 1: Summary of Land-Use Input Parameters for CalEEMod

Project Land-Use Type	CalEEMod Land-Use Type	Proposed Project Square Footage[A]
Apartments	Apartments Mid Rise	214,554
Parking Garage	Enclosed Parking with Elevator	90,000
Retail	Shopping Center	8,000

Notes: The total lot acreage = 1.02
[A] Maximum project scenario; includes 240 total dwelling units

Construction-Phase Criteria Pollutant Emissions

Project construction activities that would generate criteria pollutant emissions of concern include demolition, grading, building construction, paving, and applications of architectural coatings. The primary criteria pollutant emissions of concern during project construction activities are fugitive dust (PM10 and PM2.5) from earth-moving activities and ROG, NOx, PM10, and PM2.5 from the exhaust of off-road construction equipment and on-road vehicles. While emissions of fugitive dust PM2.5 and PM10 are a common concern, these emissions would be controlled by implementation of the dust control measures required under SCA-AIR-1. Emissions of ROG, NOx, and exhaust PM10 and PM2.5 during project construction were estimated using the CalEEMod input parameters summarized in Table 1 and the following information:

- Site preparation (i.e., vegetation removal) was not included in the analysis because the project site is devoid of vegetation.

- Approximately 2,500 tons of demolition debris from excavation of the existing parking lots and 5,000 cubic yards of soil export was assumed to calculate emissions from off-site hauling trips.

The project sponsor has committed to using best available control technologies for all off-road diesel equipment used for the project to reduce ROG, NOx, and PM emissions. Tier 4 engines have already incorporated the best available control technologies into the engine design. Therefore, the estimated emissions of criteria pollutants during project construction assumed the use of Tier 4 engines.

The project sponsor has estimated that construction will last about 565 work days (about 26 months). Based on the total emissions estimated in CalEEMod, the average daily emissions during construction were estimated over that time period and compared to the City's thresholds of significance in Table 2. The estimated unmitigated emissions for ROG, NOx, and exhaust PM2.5 and PM10 were below the applicable thresholds and, therefore, would have a less-than-significant impact on air quality standards.

Table 2: Summary of Criteria Pollutant Emissions during Project Construction

Emissions Scenario	ROG	NOx	Exhaust PM10	Exhaust PM2.5
Units	lb/day	lb/day	lb/day	lb/day
Total Project Emissions	7.7	3.5	0.04	0.04
City of Oakland's Thresholds	54	54	82	54

Notes: lb/day = pounds per day.
Source: CalEEMod (Attachment)

Operation-Phase Criteria Pollutant Emissions

Common criteria pollutant emissions of concern during the operational phase of a project include ROG, NOx, and exhaust PM10 and PM2.5: these emissions would primarily be from mobile sources (i.e., vehicle trips). Other common sources of emissions include energy use (e.g., electricity and natural gas) and area sources (e.g., consumer products, architectural coatings, and landscape maintenance equipment). Emissions during project operations were estimated using the CalEEMod input parameters summarized in Table 1 and the following assumptions regarding vehicle trip rates:

- The average weekday vehicle trip rates were adjusted for each land used based on the findings of the Transportation Impact Analysis for the proposed project.

- The average weekend vehicle trip rates for each land use that were calculated by CalEEMod using default trip generation rates from the Institute of Transportation Engineers *Trip Generation Handbook* were reduced by 43 percent in accordance with the *City of Oakland Transportation Impact Study Guidelines*.[2]

The 2013 California Building Energy Efficiency Standards (Title 24, Part 6) adopted by the City of Oakland use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the default 2008 Standards used in CalEEMod. This energy use reduction was included in the analysis to estimate unmitigated emissions of criteria pollutants for the proposed project. The City of Oakland has also adopted a Green Building Ordinance for private development projects. In accordance with the Green Building Ordinance, the proposed project must implement mandatory measures from the statewide CALGreen Code and complete a Green Building Compliance Checklist (e.g., LEED or GreenPoint Rater).[3] While implementation of the CALGreen Code could potentially result in additional reductions in energy use, these potential

[2] Nelson\Nygaard Consulting Associates Inc., 2016. *Transportation Impact Analysis for 19th & Harrison Project*. 6 July.

[3] Rating system and checklist determined by City of Oakland Planning Department based on square footage of each use.

reductions are not known at this time and therefore were not included in the analysis to estimate unmitigated emissions of criteria pollutants for the proposed project.

The estimated average annual and daily emissions during the operational phase of the project are compared to the City's thresholds of significance in Table 3. The estimated unmitigated emissions for ROG, NOx, and exhaust PM10 and PM2.5 were below the City's thresholds of significance and, therefore, would have a less-than-significant impact on air quality standards.

Table 3: Summary of Criteria Pollutant Emissions during Project Operation

Emissions Scenario	ROG	NOx	Exhaust PM10	Exhaust PM2.5	ROG	NOx	Exhaust PM10	Exhaust PM2.5
Units	ton/yr	ton/yr	ton/yr	ton/yr	lb/day	lb/day	lb/day	lb/day
Area	1.48	0.02	0.01	0.01	8.09	0.11	0.05	0.05
Energy	0.01	0.10	0.01	0.01	0.06	0.55	0.04	0.04
Mobile	0.57	1.51	0.02	0.02	3.13	8.28	0.12	0.11
Total Project Emissions	2.1	1.6	<0.1	<0.1	11.3	8.9	0.2	0.2
City of Oakland's Thresholds	10	10	15	10	54	54	82	54

Notes: ton/yr = tons per year; lb/day = pounds per day
Source: CalEEMod (Attachment)

GENERATION OF TOXIC AIR CONTAMINANTS

The BAAQMD recommends evaluating potential impacts of project TAC emissions to sensitive receptors located within 1,000 feet of a project.[4] Based on the City's thresholds, significant impacts to sensitive receptors from TAC emissions would result under project conditions resulting in an increase in cancer risk level greater than 10 in one million, an acute or chronic non-cancer hazard index (HI) greater than 1.0, or an ambient PM2.5 concentration greater than an annual average of 0.3 micrograms per cubic meter (μg/m^3). Under cumulative conditions, significant impacts to sensitive receptors include a cancer risk level greater than 100 in a million, an acute or chronic HI greater than 10.0, or an ambient PM2.5 concentration greater than an annual average of 0.8 μg/m^3.

Construction-Phase TAC Emissions

TAC emissions during construction are primarily diesel particulate matter (DPM) from heavy-duty diesel vehicles and equipment. The closest sensitive receptor to the project site are residential apartments located immediately southwest of the project site (Figure 1).

[4] BAAQMD, 2012a. *California Environmental Quality Act Air Quality Guidelines*. May.

In accordance with the Office of Environmental Health Hazard Assessment (OEHHA),[5] concentrations of PM10 were used as a basis for calculating health risks associated with DPM. The annual average concentrations of DPM and PM2.5 concentrations were estimated within 1,000 feet of the project site using the U.S. Environmental Protection Agency's Industrial Source Complex Short Term (ISCST3) air dispersion model. The input parameters and assumptions used for estimating on-site emission rates are included in the Attachment. Since the BAAQMD has not provided guidance describing how to model the dispersion of DPM emissions from a construction site, modeling was performed in accordance with guidance from the Sacramento Metropolitan Air Quality Management District.[6] The dispersion of DPM and PM2.5 emissions were modeled using multiple volume sources on the project site. It was conservatively assumed that all off-site emissions of DPM and PM2.5 from worker, vendor, and hauler trips would also occur on-site. The release height for each volume source was assumed to be 5 meters (16.4 feet), which represents the mid-range of the expected plume rise from frequently used construction equipment during daytime atmospheric conditions. Daily emissions from construction equipment were assumed to occur over an 8-hour period between 8 AM and 4 PM between Monday and Friday.

A grid of receptors spaced 10 meters (32.8 feet) apart with receptor heights of 6 meters (19.7 feet) was superimposed over sensitive receptor locations to represent people living on the second story of nearby apartment buildings. The ISCST3 model input parameters included one year of BAAQMD meteorological data from the Oakland STP station located about 2.2 miles northwest of the project site. The input parameters and results of the ISCST3 model are included in the Attachment.

In accordance with guidance from the BAAQMD[7] and OEHHA,[8] a health risk assessment (HRA) was conducted to calculate the incremental increase in cancer risk and chronic HI to sensitive receptors from on-site DPM emissions during construction. The acute HI for DPM was not calculated because an acute reference exposure level has not been approved by OEHHA and the California Air Resources Board (CARB), and the BAAQMD does not recommend analysis of acute non-cancer health hazards from construction activity. The annual average concentration

[5] OEHHA, 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. February.
[6] Sacramento Metropolitan Air Quality Management District, 2009. *Guide to Air Quality Assessment in Sacramento County*. Revised June 2015.
[7] BAAQMD, 2011. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May.
[8] OEHHA, 2015. *Op. cit*.

of DPM at the maximally exposed individual resident (MEIR)[9] was used to conservatively assess potential health risks to nearby sensitive receptors (Figure 1).

The incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a child exposed to DPM at the MEIR location beginning from the third trimester of pregnancy until about the age of 2. This exposure scenario represents the most sensitive individual who could be exposed to adverse air quality conditions in the vicinity of the project site. It was conservatively assumed that the child would be continuously exposed to annual average concentrations of DPM over the entire duration of project construction (about 2.15 years). The input parameters and results of the HRA are included in the Attachment.

Estimates of the health risks posed by the project to the MEIR from on-site construction DPM and total increase in exhaust PM2.5 concentration are summarized and compared to the City's thresholds in Table 4. The estimated excess cancer risk and chronic HI for DPM and annual average PM2.5 concentration from unmitigated construction emissions were below the City's thresholds. Therefore, the project's emissions of DPM and PM2.5 during construction could have a less-than-significant impact on nearby sensitive receptors.

Table 4: Summary of Health Risks to MEIR from TAC Emissions during Project Construction

	DPM		Exhaust $PM_{2.5}$
Emissions Scenario	Cancer Risk (per million)	Chronic Hazard Index	Annual Average Concentration ($\mu g/m^3$)
MEIR from Construction Emissions	1.8	<0.01	0.01
City of Oakland's Thresholds	10	1.0	0.3

Notes: $\mu g/m^3$ = micrograms per cubic meter
Source: See Attachment.

Operation-Phase TAC Emissions

No stationary sources of TAC emissions (e.g., backup generator) are proposed for the project. Therefore, the project would have a less-than-significant impact on nearby sensitive receptors.

Cumulative TAC Emissions

To evaluate the cumulative health risks to nearby sensitive receptors from the project's TAC emissions during construction, the BAAQMD recommends using their online screening tools to evaluate existing TAC emissions from stationary and mobile sources within 1,000 feet of the project site. The screening tools provide conservative estimates of how much existing TAC

[9] A resident that may be located at the receptor location where the highest exposure to TACs emitted from a given source or project is predicted.

sources would contribute to cancer risk, HI, and/or fine particulate matter (PM2.5) concentrations in a community. The individual health risks associated with each source are summed to find the cumulative impact at the location of the MEIR.

Based on the BAAQMD's *Stationary Source Screening Analysis Tool*,[10] twelve existing stationary sources of TAC emissions were identified within 1,000 feet of the MEIR (Table 5 and Figure 1). Preliminary health risk screening values at the MEIR from the stationary sources were determined using the BAAQMD's *Stationary Source Screening Analysis Tool*. The BAAQMD's *Diesel Internal Combustion Engine Distance Multiplier Tool* was used to refine the screening values associated with seven of the stationary sources that operate diesel engines to represent the attenuated health risks that can be expected with increasing distance from the source of emissions. The screening values from three of the stationary sources were also adjusted based on site-specific information provided by BAAQMD (BAAQMD Plants 13494, 20248, and 19997 on Table 5 and Figure 1). Three of the stationary sources have been closed and pose no health risk to the MEIR (BAAQMD Plants G9132, 18179, and G11348 on Figure 1).

The BAAQMD recommends estimating health risk screening values for major roadways with an average annual daily traffic (AADT) count volume greater than 10,000 vehicles per day.[11] Based on review of 2015 AADT volumes estimated by Kalibrate Technologies for roadways in Alameda County, one major roadway (Harrison Street) was identified within 1,000 feet of the MEIR (Table 5 and Figure 1). To be conservative, four additional major roadways were identified within 1,000 feet of the MEIR based on 2004 AADT volumes reported by the California Environmental Health Tracking Program (Table 5 and Figure 1). The health risk screening values at the MEIR from nearby major roadways were estimated using the BAAQMD's *Roadway Screening Analysis Calculator*.[12]

In addition to existing TAC sources, there are six proposed redevelopment projects within 1,000 feet of the MEIR that are either under construction or could be constructed in the near future, and future operations could potentially include maintenance and testing of a backup diesel generator. The BAAQMD does not issue permits for stationary sources that result in an excess cancer risk greater than 10 in one million or a chronic HI greater than 1.0.[13] Conservatively assuming each proposed generator would result in a maximum excess cancer risk of 10 in one million due to emissions of DPM, the BAAQMD's *Risk and Hazards Emissions Screening Calculator (Beta Version)*[14] was used to estimate the equivalent screening-level health risks

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[10] BAAQMD, 2012b. *Stationary Source Screening Analysis Tool*. 30 May.
[11] BAAQMD, 2012c. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May.
[12] BAAQMD, 2015. *Roadway Screening Analysis Calculator*. 16 April.
[13] BAAQMD's New Source Review for TACs (Regulation 2, Rule 5).
[14] BAAQMD, 2016. *Risk and Hazards Emissions Screening Calculator (Beta Version)*.

values for chronic HI and annual average PM2.5 concentrations. The health risk screening values were then refined based on the distance from each source to the MEIR using the BAAQMD's *Diesel Internal Combustion Engine Distance Multiplier Tool* (Table 5 and Figure 1).

Estimates of the cumulative health risks from TAC emissions posed by the project, existing sources, and reasonably foreseeable future sources to the MEIR are summarized and compared to the City's cumulative thresholds in Table 5. The estimated excess cancer risk and chronic HI from TAC emissions and annual average PM2.5 concentration were below the City's cumulative threshold. Therefore, the project's cumulative impact on nearby sensitive receptors from TAC emissions during construction would be less than significant.

Table 5: Summary of Cumulative Health Risks to MEIR

Source	Source Type	Distance from MEIR (feet)	Cancer Risk (per million)	Chronic HI	PM2.5 Concentration (µg/m^3)
Project Construction Emissions	Diesel Engine	0	2.7	0.002	0.008
Future Backup Generators					
1700 Webster Street	Diesel Engine	100	7.30	0.003	0.013
1510 Webster Street	Diesel Engine	660	0.80	<0.001	0.001
1433 Webster Street	Diesel Engine	940	0.40	<0.001	0.001
222 19th Street	Diesel Engine	780	0.70	<0.001	0.001
1640 Broadway	Diesel Engine	860	0.50	<0.001	0.001
1900 Broadway	Diesel Engine	830	0.60	<0.001	0.001
Existing Stationary Sources					
Pacific Gas and Electric (Plant 14173)	Diesel Engine	520	3.52	0.001	0.006
AC Transit General (Plant 14532)	Diesel Engine	575	4.11	0.002	0.007
Pacific Bell (Plant 13494)	Diesel Engine	740	4.00	0.005	0.007
CIM Group Properties (Plant 20248)	Diesel Engine	420	2.56	0.001	0.003
Verizon Business (Plant 14711)	Diesel Engine	680	1.57	0.001	<0.001
AT&T Corp (Plant 18668)	Diesel Engine	915	2.48	0.001	0.001
Oakland Property, LLC (Plant 19997)	Diesel Engine	740	0.66	<0.001	0.001
Le Magic Cleaners (Plant 10397)	Dry Cleaner	450	10.10	0.027	<0.001
Mark Borsuk Esq (Plant 13071)	Not Reported	960	<0.01	<0.001	<0.001
Mobile Sources					
Broadway (14,400 AADT)	Major Roadway	875	1.30	NA	0.026
Franklin Street (15,500 AADT)	Major Roadway	500	2.40	NA	0.047
Webster Street (19,800 AADT)	Major Roadway	110	9.43	NA	0.185
Harrison Street (20,425 AADT)	Major Roadway	230	3.64	NA	0.063
Thomas L. Berkeley Way (16,600 AADT)	Major Roadway	810	0.85	NA	0.014
Cumulative Health Risks			59.6	0.04	0.39
City of Oakland's Cumulative Thresholds			100	10.0	0.8

Notes: µg/m^3 = micrograms per cubic meter; NA = not available.
The following three stationary sources identified within 1,000 feet of the MEIR have been closed: BAAQMD Plants G9132, 18179, and G11348 (Figure 1).

EXPOSURE TO TOXIC CONTAMINANTS

Future residents on the project site could be exposed to existing and reasonably foreseeable future sources of TAC emissions. While CEQA does not require the analysis or mitigation of potential effects the existing environment may have on a project (with certain exceptions), an analysis of the potential effects existing TAC sources may have on the future receptors at the project site was performed to provide information to the public and decision-makers. The City of Oakland has adopted cumulative thresholds of significance for evaluating potential impacts to future receptors.

The approach for assessing the cumulative health risks to future sensitive receptors on the project site was the same as the methods described above to determine potential health risks to existing sensitive receptors. Sources of TAC emissions identified within 1,000 feet of the project site included twelve existing stationary sources, five major roadways, and six proposed redevelopment projects that could potentially operate backup diesel generators in the foreseeable future (Table 6 and Figure 1).

As shown in Table 6, the screening analysis, which is based on conservative assumptions, indicates that the cumulative excess cancer risk, chronic HI, and PM2.5 concentrations at the proposed project from existing and reasonably foreseeable future sources of TACs would be less than the City's cumulative thresholds. Therefore, the proposed project would not be required to implement health risk reduction measures described under SCA-AIR-2 and the potential health impacts to new project receptors would be less than significant.

Table 6: Summary of Cumulative Health Risks to New Project Receptors

Source	Source Type	Distance from Project Site (feet)	Cancer Risk (per million)	Chronic HI	PM2.5 Concentration ($\mu g/m^3$)
Future Backup Generators					
1700 Webster Street	Diesel Engine	125	6.40	0.002	0.012
1510 Webster Street	Diesel Engine	670	0.80	<0.001	0.001
1433 Webster Street	Diesel Engine	950	0.40	<0.001	0.001
222 19th Street	Diesel Engine	530	1.00	<0.001	0.002
1640 Broadway	Diesel Engine	775	0.70	<0.001	0.001
1900 Broadway	Diesel Engine	710	0.80	<0.001	0.001
Existing Stationary Sources					
Pacific Gas and Electric (Plant 14173)	Diesel Engine	400	4.70	0.002	0.008
AC Transit General (Plant 14532)	Diesel Engine	540	4.11	0.002	0.007
Pacific Bell (Plant 13494)	Diesel Engine	685	4.58	0.005	0.008
CIM Group Properties (Plant 20248)	Diesel Engine	160	9.28	0.003	0.012
Verizon Business (Plant 14711)	Diesel Engine	470	2.75	0.001	0.001
AT&T Corp (Plant 18668)	Diesel Engine	750	3.47	0.001	0.001
Oakland Property, LLC (Plant 19997)	Diesel Engine	520	1.13	<0.001	0.001
Le Magic Cleaners (Plant 10397)	Dry Cleaner	385	10.10	0.027	<0.001
Mark Borsuk Esq (Plant 13071)	Not Reported	990	<0.01	<0.001	<0.001
Mobile Sources					
Broadway (14,400 AADT)	Major Roadway	800	1.42	NA	0.028
Franklin Street (15,500 AADT)	Major Roadway	410	2.73	NA	0.054
Webster Street (19,800 AADT)	Major Roadway	20	19.21	NA	0.377
Harrison Street (32,400 AADT)	Major Roadway	20	13.43	NA	0.240
Thomas L. Berkeley Way (16,600 AADT)	Major Roadway	630	1.11	NA	0.019
Cumulative Health Risks			88.1	0.04	0.77
City of Oakland's Cumulative Thresholds			100	10.0	0.8

Notes: $\mu g/m^3$ = micrograms per cubic meter; NA = not available.
The following three stationary sources identified within 1,000 feet of the project have been closed: BAAQMD Plants G9132, 18179, and G11348 (Figure 1).

OTHER AIR QUALITY IMPACTS OF POTENTIAL CONCERN

Carbon Monoxide

The occurrence of localized carbon monoxide (CO) concentrations, also known as "hotspots," can impact sensitive receptors in local communities. The source of local CO emissions is often associated with heavy traffic congestion, which most frequently occur at signalized intersections of high-volume roadways. The 2011 *CEQA Air Quality Guidelines* provide screening criteria to conservatively assess if a proposed project could result in CO emissions that would cause local CO concentrations to exceed the City of Oakland's thresholds of significance. The proposed project would result in a less-than-significant impact to localized CO concentrations if the following screening criteria are met:

- The project is consistent with an applicable Congestion Management Program (CMP) established by the County Congestion Management Agency for designated roads or highways, regional transportation plans, and local congestion management agency plans.

- 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 Alameda County Transportation Commission (ACTC) serves as the County Congestion Management Agency. The ACTC updates the County's CMP every two years to assess, monitor, and improve the performance of the County's multimodal transportation system and strengthen the integration of transportation and land use planning. The current 2015 CMP requires an analysis of any project that is expected to generate more than 100 weekday PM peak-hour vehicle trips. The proposed project is expected to generate 174 weekday PM peak-hour trips. Although the proposed project would generate more than 100 weekday PM peak-hour trips, the amount of vehicles generated by the proposed project that would likely (if at all) traverse CMP-designated roadways (e.g., all highways and local streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road) would not be considerable or measureable. For example, about 5 percent of project-generated traffic may be added along portions of the Webster/Posey tubes; however, this equates to about 5 weekday PM peak-hour trips, which would not result in a substantial contribution to existing traffic levels and such an increase would be within the daily fluctuation in traffic. Similarly, about 20% of project-generated may be added along portions of Interstate 880; however, such an increase equates to about 30 vehicle trips and would not be considerable relative to current freeway traffic volumes. In addition, according to the ACTC 2015 CMP, none of CMP-designated roadways near the project site or that would experience any measurable increase in traffic volumes from the propose project are operated at unacceptable service levels. Based on these findings, the proposed project is consistent with the current CMP.[15]

The intersection of Harrison Street and Thomas Berkeley Way northeast of the project site is the most heavily congested intersection reported in the project vicinity with a peak-hour traffic volume of 1,599 vehicles.[16] Therefore, additional traffic from the project (174 or less trips per hour) would not increase traffic volumes at the intersection to more than 44,000 vehicles per hour over the lifetime of the project. Furthermore, vertical and/or horizontal mixing is not substantially limited at intersections near the project site (e.g., no tunnels, parking garages, bridge underpasses, natural or urban street canyons, or below-grade roadways). Since the project meets the BAAQMD screening criteria, the project would have a less-than-significant air quality impact on nearby sensitive receptors related to local CO concentrations.

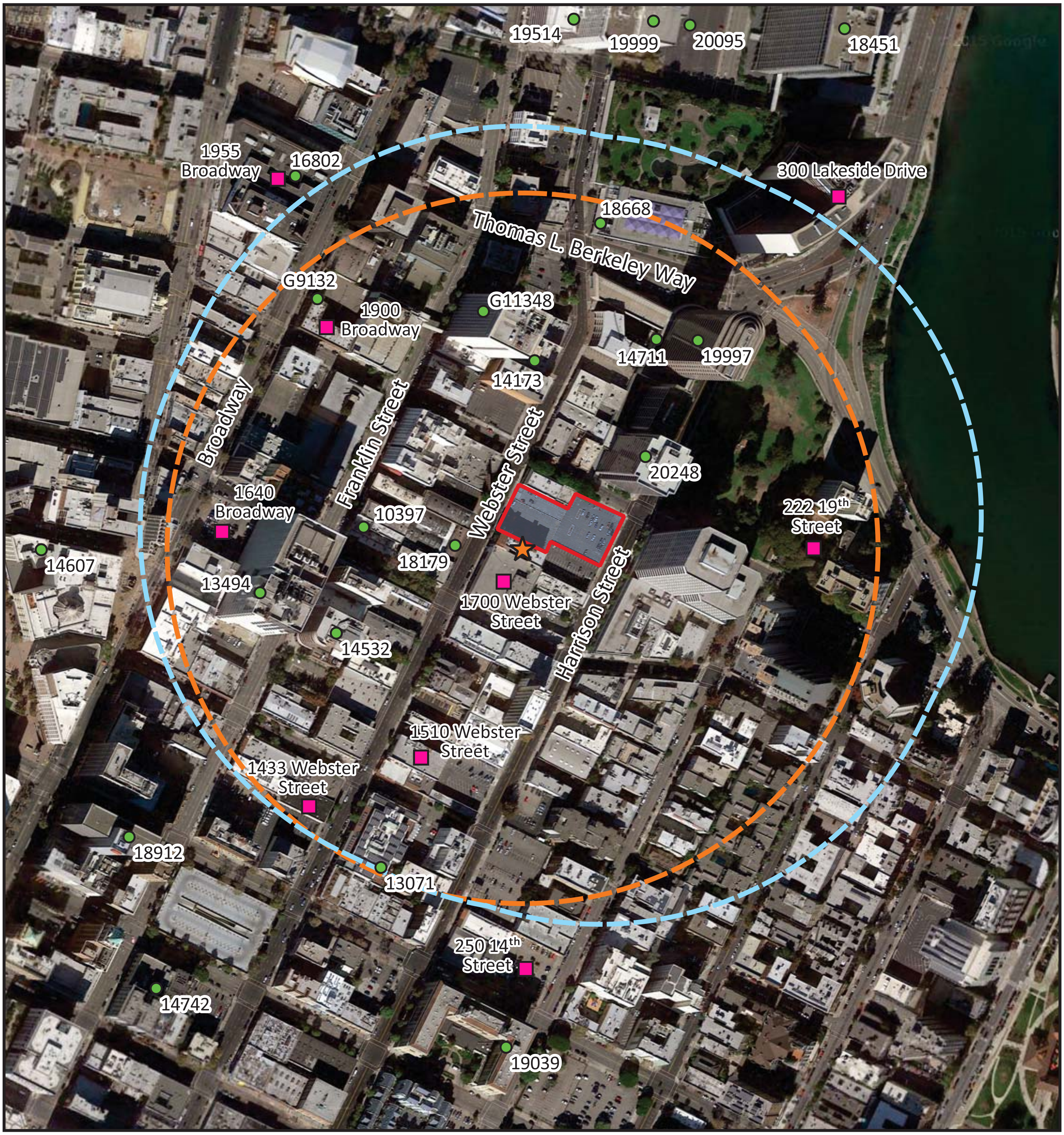
Odors

Typical odor sources are generally associated with municipal, industrial, or agricultural land uses, such as wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of receptors. As a mixed-use development, the project would not be expected to generate significant odors. Land uses surrounding the project site include mixed residential and commercial land uses, which would also not be expected to generate significant odors. Therefore, project impacts related to odors would be less than significant.

[15] Nelson\Nygaard Consulting Associates Inc., 2016. *Op. cit*.
[16] Nelson\Nygaard Consulting Associates Inc., 2016. *Op. cit*.

Existing TAC Sources near the Project Site and MEIR

Figure 1



Proposed Project Site
1,000-Foot Buffer around Project Site
1,000-Foot Buffer around MEIR
Existing Stationary Source (with BAAQMD Plant ID)[1]
Future Redevelopment Project[2]
MEIR

Base: Google Earth Pro, 2016.
Note: BAAQMD = Bay Area Air Quality Management District
MEIR = maximally exposed individual resident
[1] The location of existing stationary sources reported by BAAQMD adjusted according to the street address.
[2] Future redevelopment projects (based on the City of Oakland's Major Project List as of April 2016) identified within 1,000 feet of the proposed project are assumed to require backup diesel generators.

0 400 Feet N

BASELINE ENVIRONMENTAL CONSULTING

19th and Harrison Oakland

16206-00.02426 Figure 1 07/01/16

ATTACHMENT

MODEL INPUT PARAMETERS AND RESULTS

19th and Harrison

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	90.00	1000sqft	0.00	90,000.00	0
Apartments Mid Rise	240.00	Dwelling Unit	1.02	214,554.00	686
Regional Shopping Center	8.00	1000sqft	0.00	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	427	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor changed to the 2013 emission factor reported in PG&E's (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers

Land Use - Lot acreage and building square footage based on maximum construction scenario.
Non-residential acreages zeroed out since the project is a mixed-use development located on the same footprint.

Construction Phase - No site preparation included because the project site is devoid of vegetation.

Demolition - Based on the proposed project description, 2,500 tons of debris from excavation of parking lots will be hauled offsite.

Grading - Based on the proposed project description, 5,000 cubic yards of excavated soil will be hauled offsite from excavation.

Architectural Coating -

Vehicle Trips - Weekday trip rate based on Fehr & Peers (2016). Weekend ITE trip rates reduced by 43% in accordance with the City of Oakland Transportation Impact Study Guidelines for development in an urban environment that is within 0.25 miles of a BART station.

Woodstoves - No woodstoves or fireplaces.

Energy Use - CO2 intensity factor changed to the 2013 emission factor reported in PG&E's (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Water And Wastewater - EBMUD would service the proposed project and applies 100 percent aerobic process and 100 percent cogeneration.

Construction Off-road Equipment Mitigation - Project sponser has comitted to use of best availabel control technologies (Tier 4 equivalent emissions). These emission reductions are considered part of the project's unmitigated emissions.

Energy Mitigation - Current 2013 Title 24 energy standards exceed 2008 Title 24 energy standards by 25%. These emission reductions are considered part of the project's unmitigated emissions.

Water Mitigation - CALGreen Code mandatory requirement. These emission reductions are considered part of the project's unmitigated emissions.

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFireplaces	NumberGas	132.00	0.00
tblFireplaces	NumberNoFireplace	74.40	0.00
tblFireplaces	NumberWood	33.60	0.00
tblGrading	MaterialExported	0.00	5,000.00
tblLandUse	LandUseSquareFeet	240,000.00	214,554.00
tblLandUse	LotAcreage	2.07	0.00
tblLandUse	LotAcreage	6.32	1.02
tblLandUse	LotAcreage	0.18	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	7.16	4.08

tblVehicleTrips	ST_TR	49.97	28.48
tblVehicleTrips	SU_TR	6.07	3.46
tblVehicleTrips	SU_TR	25.24	14.39
tblVehicleTrips	WD_TR	6.59	3.74
tblVehicleTrips	WD_TR	42.94	27.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	1.20	0.00
tblWoodstoves	NumberNoncatalytic	1.20	0.00

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					
2017	2.4855	2.8955	3.4564	6.2400e-003	0.2686	0.1539	0.4225	0.0714	0.1474	0.2188	0.0000	508.9491	508.9491	0.0573	0.0000	510.1532
Total	**2.4855**	**2.8955**	**3.4564**	**6.2400e-003**	**0.2686**	**0.1539**	**0.4225**	**0.0714**	**0.1474**	**0.2188**	**0.0000**	**508.9491**	**508.9491**	**0.0573**	**0.0000**	**510.1532**

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					
2017	2.1848	0.9964	3.2671	6.2400e-003	0.2686	0.0122	0.2808	0.0714	0.0115	0.0829	0.0000	508.9488	508.9488	0.0573	0.0000	510.1529
Total	**2.1848**	**0.9964**	**3.2671**	**6.2400e-003**	**0.2686**	**0.0122**	**0.2808**	**0.0714**	**0.0115**	**0.0829**	**0.0000**	**508.9488**	**508.9488**	**0.0573**	**0.0000**	**510.1529**

	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**	**N20**	**CO2e**
Percent Reduction	**12.10**	**65.59**	**5.48**	**0.00**	**0.00**	**92.07**	**33.54**	**0.00**	**92.19**	**62.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Energy	0.0117	0.0998	0.0433	6.4000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	418.9754	418.9754	0.0228	6.3800e-003	421.4331
Mobile	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Waste						0.0000	0.0000		0.0000	0.0000	24.1153	0.0000	24.1153	1.4252	0.0000	54.0440
Water						0.0000	0.0000		0.0000	0.0000	5.7420	22.3536	28.0957	0.0213	0.0128	32.5109
Total	**2.0606**	**1.6316**	**7.8509**	**0.0143**	**0.8853**	**0.0403**	**0.9256**	**0.2379**	**0.0385**	**0.2765**	**29.8574**	**1,413.8855**	**1,443.7429**	**1.5059**	**0.0192**	**1,481.3135**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Energy	9.2900e-003	0.0795	0.0345	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	373.7407	373.7407	0.0209	5.6500e-003	375.9296
Mobile	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Waste						0.0000	0.0000		0.0000	0.0000	24.1153	0.0000	24.1153	1.4252	0.0000	54.0440
Water						0.0000	0.0000		0.0000	0.0000	4.5936	20.5361	25.1297	0.0172	0.0103	28.6773
Total	**2.0582**	**1.6113**	**7.8421**	**0.0142**	**0.8853**	**0.0387**	**0.9239**	**0.2379**	**0.0369**	**0.2748**	**28.7090**	**1,366.833 3**	**1,395.542 3**	**1.4999**	**0.0159**	**1,431.976 5**

	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	N20	CO2e
Percent Reduction	**0.12**	**1.24**	**0.11**	**0.91**	**0.00**	**4.07**	**0.18**	**0.00**	**4.26**	**0.59**	**3.85**	**3.33**	**3.34**	**0.40**	**16.94**	**3.33**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/2/2017	5	4	
3	Building Construction	Building Construction	2/3/2017	11/9/2017	5	200	
4	Paving	Paving	11/10/2017	11/23/2017	5	10	
5	Architectural Coating	Architectural Coating	11/24/2017	12/7/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 434,472; Residential Outdoor: 144,824; Non-Residential Indoor: 147,000; Non-Residential Outdoor: 49,000 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	247.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	625.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	213.00	42.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Demolition - 2017

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					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4126
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**0.0268**	**0.0161**	**0.0428**	**4.0500e-003**	**0.0150**	**0.0191**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4126**

3.2 Demolition - 2017

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	2.6400e-003	0.0332	0.0294	9.0000e-005	2.0800e-003	4.3000e-004	2.5100e-003	5.7000e-004	3.9000e-004	9.7000e-004	0.0000	8.3763	8.3763	6.0000e-005	0.0000	8.3775
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.3100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0324	1.0324	6.0000e-005	0.0000	1.0336
Total	**3.0800e-003**	**0.0339**	**0.0357**	**1.0000e-004**	**3.2600e-003**	**4.4000e-004**	**3.7000e-003**	**8.8000e-004**	**4.0000e-004**	**1.2900e-003**	**0.0000**	**9.4087**	**9.4087**	**1.2000e-004**	**0.0000**	**9.4112**

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					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0123	0.1484	2.4000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4125
Total	**2.8400e-003**	**0.0123**	**0.1484**	**2.4000e-004**	**0.0268**	**3.8000e-004**	**0.0271**	**4.0500e-003**	**3.8000e-004**	**4.4300e-003**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4125**

3.2 Demolition - 2017

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	2.6400e-003	0.0332	0.0294	9.0000e-005	2.0800e-003	4.3000e-004	2.5100e-003	5.7000e-004	3.9000e-004	9.7000e-004	0.0000	8.3763	8.3763	6.0000e-005	0.0000	8.3775
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.3100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0324	1.0324	6.0000e-005	0.0000	1.0336
Total	**3.0800e-003**	**0.0339**	**0.0357**	**1.0000e-004**	**3.2600e-003**	**4.4000e-004**	**3.7000e-003**	**8.8000e-004**	**4.0000e-004**	**1.2900e-003**	**0.0000**	**9.4087**	**9.4087**	**1.2000e-004**	**0.0000**	**9.4112**

3.3 Grading - 2017

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					0.0101	0.0000	0.0101	5.0900e-003	0.0000	5.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**0.0101**	**2.1300e-003**	**0.0122**	**5.0900e-003**	**1.9600e-003**	**7.0500e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

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	6.6800e-003	0.0841	0.0745	2.4000e-004	5.2700e-003	1.0800e-003	6.3600e-003	1.4500e-003	1.0000e-003	2.4400e-003	0.0000	21.1950	21.1950	1.5000e-004	0.0000	21.1982
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1271	0.1271	1.0000e-005	0.0000	0.1272
Total	**6.7300e-003**	**0.0841**	**0.0752**	**2.4000e-004**	**5.4200e-003**	**1.0800e-003**	**6.5100e-003**	**1.4900e-003**	**1.0000e-003**	**2.4800e-003**	**0.0000**	**21.3221**	**21.3221**	**1.6000e-004**	**0.0000**	**21.3255**

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					0.0101	0.0000	0.0101	5.0900e-003	0.0000	5.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	1.4800e-003	0.0170	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.4000e-004**	**1.4800e-003**	**0.0170**	**3.0000e-005**	**0.0101**	**5.0000e-005**	**0.0102**	**5.0900e-003**	**5.0000e-005**	**5.1400e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

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	6.6800e-003	0.0841	0.0745	2.4000e-004	5.2700e-003	1.0800e-003	6.3600e-003	1.4500e-003	1.0000e-003	2.4400e-003	0.0000	21.1950	21.1950	1.5000e-004	0.0000	21.1982
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1271	0.1271	1.0000e-005	0.0000	0.1272
Total	**6.7300e-003**	**0.0841**	**0.0752**	**2.4000e-004**	**5.4200e-003**	**1.0800e-003**	**6.5100e-003**	**1.4900e-003**	**1.0000e-003**	**2.4800e-003**	**0.0000**	**21.3221**	**21.3221**	**1.6000e-004**	**0.0000**	**21.3255**

3.4 Building Construction - 2017

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	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5473	184.5473	0.0387	0.0000	185.3605
Total	**0.2955**	**1.9109**	**1.4311**	**2.2000e-003**		**0.1226**	**0.1226**		**0.1182**	**0.1182**	**0.0000**	**184.5473**	**184.5473**	**0.0387**	**0.0000**	**185.3605**

3.4 Building Construction - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.3805	0.5771	1.0100e-003	0.0272	5.5300e-003	0.0327	7.8000e-003	5.0900e-003	0.0129	0.0000	89.9909	89.9909	7.0000e-004	0.0000	90.0056
Worker	0.0721	0.1079	1.0341	2.3100e-003	0.1933	1.5700e-003	0.1949	0.0514	1.4500e-003	0.0529	0.0000	169.1619	169.1619	9.0900e-003	0.0000	169.3527
Total	**0.1194**	**0.4884**	**1.6112**	**3.3200e-003**	**0.2205**	**7.1000e-003**	**0.2276**	**0.0592**	**6.5400e-003**	**0.0658**	**0.0000**	**259.1527**	**259.1527**	**9.7900e-003**	**0.0000**	**259.3583**

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	0.0292	0.3707	1.3082	2.2000e-003		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	184.5471	184.5471	0.0387	0.0000	185.3603
Total	**0.0292**	**0.3707**	**1.3082**	**2.2000e-003**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**184.5471**	**184.5471**	**0.0387**	**0.0000**	**185.3603**

3.4 Building Construction - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.3805	0.5771	1.0100e-003	0.0272	5.5300e-003	0.0327	7.8000e-003	5.0900e-003	0.0129	0.0000	89.9909	89.9909	7.0000e-004	0.0000	90.0056
Worker	0.0721	0.1079	1.0341	2.3100e-003	0.1933	1.5700e-003	0.1949	0.0514	1.4500e-003	0.0529	0.0000	169.1619	169.1619	9.0900e-003	0.0000	169.3527
Total	**0.1194**	**0.4884**	**1.6112**	**3.3200e-003**	**0.2205**	**7.1000e-003**	**0.2276**	**0.0592**	**6.5400e-003**	**0.0658**	**0.0000**	**259.1527**	**259.1527**	**9.7900e-003**	**0.0000**	**259.3583**

3.5 Paving - 2017

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	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9300e-003**	**0.0605**	**0.0452**	**7.0000e-005**		**3.6700e-003**	**3.6700e-003**		**3.3800e-003**	**3.3800e-003**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.1600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5162	0.5162	3.0000e-005	0.0000	0.5168
Total	**2.2000e-004**	**3.3000e-004**	**3.1600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5162**	**0.5162**	**3.0000e-005**	**0.0000**	**0.5168**

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	7.9000e-004	3.4100e-003	0.0485	7.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9000e-004**	**3.4100e-003**	**0.0485**	**7.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.1600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5162	0.5162	3.0000e-005	0.0000	0.5168
Total	**2.2000e-004**	**3.3000e-004**	**3.1600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5162**	**0.5162**	**3.0000e-005**	**0.0000**	**0.5168**

3.6 Architectural Coating - 2017

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	2.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**2.0230**	**0.0109**	**9.3400e-003**	**1.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	1.0900e-003	0.0104	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7075	1.7075	9.0000e-005	0.0000	1.7094
Total	**7.3000e-004**	**1.0900e-003**	**0.0104**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.7075**	**1.7075**	**9.0000e-005**	**0.0000**	**1.7094**

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	2.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**2.0215**	**6.4000e-004**	**9.1600e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	1.0900e-003	0.0104	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7075	1.7075	9.0000e-005	0.0000	1.7094
Total	**7.3000e-004**	**1.0900e-003**	**0.0104**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.7075**	**1.7075**	**9.0000e-005**	**0.0000**	**1.7094**

4.0 Operational Detail - Mobile

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	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Unmitigated	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	898.32	979.49	830.38	2,009,596	2,009,596
Regional Shopping Center	216.60	227.86	115.09	357,163	357,163
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,114.92	1,207.35	945.47	2,366,759	2,366,759

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.543091	0.062201	0.166716	0.110184	0.030625	0.004564	0.019041	0.050825	0.001789	0.003661	0.005684	0.000199	0.001418

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

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						0.0000	0.0000		0.0000	0.0000	0.0000	281.7639	281.7639	0.0191	3.9600e-003	283.3931
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	303.5345	303.5345	0.0206	4.2700e-003	305.2896
NaturalGas Mitigated	9.2900e-003	0.0795	0.0345	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	91.9768	91.9768	1.7600e-003	1.6900e-003	92.5366
NaturalGas Unmitigated	0.0117	0.0998	0.0433	6.4000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	115.4409	115.4409	2.2100e-003	2.1200e-003	116.1435

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/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.12488e+006	0.0115	0.0979	0.0417	6.2000e-004		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	113.3917	113.3917	2.1700e-003	2.0800e-003	114.0818
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	38400	2.1000e-004	1.8800e-003	1.5800e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0492	2.0492	4.0000e-005	4.0000e-005	2.0616
Total		**0.0117**	**0.0998**	**0.0432**	**6.3000e-004**		**8.0600e-003**	**8.0600e-003**		**8.0600e-003**	**8.0600e-003**	**0.0000**	**115.4409**	**115.4409**	**2.2100e-003**	**2.1200e-003**	**116.1435**

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/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	30200	1.6000e-004	1.4800e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6116	1.6116	3.0000e-005	3.0000e-005	1.6214
Apartments Mid Rise	1.69338e+006	9.1300e-003	0.0780	0.0332	5.0000e-004		6.3100e-003	6.3100e-003		6.3100e-003	6.3100e-003	0.0000	90.3652	90.3652	1.7300e-003	1.6600e-003	90.9152
Total		**9.2900e-003**	**0.0795**	**0.0344**	**5.1000e-004**		**6.4200e-003**	**6.4200e-003**		**6.4200e-003**	**6.4200e-003**	**0.0000**	**91.9768**	**91.9768**	**1.7600e-003**	**1.6900e-003**	**92.5366**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	867684	168.0565	0.0114	2.3600e-003	169.0282
Enclosed Parking with Elevator	606600	117.4887	7.9800e-003	1.6500e-003	118.1680
Regional Shopping Center	92880	17.9894	1.2200e-003	2.5000e-004	18.0934
Total		**303.5345**	**0.0206**	**4.2600e-003**	**305.2896**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	848961	164.4301	0.0112	2.3100e-003	165.3809
Enclosed Parking with Elevator	518400	100.4058	6.8200e-003	1.4100e-003	100.9863
Regional Shopping Center	87400	16.9280	1.1500e-003	2.4000e-004	17.0259
Total		**281.7639**	**0.0191**	**3.9600e-003**	**283.3931**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Unmitigated	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724

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	0.2021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0545	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Total	**1.4773**	**0.0207**	**1.7889**	**9.0000e-005**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**	**0.0000**	**2.9127**	**2.9127**	**2.8400e-003**	**0.0000**	**2.9724**

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	0.2021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0545	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Total	**1.4773**	**0.0207**	**1.7889**	**9.0000e-005**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**	**0.0000**	**2.9127**	**2.9127**	**2.8400e-003**	**0.0000**	**2.9724**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.1297	0.0172	0.0103	28.6773
Unmitigated	28.0957	0.0213	0.0128	32.5109

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.637 / 9.85809	27.0766	0.0205	0.0123	31.3307
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.59258 / 0.363194	1.0191	7.8000e-004	4.7000e-004	1.1802
Total		**28.0957**	**0.0213**	**0.0128**	**32.5109**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	12.5096 / 9.85809	24.2190	0.0166	9.9000e-003	27.6370
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.474064 / 0.363194	0.9108	6.3000e-004	3.8000e-004	1.0403
Total		**25.1297**	**0.0172**	**0.0103**	**28.6773**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.1153	1.4252	0.0000	54.0440
Unmitigated	24.1153	1.4252	0.0000	54.0440

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	110.4	22.4102	1.3244	0.0000	50.2227
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.4	1.7051	0.1008	0.0000	3.8213
Total		**24.1153**	**1.4252**	**0.0000**	**54.0440**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	110.4	22.4102	1.3244	0.0000	50.2227
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.4	1.7051	0.1008	0.0000	3.8213
Total		**24.1153**	**1.4252**	**0.0000**	**54.0440**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Summary of ISCST3 and Health Risk Assessment Parameters and Results for DPM and PM2.5 Emissions during Construction

Construction Assumptions		
Construction Duration	**Quantity**	**Notes**
Total Construction Work Days	565	CalEEMod
Total Construction Period (years)	2.15	CalEEMod
Work Hours/Day	8	CalEEMod

ISCST3 Model Parameters and Results			
	Units	**Value**	**Notes**
VOLUME SOURCE: Off-Road Equipment			
Emission Rate	gram/second	0.00068	Converted from total onsite exhaust PM10 with SCA-19
Number of Sources	count	38	SMAQMD, 2009
Release Height	meters	5.0	SMAQMD, 2009
Length of Side	meters	10.0	SMAQMD, 2009
Initial Lateral Dimension	meters	2.3	USEPA, 1995
Initial Vertical Dimension	meters	1.0	SMAQMD, 2009
RECEPTORS			
Grid Spacing	meters	10	SMAQMD, 2009
Flag Pole Receptor Height	meters	6.0	Second Story Receptors
Emissions Source	**Pollutant**	**Annual Average Concentration**	**Notes**
Off-Road Equipment and Onsite Vehicle Trips	DPM ($\mu g/m^{3)}$	0.0064	At maximum exposed individual resident (MEIR) location
	PM2.5 ($\mu g/m^{3)}$	0.0060	At MEIR location (based on ratio of total PM10 and PM2.5)

Health Risk Assessment Parameters and Results				
Hazard Index for DPM	Units	Value		Notes
Chronic REL	$\mu g/m^3$	5.0		OEHHA, 2015
Chronic Hazard Index for DPM	unitless	0.001		At MEIR location
Inhalation Cancer Risk Assessment for DPM	Units	Age Group: 3rd Trimester	Age Group: 0-2 Years	Notes
Concentration (C)	$\mu g/m^3$	0.0064	0.0064	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	mg-m^3/µg-L	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose	mg/kg/day	0.000002	0.000007	C*DBR*A*EF*CF_D (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	1.90	Based on total construction period of 2.32 years
Averaging Time (AT)	years	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	m^3/L	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.07	1.70	At MEIR location
Total Cancer Risk	per million	1.77		At MEIR location

Notes:

DPM = diesel particulate matter

PM10 = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

PM2.5 = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

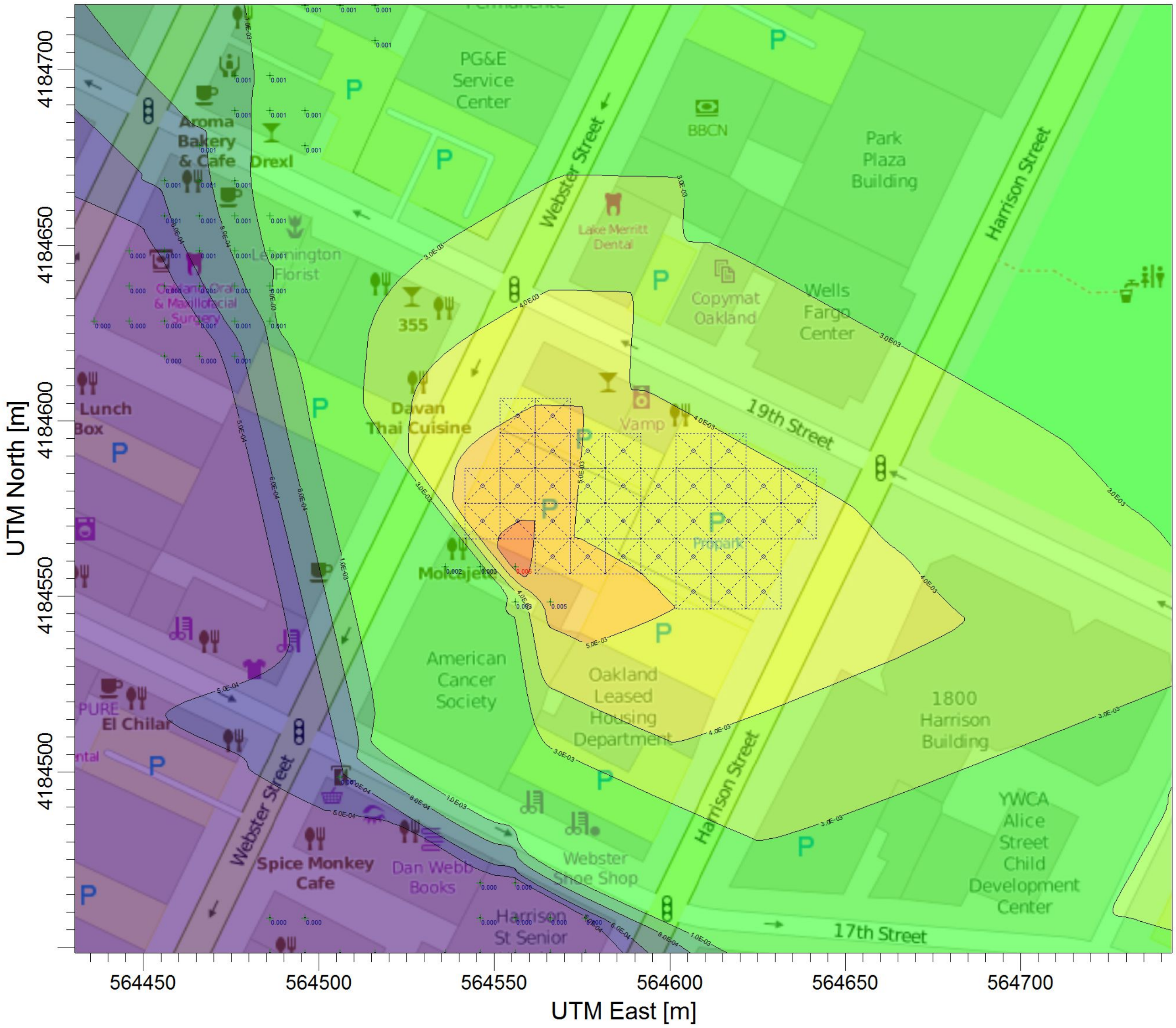
Sacramento Metropolitan Air Quality Management District (SMAQMD), 2009. *Guide to Air Quality Assessment in Sacramento County*. Revised June 2015.

Bay Area Air Quality Management District (BAAQMD), 2012. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May.

U.S. Environmental Protection Agency (USEPA), 1995. *User's Guide for the Industrial Source Complex (ISC3) Dispersion Models; Volume I - User Instructions*. Septemeber.

PROJECT TITLE:

C:\Users\BASELINE\Documents\Projects\16206-00 UPP 19th and Harrison



PLOT FILE OF ANNUAL VALUES FOR SOURCE GROUP: ALL

ug/m^3

Max: 6.4E-03 [ug/m^3] at (564556.00, 4184558.50)

1.4E-04 5.0E-04 6.0E-04 8.0E-04 1.0E-03 3.0E-03 4.0E-03 5.0E-03 6.0E-03 6.4E-03

COMMENTS:	SOURCES:	COMPANY NAME:	
	38	**BASELINE Environmental Consulting**	
	RECEPTORS: **144**		
	OUTPUT TYPE: **Concentration**	SCALE: 1:1,966 0 0.05 km	
	MAX: **6.4E-03 ug/m^3**	DATE: **7/11/2016**	PROJECT NO.:

AERMOD View - Lakes Environmental Software C:\Users\BASELINE\Documents\Projects\16206-00 UPP 19th and Harrison\00 Memos\02426 Air Quality Memo\AERMOD\19andHarrison.isc

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**
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**
** ISCST3 Input Produced by:
** AERMOD View Ver. 9.0.0
** Lakes Environmental Software Inc.
** Date: 7/11/2016
** File: C:\Users\BASELINE\Documents\Projects\16206-00 UPP 19th
and Harrison\00 Memos\02426 Air Quality Memo\AERMOD
\19andHarrison.IN
**
****************************************
**
**
****************************************
** ISCST3 Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE C:\Users\BASELINE\Documents\Projects\16206-00 UPP
19th and Harrison\
   MODELOPT DFAULT CONC NOCMPL  URBAN
   AVERTIME ANNUAL
   POLLUTID PM_10
   TERRHGTS FLAT
   FLAGPOLE 6.00
   RUNORNOT RUN
   ERRORFIL 198400~3.ERR
CO FINISHED
**
****************************************
** ISCST3 Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION VOL1        VOLUME     564606.670  4184551.450
   LOCATION VOL2        VOLUME     564616.670  4184551.450
   LOCATION VOL3        VOLUME     564626.670  4184551.450
   LOCATION VOL4        VOLUME     564566.670  4184561.450
   LOCATION VOL5        VOLUME     564576.670  4184561.450
   LOCATION VOL6        VOLUME     564586.670  4184561.450
   LOCATION VOL7        VOLUME     564596.670  4184561.450
   LOCATION VOL8        VOLUME     564606.670  4184561.450
   LOCATION VOL9        VOLUME     564616.670  4184561.450
   LOCATION VOL10       VOLUME     564626.670  4184561.450
   LOCATION VOL11       VOLUME     564546.670  4184571.450
   LOCATION VOL12       VOLUME     564556.670  4184571.450
   LOCATION VOL13       VOLUME     564566.670  4184571.450
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   LOCATION VOL14        VOLUME     564576.670  4184571.450
   LOCATION VOL15        VOLUME     564586.670  4184571.450
   LOCATION VOL16        VOLUME     564596.670  4184571.450
   LOCATION VOL17        VOLUME     564606.670  4184571.450
   LOCATION VOL18        VOLUME     564616.670  4184571.450
   LOCATION VOL19        VOLUME     564626.670  4184571.450
   LOCATION VOL20        VOLUME     564636.670  4184571.450
   LOCATION VOL21        VOLUME     564546.670  4184581.450
   LOCATION VOL22        VOLUME     564556.670  4184581.450
   LOCATION VOL23        VOLUME     564566.670  4184581.450
   LOCATION VOL24        VOLUME     564576.670  4184581.450
   LOCATION VOL25        VOLUME     564586.670  4184581.450
   LOCATION VOL26        VOLUME     564596.670  4184581.450
   LOCATION VOL27        VOLUME     564606.670  4184581.450
   LOCATION VOL28        VOLUME     564616.670  4184581.450
   LOCATION VOL29        VOLUME     564626.670  4184581.450
   LOCATION VOL30        VOLUME     564636.670  4184581.450
   LOCATION VOL31        VOLUME     564556.670  4184591.450
   LOCATION VOL32        VOLUME     564566.670  4184591.450
   LOCATION VOL33        VOLUME     564576.670  4184591.450
   LOCATION VOL34        VOLUME     564586.670  4184591.450
   LOCATION VOL35        VOLUME     564606.670  4184591.450
   LOCATION VOL36        VOLUME     564616.670  4184591.450
   LOCATION VOL37        VOLUME     564556.670  4184601.450
   LOCATION VOL38        VOLUME     564566.670  4184601.450
** Source Parameters **
   SRCPARAM VOL1         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL2         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL3         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL4         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL5         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL6         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL7         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL8         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL9         0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL10        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL11        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL12        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL13        0.0000179152     5.000     2.326
1.000
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   SRCPARAM VOL14        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL15        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL16        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL17        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL18        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL19        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL20        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL21        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL22        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL23        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL24        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL25        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL26        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL27        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL28        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL29        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL30        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL31        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL32        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL33        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL34        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL35        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL36        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL37        0.0000179152     5.000     2.326
1.000
   SRCPARAM VOL38        0.0000179152     5.000     2.326
1.000

** Variable Emissions Type: "By Season / Hour / Day (SHRDOW)"
```

```
** Variable Emission Scenario: "Scenario 1"
** WeekDays:
** Winter
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL1         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL1          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL2          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL2          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL3          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL3          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL3         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL4         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL4         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL4         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
```

```
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL5         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
```

```
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL5         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL6         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
** Spring
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL6          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL7          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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** Fall
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL7          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL8          SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8          SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL8         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL9         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL9         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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   EMISFACT VOL10        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL10        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL10        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL11        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL11        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL12        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL12        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL13        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
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```
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL13        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
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```
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL14        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL14        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
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** Winter
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL15         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Summer
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL15         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL16         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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** Sunday:
** Winter
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL16        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL17        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL17        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL18        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
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   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL18        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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   EMISFACT VOL19        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL19        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL19        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL20        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL20        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL21        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL21        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL22        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
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```
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL22        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
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   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL23        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL23        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL24        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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** Spring
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL24         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL24         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL24         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** Fall
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL24        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL25        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL25        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL25        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL25        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL25        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL26        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL26        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL26        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL26        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL26        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL27        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL27        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL27        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL27        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL27        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL28        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL28        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
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   EMISFACT VOL28        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL28        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL28        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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```
   EMISFACT VOL29        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL29        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL29        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL29        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL29        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL29        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL30        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL30        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL30        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL30        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
```

```
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL30        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL31        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL31        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL31        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL31        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
```

```
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL31        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL32        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL32        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL32        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL32        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL32        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
```

```
** Winter
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL32         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL33         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL33         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

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** Summer
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL33         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL33         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL33         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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** WeekDays:
** Winter
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL34         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL34         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL34         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL34         SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34         SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL34        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL35        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL35        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL35        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL35        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL35        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL36        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL36        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL36        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL36        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL36        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL37        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL37        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL37        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
```

```
   EMISFACT VOL37        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL37        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
** Winter
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL38        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
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   EMISFACT VOL38        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL38        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL38        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 1.0 1.0 1.0 1.0
   EMISFACT VOL38        SHRDOW 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
** Winter
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
** Winter
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Spring
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Summer
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Fall
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
```

```
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT VOL38        SHRDOW 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
****************************************
** ISCST3 Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "UCART1" "Receptors generated from Uniform Cartesian
Grid"
   DISCCART    564545.98   4184398.40    6.00
   DISCCART    564645.98   4184398.40    6.00
   DISCCART    564655.98   4184398.40    6.00
   DISCCART    564665.98   4184398.40    6.00
   DISCCART    564675.98   4184398.40    6.00
   DISCCART    564705.98   4184398.40    6.00
   DISCCART    564715.98   4184398.40    6.00
   DISCCART    564725.98   4184398.40    6.00
   DISCCART    564735.98   4184398.40    6.00
   DISCCART    564745.98   4184398.40    6.00
   DISCCART    564755.98   4184398.40    6.00
   DISCCART    564765.98   4184398.40    6.00
   DISCCART    564525.98   4184408.40    6.00
   DISCCART    564535.98   4184408.40    6.00
   DISCCART    564545.98   4184408.40    6.00
   DISCCART    564555.98   4184408.40    6.00
   DISCCART    564625.98   4184408.40    6.00
   DISCCART    564635.98   4184408.40    6.00
   DISCCART    564645.98   4184408.40    6.00
   DISCCART    564655.98   4184408.40    6.00
   DISCCART    564665.98   4184408.40    6.00
   DISCCART    564675.98   4184408.40    6.00
   DISCCART    564685.98   4184408.40    6.00
   DISCCART    564715.98   4184408.40    6.00
   DISCCART    564725.98   4184408.40    6.00
   DISCCART    564735.98   4184408.40    6.00
   DISCCART    564745.98   4184408.40    6.00
   DISCCART    564755.98   4184408.40    6.00
   DISCCART    564765.98   4184408.40    6.00
   DISCCART    564515.98   4184418.40    6.00
   DISCCART    564525.98   4184418.40    6.00
   DISCCART    564535.98   4184418.40    6.00
   DISCCART    564545.98   4184418.40    6.00
   DISCCART    564555.98   4184418.40    6.00
   DISCCART    564605.98   4184418.40    6.00
   DISCCART    564615.98   4184418.40    6.00
   DISCCART    564625.98   4184418.40    6.00
   DISCCART    564635.98   4184418.40    6.00
```

DISCCART	564645.98	4184418.40	6.00
DISCCART	564675.98	4184418.40	6.00
DISCCART	564685.98	4184418.40	6.00
DISCCART	564725.98	4184418.40	6.00
DISCCART	564735.98	4184418.40	6.00
DISCCART	564745.98	4184418.40	6.00
DISCCART	564755.98	4184418.40	6.00
DISCCART	564495.98	4184428.40	6.00
DISCCART	564505.98	4184428.40	6.00
DISCCART	564515.98	4184428.40	6.00
DISCCART	564525.98	4184428.40	6.00
DISCCART	564535.98	4184428.40	6.00
DISCCART	564545.98	4184428.40	6.00
DISCCART	564555.98	4184428.40	6.00
DISCCART	564565.98	4184428.40	6.00
DISCCART	564605.98	4184428.40	6.00
DISCCART	564615.98	4184428.40	6.00
DISCCART	564655.98	4184428.40	6.00
DISCCART	564665.98	4184428.40	6.00
DISCCART	564675.98	4184428.40	6.00
DISCCART	564685.98	4184428.40	6.00
DISCCART	564695.98	4184428.40	6.00
DISCCART	564725.98	4184428.40	6.00
DISCCART	564735.98	4184428.40	6.00
DISCCART	564475.98	4184438.40	6.00
DISCCART	564485.98	4184438.40	6.00
DISCCART	564495.98	4184438.40	6.00
DISCCART	564505.98	4184438.40	6.00
DISCCART	564525.98	4184438.40	6.00
DISCCART	564535.98	4184438.40	6.00
DISCCART	564545.98	4184438.40	6.00
DISCCART	564555.98	4184438.40	6.00
DISCCART	564565.98	4184438.40	6.00
DISCCART	564655.98	4184438.40	6.00
DISCCART	564665.98	4184438.40	6.00
DISCCART	564675.98	4184438.40	6.00
DISCCART	564685.98	4184438.40	6.00
DISCCART	564695.98	4184438.40	6.00
DISCCART	564485.98	4184448.40	6.00
DISCCART	564495.98	4184448.40	6.00
DISCCART	564505.98	4184448.40	6.00
DISCCART	564515.98	4184448.40	6.00
DISCCART	564535.98	4184448.40	6.00
DISCCART	564545.98	4184448.40	6.00
DISCCART	564555.98	4184448.40	6.00
DISCCART	564565.98	4184448.40	6.00
DISCCART	564575.98	4184448.40	6.00
DISCCART	564485.98	4184458.40	6.00
DISCCART	564495.98	4184458.40	6.00
DISCCART	564545.98	4184458.40	6.00
DISCCART	564555.98	4184458.40	6.00
DISCCART	564565.98	4184458.40	6.00

```
   DISCCART    564575.98   4184458.40    6.00
   DISCCART    564545.98   4184468.40    6.00
   DISCCART    564555.98   4184468.40    6.00
   DISCCART    564765.98   4184478.40    6.00
   DISCCART    564765.98   4184488.40    6.00
   DISCCART    564505.98   4184498.40    6.00
   DISCCART    564555.98   4184548.40    6.00
   DISCCART    564565.98   4184548.40    6.00
   DISCCART    564535.98   4184558.40    6.00
   DISCCART    564545.98   4184558.40    6.00
   DISCCART    564555.98   4184558.40    6.00
   DISCCART    564455.98   4184618.40    6.00
   DISCCART    564465.98   4184618.40    6.00
   DISCCART    564475.98   4184618.40    6.00
   DISCCART    564435.98   4184628.40    6.00
   DISCCART    564445.98   4184628.40    6.00
   DISCCART    564455.98   4184628.40    6.00
   DISCCART    564465.98   4184628.40    6.00
   DISCCART    564475.98   4184628.40    6.00
   DISCCART    564485.98   4184628.40    6.00
   DISCCART    564445.98   4184638.40    6.00
   DISCCART    564455.98   4184638.40    6.00
   DISCCART    564465.98   4184638.40    6.00
   DISCCART    564475.98   4184638.40    6.00
   DISCCART    564485.98   4184638.40    6.00
   DISCCART    564445.98   4184648.40    6.00
   DISCCART    564455.98   4184648.40    6.00
   DISCCART    564465.98   4184648.40    6.00
   DISCCART    564475.98   4184648.40    6.00
   DISCCART    564485.98   4184648.40    6.00
   DISCCART    564455.98   4184658.40    6.00
   DISCCART    564465.98   4184658.40    6.00
   DISCCART    564475.98   4184658.40    6.00
   DISCCART    564485.98   4184658.40    6.00
   DISCCART    564455.98   4184668.40    6.00
   DISCCART    564465.98   4184668.40    6.00
   DISCCART    564475.98   4184668.40    6.00
   DISCCART    564465.98   4184678.40    6.00
   DISCCART    564495.98   4184678.40    6.00
   DISCCART    564475.98   4184688.40    6.00
   DISCCART    564485.98   4184688.40    6.00
   DISCCART    564495.98   4184688.40    6.00
   DISCCART    564475.98   4184698.40    6.00
   DISCCART    564485.98   4184698.40    6.00
   DISCCART    564515.98   4184708.40    6.00
   DISCCART    564495.98   4184718.40    6.00
   DISCCART    564505.98   4184718.40    6.00
   DISCCART    564515.98   4184718.40    6.00
   DISCCART    564485.98   4184728.40    6.00
   DISCCART    564495.98   4184728.40    6.00
   DISCCART    564505.98   4184728.40    6.00
** DESCRREC "" ""
```

```
   DISCCART    564765.59   4184727.93    6.00
   DISCCART    564385.97   4184729.25    6.00
   DISCCART    564385.97   4184399.23    6.00
RE FINISHED
**
****************************************
** ISCST3 Meteorology Pathway
****************************************
**
**
ME STARTING
   INPUTFIL METDAT~1\OST003RA.ASC
   ANEMHGHT 27.7 METERS
   SURFDATA 1804 2000
   UAIRDATA 1804 2000
ME FINISHED
**
****************************************
** ISCST3 Output Pathway
****************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE ANNUAL ALL 19ANDH~1.IS\AN00GALL.PLT 31
OU FINISHED

***********************************
*** SETUP Finishes Successfully ***
***********************************
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE   1
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL

                                           ***     MODEL SETUP
OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

**Simple Terrain Model is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

  --  SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION.  DDPLETE =  F
**Model Uses NO WET DEPLETION.  WDPLETE =  F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion
Calculations

**Model Uses URBAN Dispersion.

**Model Uses Regulatory DEFAULT Options:
           1. Final Plume Rise.
           2. Stack-tip Downwash.
           3. Buoyancy-induced Dispersion.
           4. Use Calms Processing Routine.
           5. Not Use Missing Data Processing Routine.
           6. Default Wind Profile Exponents.
           7. Default Vertical Potential Temperature Gradients.
           8. "Upper Bound" Values for Supersquat Buildings.
           9. No Exponential Decay for URBAN/Non-SO2

**Model Assumes Receptors on FLAT Terrain.

**Model Accepts FLAGPOLE Receptor Heights.

**Model Calculates ANNUAL Averages Only

**This Run Includes:    38 Source(s);      1 Source Group(s); and
144 Receptor(s)

**The Model Assumes A Pollutant Type of:  PM_10

**Model Set To Continue RUNning After the Setup Testing.
```

```
**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for
Plotting (PLOTFILE Keyword)

**NOTE:  The Following Flags May Appear Following CONC Values:  c
for Calm Hours
                                                                m
for Missing Hours
                                                                b
for Both Calm and Missing Hours

**Misc. Inputs:  Anem. Hgt. (m) =    27.70 ;    Decay Coef. =
0.000     ;    Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC
;  Emission Rate Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

**Approximate Storage Requirements of Model =     1.3 MB of RAM.

**Input Runstream File:          19andHarrison.INP
**Output Print File:             19andHarrison.OUT
**Detailed Error/Message File:   198400~3.ERR
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE \Documents\Projects\16206-00 UPP 19th and Harrison\ *** 07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE   2
CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	EMISSION RATE SCALAR VARY BY
VOL1	0	0.17915E-04	564606.7	4184551.5	0.0	5.00	2.33	1.00	SHRDOW
VOL2	0	0.17915E-04	564616.7	4184551.5	0.0	5.00	2.33	1.00	SHRDOW
VOL3	0	0.17915E-04	564626.7	4184551.5	0.0	5.00	2.33	1.00	SHRDOW
VOL4	0	0.17915E-04	564566.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL5	0	0.17915E-04	564576.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL6	0	0.17915E-04	564586.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL7	0	0.17915E-04	564596.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL8	0	0.17915E-04	564606.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL9	0	0.17915E-04	564616.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL10	0	0.17915E-04	564626.7	4184561.5	0.0	5.00	2.33	1.00	SHRDOW
VOL11	0	0.17915E-04	564546.7	4184571.5	0.0	5.00	2.33	1.00	SHRDOW
VOL12	0	0.17915E-04	564556.7	4184571.5	0.0	5.00	2.33	1.00	SHRDOW
VOL13	0	0.17915E-04	564566.7	4184571.5	0.0	5.00	2.33	1.00	SHRDOW
VOL14	0	0.17915E-04	564576.7	4184571.5	0.0	5.00	2.33	1.00	SHRDOW

```
  VOL15          0   0.17915E-04  564586.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL16          0   0.17915E-04  564596.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL17          0   0.17915E-04  564606.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL18          0   0.17915E-04  564616.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL19          0   0.17915E-04  564626.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL20          0   0.17915E-04  564636.7 4184571.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL21          0   0.17915E-04  564546.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL22          0   0.17915E-04  564556.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL23          0   0.17915E-04  564566.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL24          0   0.17915E-04  564576.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL25          0   0.17915E-04  564586.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL26          0   0.17915E-04  564596.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL27          0   0.17915E-04  564606.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL28          0   0.17915E-04  564616.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL29          0   0.17915E-04  564626.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL30          0   0.17915E-04  564636.7 4184581.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL31          0   0.17915E-04  564556.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL32          0   0.17915E-04  564566.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL33          0   0.17915E-04  564576.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL34          0   0.17915E-04  564586.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL35          0   0.17915E-04  564606.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL36          0   0.17915E-04  564616.7 4184591.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL37          0   0.17915E-04  564556.7 4184601.5     0.0
5.00     2.33     1.00   SHRDOW
  VOL38          0   0.17915E-04  564566.7 4184601.5     0.0
5.00     2.33     1.00   SHRDOW
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE   3
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL



                                          *** SOURCE IDs DEFINING
SOURCE GROUPS ***

GROUP ID                                                    SOURCE
IDs



 ALL         VOL1     , VOL2     , VOL3     , VOL4     , VOL5     , VOL6
, VOL7     , VOL8     , VOL9     , VOL10    , VOL11    , VOL12    ,

             VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    , VOL20    , VOL21    , VOL22    , VOL23    , VOL24
,

             VOL25    , VOL26    , VOL27    , VOL28    , VOL29    ,
VOL30    , VOL31    , VOL32    , VOL33    , VOL34    , VOL35    , VOL36
,

             VOL37    , VOL38    ,
```

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 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE   4
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL1     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE   5
CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL2   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL3     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                 SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                                  ***
***        09:14:24
**MODELOPTs:
PAGE   7
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL4     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                         ***
***        09:14:24
**MODELOPTs:
PAGE   8
CONC                      URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL5     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE   9
CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL6   ; SOURCE TYPE = VOLUME   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SEASON = WINTER; DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SPRING; DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = SUMMER; DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = FALL ; DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
SEASON = WINTER; DAY OF WEEK = SATURDAY															

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL7     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                                       ***
***       09:14:24
**MODELOPTs:
PAGE  11
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL8     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE  12
CONC                  URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL9     ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                         ***
***        09:14:24
**MODELOPTs:
PAGE  13
CONC                   URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL10    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL11   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL12   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                        ***
***        09:14:24
**MODELOPTs:
PAGE  16
CONC                       URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL13    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                         ***
***        09:14:24
**MODELOPTs:
PAGE  17
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL14    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

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                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL15    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE  19
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL16    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL17   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                        ***
***        09:14:24
**MODELOPTs:
PAGE  21
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                 * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL18    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                         ***
***        09:14:24
**MODELOPTs:
PAGE  22
CONC                       URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL19    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL20    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL21     ;  SOURCE TYPE = VOLUME    :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE \Documents\Projects\16206-00 UPP 19th and Harrison\ *** 07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE 25
CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL22   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                            ***
***        09:14:24
**MODELOPTs:
PAGE  26
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL23    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL24    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL25   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                    ***
***        09:14:24
**MODELOPTs:
PAGE  29
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL26    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE  30
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL27    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL28    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL29    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL30    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL31    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

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  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE \Documents\Projects\16206-00 UPP 19th and Harrison\ *** 07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE 35
CONC   URBAN FLAT FLGPOL DFAULT NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL32   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL33   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

```
SOURCE ID = VOL34    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL35   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

```
 *** ISCST3 - VERSION 02035 ***     *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                                           ***
***        09:14:24
**MODELOPTs:
PAGE  39
CONC                     URBAN FLAT  FLGPOL DFAULT
NOCMPL

                * SOURCE EMISSION RATE SCALARS WHICH VARY
SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL36    ;  SOURCE TYPE = VOLUME   :
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL37   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

* SOURCE EMISSION RATE SCALARS WHICH VARY SEASONALLY, DIURNALLY AND BY DAY OF WEEK (SHRDOW) *

SOURCE ID = VOL38   ; SOURCE TYPE = VOLUME   :

```
 HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
                                                SEASON = WINTER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = WEEKDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01
13  .1000E+01   14  .1000E+01   15  .1000E+01   16  .1000E+01
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SATURDAY
```

```
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SATURDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = WINTER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SPRING;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON = SUMMER;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
```

```
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                SEASON =  FALL ;
DAY OF WEEK = SUNDAY
   1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00
5  .0000E+00    6  .0000E+00    7  .0000E+00    8  .0000E+00
   9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00
13  .0000E+00   14  .0000E+00   15  .0000E+00   16  .0000E+00
  17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00
21  .0000E+00   22  .0000E+00   23  .0000E+00   24  .0000E+00
```

*** DISCRETE
CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

```
    ( 564546.0, 4184398.5,       0.0,       6.0);          (
564646.0, 4184398.5,       0.0,       6.0);

    ( 564656.0, 4184398.5,       0.0,       6.0);          (
564666.0, 4184398.5,       0.0,       6.0);
    ( 564676.0, 4184398.5,       0.0,       6.0);          (
564706.0, 4184398.5,       0.0,       6.0);
    ( 564716.0, 4184398.5,       0.0,       6.0);          (
564726.0, 4184398.5,       0.0,       6.0);
    ( 564736.0, 4184398.5,       0.0,       6.0);          (
564746.0, 4184398.5,       0.0,       6.0);
    ( 564756.0, 4184398.5,       0.0,       6.0);          (
564766.0, 4184398.5,       0.0,       6.0);
    ( 564526.0, 4184408.5,       0.0,       6.0);          (
564536.0, 4184408.5,       0.0,       6.0);
    ( 564546.0, 4184408.5,       0.0,       6.0);          (
564556.0, 4184408.5,       0.0,       6.0);
    ( 564626.0, 4184408.5,       0.0,       6.0);          (
564636.0, 4184408.5,       0.0,       6.0);
    ( 564646.0, 4184408.5,       0.0,       6.0);          (
564656.0, 4184408.5,       0.0,       6.0);
    ( 564666.0, 4184408.5,       0.0,       6.0);          (
564676.0, 4184408.5,       0.0,       6.0);
    ( 564686.0, 4184408.5,       0.0,       6.0);          (
564716.0, 4184408.5,       0.0,       6.0);
    ( 564726.0, 4184408.5,       0.0,       6.0);          (
564736.0, 4184408.5,       0.0,       6.0);
    ( 564746.0, 4184408.5,       0.0,       6.0);          (
564756.0, 4184408.5,       0.0,       6.0);
    ( 564766.0, 4184408.5,       0.0,       6.0);          (
564516.0, 4184418.5,       0.0,       6.0);
    ( 564526.0, 4184418.5,       0.0,       6.0);          (
564536.0, 4184418.5,       0.0,       6.0);
    ( 564546.0, 4184418.5,       0.0,       6.0);          (
```

```
564556.0, 4184418.5,        0.0,        6.0);
    ( 564606.0, 4184418.5,        0.0,        6.0);           (
564616.0, 4184418.5,        0.0,        6.0);
    ( 564626.0, 4184418.5,        0.0,        6.0);           (
564636.0, 4184418.5,        0.0,        6.0);
    ( 564646.0, 4184418.5,        0.0,        6.0);           (
564676.0, 4184418.5,        0.0,        6.0);
    ( 564686.0, 4184418.5,        0.0,        6.0);           (
564726.0, 4184418.5,        0.0,        6.0);
    ( 564736.0, 4184418.5,        0.0,        6.0);           (
564746.0, 4184418.5,        0.0,        6.0);
    ( 564756.0, 4184418.5,        0.0,        6.0);           (
564496.0, 4184428.5,        0.0,        6.0);
    ( 564506.0, 4184428.5,        0.0,        6.0);           (
564516.0, 4184428.5,        0.0,        6.0);
    ( 564526.0, 4184428.5,        0.0,        6.0);           (
564536.0, 4184428.5,        0.0,        6.0);
    ( 564546.0, 4184428.5,        0.0,        6.0);           (
564556.0, 4184428.5,        0.0,        6.0);
    ( 564566.0, 4184428.5,        0.0,        6.0);           (
564606.0, 4184428.5,        0.0,        6.0);
    ( 564616.0, 4184428.5,        0.0,        6.0);           (
564656.0, 4184428.5,        0.0,        6.0);
    ( 564666.0, 4184428.5,        0.0,        6.0);           (
564676.0, 4184428.5,        0.0,        6.0);
    ( 564686.0, 4184428.5,        0.0,        6.0);           (
564696.0, 4184428.5,        0.0,        6.0);
    ( 564726.0, 4184428.5,        0.0,        6.0);           (
564736.0, 4184428.5,        0.0,        6.0);
    ( 564476.0, 4184438.5,        0.0,        6.0);           (
564486.0, 4184438.5,        0.0,        6.0);
    ( 564496.0, 4184438.5,        0.0,        6.0);           (
564506.0, 4184438.5,        0.0,        6.0);
    ( 564526.0, 4184438.5,        0.0,        6.0);           (
564536.0, 4184438.5,        0.0,        6.0);
    ( 564546.0, 4184438.5,        0.0,        6.0);           (
564556.0, 4184438.5,        0.0,        6.0);
    ( 564566.0, 4184438.5,        0.0,        6.0);           (
564656.0, 4184438.5,        0.0,        6.0);
    ( 564666.0, 4184438.5,        0.0,        6.0);           (
564676.0, 4184438.5,        0.0,        6.0);
    ( 564686.0, 4184438.5,        0.0,        6.0);           (
564696.0, 4184438.5,        0.0,        6.0);
    ( 564486.0, 4184448.5,        0.0,        6.0);           (
564496.0, 4184448.5,        0.0,        6.0);
    ( 564506.0, 4184448.5,        0.0,        6.0);           (
564516.0, 4184448.5,        0.0,        6.0);
    ( 564536.0, 4184448.5,        0.0,        6.0);           (
564546.0, 4184448.5,        0.0,        6.0);
    ( 564556.0, 4184448.5,        0.0,        6.0);           (
564566.0, 4184448.5,        0.0,        6.0);
    ( 564576.0, 4184448.5,        0.0,        6.0);           (
```

```
564486.0, 4184458.5,       0.0,       6.0);
    ( 564496.0, 4184458.5,       0.0,       6.0);          (
564546.0, 4184458.5,       0.0,       6.0);
    ( 564556.0, 4184458.5,       0.0,       6.0);          (
564566.0, 4184458.5,       0.0,       6.0);
```

*** ISCST3 - VERSION 02035 ***   *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
***
***   09:14:24
**MODELOPTs:
PAGE 43
CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

*** DISCRETE
CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD,
ZELEV, ZFLAG)

(METERS)

```
    ( 564576.0, 4184458.5,       0.0,       6.0);          (
564546.0, 4184468.5,       0.0,       6.0);
    ( 564556.0, 4184468.5,       0.0,       6.0);          (
564766.0, 4184478.5,       0.0,       6.0);
    ( 564766.0, 4184488.5,       0.0,       6.0);          (
564506.0, 4184498.5,       0.0,       6.0);
    ( 564556.0, 4184548.5,       0.0,       6.0);          (
564566.0, 4184548.5,       0.0,       6.0);
    ( 564536.0, 4184558.5,       0.0,       6.0);          (
564546.0, 4184558.5,       0.0,       6.0);
    ( 564556.0, 4184558.5,       0.0,       6.0);          (
564456.0, 4184618.5,       0.0,       6.0);
    ( 564466.0, 4184618.5,       0.0,       6.0);          (
564476.0, 4184618.5,       0.0,       6.0);
    ( 564436.0, 4184628.5,       0.0,       6.0);          (
564446.0, 4184628.5,       0.0,       6.0);
    ( 564456.0, 4184628.5,       0.0,       6.0);          (
564466.0, 4184628.5,       0.0,       6.0);
    ( 564476.0, 4184628.5,       0.0,       6.0);          (
564486.0, 4184628.5,       0.0,       6.0);
    ( 564446.0, 4184638.5,       0.0,       6.0);          (
564456.0, 4184638.5,       0.0,       6.0);
    ( 564466.0, 4184638.5,       0.0,       6.0);          (
564476.0, 4184638.5,       0.0,       6.0);
    ( 564486.0, 4184638.5,       0.0,       6.0);          (
564446.0, 4184648.5,       0.0,       6.0);
    ( 564456.0, 4184648.5,       0.0,       6.0);          (
564466.0, 4184648.5,       0.0,       6.0);
    ( 564476.0, 4184648.5,       0.0,       6.0);          (
564486.0, 4184648.5,       0.0,       6.0);
    ( 564456.0, 4184658.5,       0.0,       6.0);          (
564466.0, 4184658.5,       0.0,       6.0);
    ( 564476.0, 4184658.5,       0.0,       6.0);          (
564486.0, 4184658.5,       0.0,       6.0);
```

(564456.0, 4184668.5, 0.0, 6.0); (
564466.0, 4184668.5, 0.0, 6.0);
(564476.0, 4184668.5, 0.0, 6.0); (
564466.0, 4184678.5, 0.0, 6.0);
(564496.0, 4184678.5, 0.0, 6.0); (
564476.0, 4184688.5, 0.0, 6.0);
(564486.0, 4184688.5, 0.0, 6.0); (
564496.0, 4184688.5, 0.0, 6.0);
(564476.0, 4184698.5, 0.0, 6.0); (
564486.0, 4184698.5, 0.0, 6.0);
(564516.0, 4184708.5, 0.0, 6.0); (
564496.0, 4184718.5, 0.0, 6.0);
(564506.0, 4184718.5, 0.0, 6.0); (
564516.0, 4184718.5, 0.0, 6.0);
(564486.0, 4184728.5, 0.0, 6.0); (
564496.0, 4184728.5, 0.0, 6.0);
(564506.0, 4184728.5, 0.0, 6.0); (
564765.6, 4184728.0, 0.0, 6.0);
(564386.0, 4184729.2, 0.0, 6.0); (
564386.0, 4184399.2, 0.0, 6.0);

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE  44
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL


                                           *** METEOROLOGICAL
DAYS SELECTED FOR PROCESSING ***
                                                         (1
=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL
ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.



                                  *** UPPER BOUND OF FIRST THROUGH
FIFTH WIND SPEED CATEGORIES ***

(METERS/SEC)

                                                1.54,   3.09,
5.14,   8.23,  10.80,


                                                  *** WIND
PROFILE EXPONENTS ***


               STABILITY                             WIND SPEED
CATEGORY
```

```
                  CATEGORY          1                  2                  3
4                 5                 6
                     A            .15000E+00         .15000E+00
.15000E+00        .15000E+00         .15000E+00         .15000E+00
                     B            .15000E+00         .15000E+00
.15000E+00        .15000E+00         .15000E+00         .15000E+00
                     C            .20000E+00         .20000E+00
.20000E+00        .20000E+00         .20000E+00         .20000E+00
                     D            .25000E+00         .25000E+00
.25000E+00        .25000E+00         .25000E+00         .25000E+00
                     E            .30000E+00         .30000E+00
.30000E+00        .30000E+00         .30000E+00         .30000E+00
                     F            .30000E+00         .30000E+00
.30000E+00        .30000E+00         .30000E+00         .30000E+00


                                                *** VERTICAL POTENTIAL
TEMPERATURE GRADIENTS ***
                                                             (DEGREES
KELVIN PER METER)


                  STABILITY                                     WIND SPEED
CATEGORY
                  CATEGORY          1                  2                  3
4                 5                 6
                     A            .00000E+00         .00000E+00
.00000E+00        .00000E+00         .00000E+00         .00000E+00
                     B            .00000E+00         .00000E+00
.00000E+00        .00000E+00         .00000E+00         .00000E+00
                     C            .00000E+00         .00000E+00
.00000E+00        .00000E+00         .00000E+00         .00000E+00
                     D            .00000E+00         .00000E+00
.00000E+00        .00000E+00         .00000E+00         .00000E+00
                     E            .20000E-01         .20000E-01
.20000E-01        .20000E-01         .20000E-01         .20000E-01
                     F            .35000E-01         .35000E-01
.35000E-01        .35000E-01         .35000E-01         .35000E-01
```

```
                      *** THE FIRST  24 HOURS OF METEOROLOGICAL
DATA ***

     FILE:   METDAT~1\OST003RA.ASC
     FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1,f9.4,f10.1,f8.4,i4,f7.2)
     SURFACE STATION NO.:   1804                   UPPER AIR
STATION NO.:   1804
                    NAME: UNKNOWN
NAME: UNKNOWN
                    YEAR:   2000
YEAR:   2000

             FLOW   SPEED  TEMP  STAB  MIXING HEIGHT (M)  USTAR
M-O LENGTH   Z-0 IPCODE PRATE
YR MN DY HR VECTOR  (M/S)   (K)  CLASS   RURAL   URBAN    (M/S)
(M)       (M)       (mm/HR)
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

00 01 01 01    3.0   2.55  283.5   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 02  355.0   1.83  283.3   5     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 03   94.5   1.97  283.2   6     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 04  152.6   3.89  282.3   5     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 05  164.1   4.47  281.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 06  172.0   5.01  281.9   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 07  178.7   2.73  282.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 08  148.7   2.19  282.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 09  133.5   2.37  281.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 10  153.8   1.92  282.0   3     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 11  351.9   1.25  282.8   2     300.0   300.0    0.0000
0.0  0.0000   0   0.00
```

```
00 01 01 12   53.1   2.15  283.1   1     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 13  112.2   2.59  282.9   2     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 14  127.9   1.92  283.3   3     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 15  104.2   1.70  284.3   2     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 16  125.0   7.29  284.5   3     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 17  119.0   8.72  284.6   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 18  126.9   7.64  284.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 19  130.0   6.97  283.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 20  124.8   5.99  283.6   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 21  111.9   5.50  283.4   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 22  126.9   5.10  283.0   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 23  133.0   6.44  282.8   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
00 01 01 24  155.4   4.74  282.3   4     300.0   300.0    0.0000
0.0  0.0000   0   0.00
```

```
*** NOTES:  STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
            FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS
BLOWING.
```

*** ISCST3 - VERSION 02035 *** *** C:\Users\BASELINE \Documents\Projects\16206-00 UPP 19th and Harrison\ *** 07/11/16
***
*** 09:14:24
**MODELOPTs:
PAGE 46
CONC URBAN FLAT FLGPOL DFAULT
NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 , VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564546.00	4184398.50	0.00018	564646.00	4184398.50	0.00059
564656.00	4184398.50	0.00068	564666.00	4184398.50	0.00078
564676.00	4184398.50	0.00088	564706.00	4184398.50	0.00115
564716.00	4184398.50	0.00123	564726.00	4184398.50	0.00130
564736.00	4184398.50	0.00136	564746.00	4184398.50	0.00141
564756.00	4184398.50	0.00146	564766.00	4184398.50	0.00149
564526.00	4184408.50	0.00018	564536.00	4184408.50	0.00019
564546.00	4184408.50	0.00020	564556.00	4184408.50	0.00021
564626.00	4184408.50	0.00051	564636.00	4184408.50	0.00060
564646.00	4184408.50	0.00070	564656.00	4184408.50	0.00081
564666.00	4184408.50	0.00092	564676.00	4184408.50	0.00103
564686.00	4184408.50	0.00114			

564716.00	4184408.50	0.00143
564726.00	4184408.50	0.00151
564736.00	4184408.50	0.00157
564746.00	4184408.50	0.00162
564756.00	4184408.50	0.00166
564766.00	4184408.50	0.00169
564516.00	4184418.50	0.00019
564526.00	4184418.50	0.00020
564536.00	4184418.50	0.00021
564546.00	4184418.50	0.00022
564556.00	4184418.50	0.00024
564606.00	4184418.50	0.00043
564616.00	4184418.50	0.00050
564626.00	4184418.50	0.00060
564636.00	4184418.50	0.00071
564646.00	4184418.50	0.00083
564676.00	4184418.50	0.00123
564686.00	4184418.50	0.00136
564726.00	4184418.50	0.00175
564736.00	4184418.50	0.00182
564746.00	4184418.50	0.00186
564756.00	4184418.50	0.00189
564496.00	4184428.50	0.00021
564506.00	4184428.50	0.00021
564516.00	4184428.50	0.00022
564526.00	4184428.50	0.00023
564536.00	4184428.50	0.00024
564546.00	4184428.50	0.00025
564556.00	4184428.50	0.00026
564566.00	4184428.50	0.00029
564606.00	4184428.50	0.00050
564616.00	4184428.50	0.00060
564656.00	4184428.50	0.00115
564666.00	4184428.50	0.00131
564676.00	4184428.50	0.00147
564686.00	4184428.50	0.00162
564696.00	4184428.50	0.00175
564726.00	4184428.50	0.00205
564736.00	4184428.50	0.00211
564476.00	4184438.50	0.00023
564486.00	4184438.50	0.00023
564496.00	4184438.50	0.00024
564506.00	4184438.50	0.00024
564526.00	4184438.50	0.00025
564536.00	4184438.50	0.00026
564546.00	4184438.50	0.00028
564556.00	4184438.50	0.00030
564566.00	4184438.50	0.00032
564656.00	4184438.50	0.00140
564666.00	4184438.50	0.00159
564676.00	4184438.50	0.00178
564686.00	4184438.50	0.00195

564696.00	4184438.50	0.00210
564486.00	4184448.50	0.00027
564496.00	4184448.50	0.00027
564506.00	4184448.50	0.00027
564516.00	4184448.50	0.00028

*** ISCST3 - VERSION 02035 *** *** C:\Users\BASELINE \Documents\Projects\16206-00 UPP 19th and Harrison\ *** 07/11/16
***
*** 09:14:24
**MODELOPTs:
PAGE 47
CONC URBAN FLAT FLGPOL DFAULT NOCMPL

*** THE ANNUAL (1 YRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL2 , VOL3 , VOL4 , VOL5 , VOL6 , VOL7 , VOL8 , VOL9 , VOL10 , VOL11 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , VOL25 , VOL26 , VOL27 , VOL28 , VOL29 , VOL30 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
564536.00	4184448.50	0.00030	564546.00	4184448.50	0.00032
564556.00	4184448.50	0.00034	564566.00	4184448.50	0.00037
564576.00	4184448.50	0.00042	564486.00	4184458.50	0.00031
564496.00	4184458.50	0.00031	564546.00	4184458.50	0.00036
564556.00	4184458.50	0.00039	564566.00	4184458.50	0.00043
564576.00	4184458.50	0.00049	564546.00	4184468.50	0.00042
564556.00	4184468.50	0.00045	564766.00	4184478.50	0.00390
564766.00	4184488.50	0.00427	564506.00	4184498.50	0.00056
564556.00	4184548.50	0.00315	564566.00	4184548.50	0.00543
564536.00	4184558.50	0.00181	564546.00	4184558.50	0.00274
564556.00	4184558.50	0.00640	564456.00	4184618.50	0.00033
564466.00	4184618.50	0.00041			

564476.00	4184618.50	0.00053
564436.00	4184628.50	0.00026
564446.00	4184628.50	0.00032
564456.00	4184628.50	0.00039
564466.00	4184628.50	0.00050
564476.00	4184628.50	0.00064
564486.00	4184628.50	0.00084
564446.00	4184638.50	0.00037
564456.00	4184638.50	0.00046
564466.00	4184638.50	0.00058
564476.00	4184638.50	0.00074
564486.00	4184638.50	0.00095
564446.00	4184648.50	0.00043
564456.00	4184648.50	0.00052
564466.00	4184648.50	0.00065
564476.00	4184648.50	0.00082
564486.00	4184648.50	0.00103
564456.00	4184658.50	0.00058
564466.00	4184658.50	0.00071
564476.00	4184658.50	0.00087
564486.00	4184658.50	0.00108
564456.00	4184668.50	0.00062
564466.00	4184668.50	0.00075
564476.00	4184668.50	0.00091
564466.00	4184678.50	0.00077
564496.00	4184678.50	0.00132
564476.00	4184688.50	0.00092
564486.00	4184688.50	0.00109
564496.00	4184688.50	0.00128
564476.00	4184698.50	0.00091
564486.00	4184698.50	0.00106
564516.00	4184708.50	0.00149
564496.00	4184718.50	0.00110
564506.00	4184718.50	0.00124
564516.00	4184718.50	0.00138
564486.00	4184728.50	0.00093
564496.00	4184728.50	0.00104
564506.00	4184728.50	0.00116
564765.56	4184728.00	0.00086
564386.00	4184729.25	0.00028
564386.00	4184399.25	0.00014

```
 *** ISCST3 - VERSION 02035 ***    *** C:\Users\BASELINE
\Documents\Projects\16206-00 UPP 19th and Harrison\ ***
07/11/16
                                   ***
***        09:14:24
**MODELOPTs:
PAGE  48
CONC                    URBAN FLAT  FLGPOL DFAULT
NOCMPL

                                         *** THE SUMMARY OF
MAXIMUM ANNUAL (   1 YRS) RESULTS ***


                                      ** CONC OF PM_10    IN
MICROGRAMS/M**3                         **


NETWORK
GROUP ID                      AVERAGE CONC
RECEPTOR  (XR, YR, ZELEV, ZFLAG)   OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - -

ALL      1ST HIGHEST VALUE IS       0.00640 AT (  564556.00,
4184558.50,      0.00,      6.00)  DC      NA
         2ND HIGHEST VALUE IS       0.00543 AT (  564566.00,
4184548.50,      0.00,      6.00)  DC      NA
         3RD HIGHEST VALUE IS       0.00427 AT (  564766.00,
4184488.50,      0.00,      6.00)  DC      NA
         4TH HIGHEST VALUE IS       0.00390 AT (  564766.00,
4184478.50,      0.00,      6.00)  DC      NA
         5TH HIGHEST VALUE IS       0.00315 AT (  564556.00,
4184548.50,      0.00,      6.00)  DC      NA
         6TH HIGHEST VALUE IS       0.00274 AT (  564546.00,
4184558.50,      0.00,      6.00)  DC      NA
         7TH HIGHEST VALUE IS       0.00211 AT (  564736.00,
4184428.50,      0.00,      6.00)  DC      NA
         8TH HIGHEST VALUE IS       0.00210 AT (  564696.00,
4184438.50,      0.00,      6.00)  DC      NA
         9TH HIGHEST VALUE IS       0.00205 AT (  564726.00,
4184428.50,      0.00,      6.00)  DC      NA
        10TH HIGHEST VALUE IS       0.00195 AT (  564686.00,
4184438.50,      0.00,      6.00)  DC      NA


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
                      BD = BOUNDARY
```

CONC   URBAN FLAT FLGPOL DFAULT
NOCMPL

*** Message Summary : ISCST3 Model Execution ***

--------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   0 Warning Message(s)
A Total of   4 Informational Message(s)

A Total of   4 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
*** NONE ***

****
*** ISCST3 Finishes Successfully ***
****

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Attachment G:
Shadow Diagrams

PREVISION DESIGN

1.A-1 19TH AND HARRISON STREETS

Shading diagrams on the Summer Solstice on Snow Park

JUNE 21
SUMMER SOLSTICE

9:00 AM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

1.A-2

19TH AND HARRISON STREETS

Shading diagrams on the Summer Solstice on Snow Park

JUNE 21
SUMMER SOLSTICE

12:00 PM

Proposed Project
Existing (current) Shadows
New Shading by Proposed Project
New Shading from Cumulative Projects
Project Shading overlap with Cumulative

Cumulative Projects
1 1700 Webster St.
2 222 19th St.
3 1900 Broadway

Parks
1 Snow Park

Historic Resources
1 Leamington Hotel

1.A-3 19TH AND HARRISON STREETS

Shading diagrams on the Summer Solstice on Snow Park

JUNE 21
SUMMER SOLSTICE

3:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

2.A-1 19TH AND HARRISON STREETS

Shading diagrams on the Vernal/Autumnal Equinoxes on Snow Park

MARCH 20 & SEPTEMBER 22
VERNAL/AUTUMNAL EQUINOX

9:00 AM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

2.A-2

19TH AND HARRISON STREETS

Shading diagrams on the Vernal/Autumnal Equinoxes on Snow Park

MARCH 20 & SEPTEMBER 22
VERNAL/AUTUMNAL EQUINOX

12:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

2.A-3

19TH AND HARRISON STREETS

Shading diagrams on the Vernal/Autumnal Equinoxes on Snow Park

MARCH 20 & SEPTEMBER 22
VERNAL/AUTUMNAL EQUINOX

3:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

3.A-1

19TH AND HARRISON STREETS

Shading diagrams on the Winter Solstice on Snow Park

DECEMBER 21 (MAX SHADOW ON LEAMINGTON HOTEL)
WINTER SOLSTICE

8:22 AM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

3.A-2

19TH AND HARRISON STREETS

Shading diagrams on the Winter Solstice on Snow Park

DECEMBER 21
WINTER SOLSTICE

9:00 AM

Proposed Project
Existing (current) Shadows
New Shading by Proposed Project
New Shading from Cumulative Projects
Project Shading overlap with Cumulative

Cumulative Projects
1 1700 Webster St.
2 222 19th St.
3 1900 Broadway

Parks
1 Snow Park

Historic Resources
1 Leamington Hotel

PREVISION DESIGN

3.A-3

19TH AND HARRISON STREETS

Shading diagrams on the Winter Solstice on Snow Park

DECEMBER 21
WINTER SOLSTICE

12:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

3.A-4

19TH AND HARRISON STREETS

Shading diagrams on the Winter Solstice on Snow Park

DECEMBER 21
WINTER SOLSTICE

3:00 PM

Proposed Project
Existing (current) Shadows
New Shading by Proposed Project
New Shading from Cumulative Projects
Project Shading overlap with Cumulative

Cumulative Projects
1 1700 Webster St.
2 222 19th St.
3 1900 Broadway

Parks
1 Snow Park

Historic Resources
1 Leamington Hotel

PREVISION DESIGN

4.A-1

19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

4:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

4.A-2 19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

4:15 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

4.A-3

19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

4:30 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

4.A-4 19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

4:45 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

4.A-5 19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

5:00 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

4.A-6 19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

5:15 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

PREVISION DESIGN

4.A-7 19TH AND HARRISON STREETS

Shading diagrams on the dates of maximum shading on Snow Park

FEBRUARY 23 & OCTOBER 18
DATES OF MAXIMUM SHADING ON SNOW PARK

5:28 PM

- Proposed Project
- Existing (current) Shadows
- New Shading by Proposed Project
- New Shading from Cumulative Projects
- Project Shading overlap with Cumulative

Cumulative Projects
1. 1700 Webster St.
2. 222 19th St.
3. 1900 Broadway

Parks
1. Snow Park

Historic Resources
1. Leamington Hotel

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Attachment H:
Greenhouse Gases Emissions Analysis

BASELINE
ENVIRONMENTAL CONSULTING

MEMORANDUM

Date: July 11, 2016 **Job No.:** 16208-00.02427

To: Hannah Young, Urban Planning Partners, Inc.

From: Patrick Sutton, BASELINE Environmental Consulting

Subject: **Greenhouse Gases Emissions Analysis – 19th and Harrison Project**

The proposed 19th and Harrison project in the City of Oakland (the "project") is required to determine if a Greenhouse Gas (GHG) Reduction Plan is required in accordance with the City of Oakland's current Standard Condition of Approvals (SCAs). The City's current SCA for a GHG Reduction Plan (SCA-38) applies to any project that meets one or more of the following three scenarios and has a net increase in GHG emissions:

- **Scenario A:** Projects which (a) involve a land use development (i.e., a project that does not require a permit from the Bay Area Air Quality Management District [BAAQMD] to operate), (b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, and (c) after a GHG analysis is prepared would exceed both of the City's applicable thresholds of significance (1,100 metric tons of carbon dioxide equivalents [CO2e] annually and 4.6 metric tons of CO2e per service population[1] annually).

- **Scenario B:** Projects which (a) involve a land use development, (b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, (c) after a GHG analysis is prepared would exceed at least one of the City's applicable thresholds of significance (1,100 metric tons of CO2e annually or 4.6 metric tons of CO2e per service population annually), and (d) are considered to be "Very Large Projects."

- **Scenario C:** Projects which (a) involve a stationary source of GHG (i.e., a project that requires a permit from BAAQMD to operate) and (b) after a GHG analysis is prepared would exceed the City's applicable threshold of significance (10,000 metric tons of CO2e annually).

SCA-38 requires a project applicant to prepare a GHG Reduction Plan to increase energy efficiency and reduce GHG emissions to the greatest extent feasible below the BAAQMD's thresholds of significance. The GHG Reduction Plan would include a detailed GHG emissions inventory and a comprehensive set of quantified GHG emissions reduction measures.

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[1] The "service population" is the total number of employees and residents of a proposed project.

The BAAQMD's screening criteria are included in Table 3-1 of the BAAQMD's 2011 *CEQA Air Quality Guidelines*. The screening criteria indicate which projects, based on land use and size, would have impacts that would be considered less than significant without a quantitative analysis of project emissions. The City's numeric thresholds of significance for GHG emissions from proposed land use developments and stationary sources are also derived from the BAAQMD's 2011 *CEQA Air Quality Guidelines*.

Table 1 compares the proposed maximum development scenario[2] for the project to the criteria associated with each of the City of Oakland's three GHG emissions scenarios for SCA-38. For a project to be subject to SCA-38 (and be required to prepare a GHG Reduction Plan), the project must meet all the criteria of one or more of the scenarios. As indicated in Table 1, the proposed project would not trigger the GHG Reduction Plan requirement because none of the three scenarios of SCA-38 are fully satisfied. Supporting analysis for the findings summarized in Table 1 is provided in Attachments A through C.

Conclusion

The analysis above indicates that the proposed project would not meet all the criteria described under Scenarios A, B, and C of SCA-38. Therefore, the proposed project would not be required to prepare a GHG Reduction Plan.

[2] The maximum development scenario identified by the project sponsor would include approximately 214,554 square feet of residential uses (240 residential units), 8,000 square feet of commercial/retail uses, and 90,000 square feet of parking space. The actual project proposed by the sponsor is anticipated to include 224 residential units, approximately 3,709 square feet of commercial/retail uses, and approximately 57,946 square feet of parking space. Therefore, this analysis is a conservative estimate of project GHG emissions.

Table 1: Comparison of Proposed Project with Scenarios for SCA-38

Scenario	Criterion (a)	Criterion (b)	Criterion (c)	Criterion (d)	Applies to Project?
Scenario A	*Involve land use development*	*Exceed BAAQMD's screening criteria* [A]	*Exceed both of the City's applicable thresholds* [B]	---	No
19th and Harrison Project	Yes (mixed use)	Yes (240 dwelling units and 8,000 ft^2 retail)	No (See Table B2)	---	
Scenario B	*Involve land use development*	*Exceed BAAQMD's screening criteria* [A]	*Exceed one of the City's applicable thresholds* [B]	*Very Large Project*	No
19th and Harrison Project	Yes (mixed use)	Yes (240 dwelling units and 8,000 ft^2 retail)	Yes (See Table B2)	No (See Table A1)	
Scenario C	*Involve a stationary source*	*Exceed the City's applicable threshold* [C]	---	---	No
19th and Harrison Project	No	No	---	---	

Note: ft^2 = square feet

[A] Based on Table 3-1 of the BAAQMD's 2011 *CEQA Air Quality Guidelines*, a mid-rise apartment building with 87 or less dwelling units or a convenience market with 1,000 or less square feet of area would have GHG emission levels below the City's applicable thresholds.

[B] For land use developments, the City's threshold of significance are 1,100 metric tons of CO2e annually and 4.6 metric tons of CO2e per service population annually.

[C] For stationary sources, the City's threshold of significance is 10,000 metric tons of CO2e annually.

ATTACHMENT A

Comparison of Project with Very Large Project

As outlined in Scenario B of SCA-38 (Table 1), the proposed project should be compared to the City's criteria for identifying a Very Large Project. The City defines a Very Large Project as any of the following:

(A) Residential development of more than 500 dwelling units;
(B) Shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space;
(C) Commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space;
(D) Hotel/motel development of more than 500 rooms;
(E) Industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area; or
(F) Any combination of smaller versions of the above that when combined result in equivalent annual GHG emissions as the above.

The project does not meet any of the Criteria A through E. The proposed 240 residential units are below the 500-dwelling-unit threshold. The retail component of the project would not employ more than 1,000 persons and would have less than 500,000 square feet of floor space. The proposed project does not include commercial office uses, hotel/motel uses, or industrial/manufacturing uses.

Criterion F is assessed in Table A1, which shows the combined residential and retail uses, and evaluates the percentage of each component of the project to the criteria for Very Large Projects. If the sum of these percentages adds up to 100 or more, then the project would constitute a Very Large Project. As shown in Table A1, the combined project components would not result in equivalent GHG emissions that represent a Very Large Project. Therefore, the proposed project would not be considered a Very Large Project.

Table A1: Comparison of Proposed Project with Criterion F for a Very Large Project

Land Use	Unit Metric	Proposed Project [A]	Very Large Project	Project Component's Percentage of a Very Large Project
Residential	Dwelling Units	240	500	48%
Retail	Square Feet	8,000	500,000	1.6%
	Total (Combined Land Use Components)			49.6%

Note: [A] Maximum project scenario.

ATTACHMENT B

Quantification of Project GHG Emissions

As outlined in Scenarios A and B of SCA-38 (Table 1), the project's GHG emissions from land use development should be estimated and compared to the City's thresholds of significance to determine if a GHG Reduction Plan is required. Since the project would not involve a stationary source of GHG emissions, Scenario C of SCA-38 (Table 1) does not apply to the proposed project. The BAAQMD recommends using the most current version of the California Emissions Estimator Model (CalEEMod) to estimate construction and operational emissions of GHGs for a proposed project. CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data for a variety of land-use projects that can be used if site-specific information is not available. The primary input data used to estimate emissions associated with each of the project's land-use types are summarized in Table B1. A copy of the CalEEMod report for the project, which summarizes the input parameters, assumptions, and findings, is included in Attachment C.

Table B1: Summary of Land-Use Input Parameters for CalEEMod

Project Land-Use Type	CalEEMod Land-Use Type	Proposed Project Square Footage [A]
Apartments, including amenities	Apartments Mid Rise	214,554
Retail	Shopping Center	8,000
Parking Garage	Enclosed Parking with Elevator	90,000

Notes: The total lot acreage = 1.02
[A] Maximum project scenario; includes 240 total dwelling units.

Emissions of GHGs during project construction and operation were estimated using the CalEEMod input parameters summarized in Table B1 and the following information:

- Site preparation (i.e., vegetation removal) was not included in the analysis because the project site is devoid of vegetation.
- Approximately 2,500 tons of demolition debris and 5,000 cubic yards of soil export from excavation of the existing parking lots was assumed to calculate emissions from offsite hauling trips.
- The average weekday vehicle trip rates were adjusted for each land used based on the findings of the Transportation Impact Analysis for the proposed project.
- The average weekend vehicle trip rates for each land use that were calculated by CalEEMod using default trip generation rates from the Institute of Transportation

Engineers *Trip Generation Handbook* were reduced by 43 percent in accordance with the *City of Oakland Transportation Impact Study Guidelines*.[3]

- Based on the design of the East Bay Municipal Utility District's wastewater treatment plant, emissions estimated from wastewater treatment process assumed a process with 100 percent aerobic biodegradation and 100 percent anaerobic digestion with cogeneration.
- Based on the project design, no fireplaces or woodstoves would be included in the project operations.
- Sequestration from landscaping was assumed to be negligible and was not included.

The 2013 California Building Energy Efficiency Standards (Title 24, Part 6) adopted by the City of Oakland use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the default 2008 Standards used in CalEEMod. This energy use reduction was included in the analysis to estimate unmitigated emissions of criteria pollutants for the proposed project. The City of Oakland has also adopted a Green Building Ordinance for private development projects. In accordance with the Green Building Ordinance, the proposed project must implement mandatory measures from the statewide CALGreen Code and complete a Green Building Compliance Checklist (e.g., LEED or GreenPoint Rater).[4] Compliance with the mandatory measures described under the current CALGreen Code would reduce indoor water use by approximately 20 percent. These GHG reductions were included in the GHG analysis for the proposed project.

In accordance with the City of Oakland's CEQA guidance for evaluating the GHG thresholds of significance, the construction CO2e emissions were annualized over a period of 40 years and then added to the expected CO2e emissions during operation. The average annual CO2e emissions per service population (614) was determined based on the forecasted population of residents and employees.[5]

The total average annual CO2e emissions and the total average annual CO2e emissions per service population for the proposed project are compared to the City's thresholds in Table B2. The project's estimated CO2e emissions exceeded the City's annual emissions threshold, but were below the efficiency-based threshold in terms of annual emissions per service population.

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[3] Nelson\Nygaard Consulting Associates Inc., 2016. *Transportation Impact Analysis for 19th & Harrison Project*. 6 July.

[4] Rating system and checklist determined by City of Oakland Planning Department based on square footage of each use.

[5] Based an average of 2.49 persons per household (2015-2023 Housing Element, 2010 US Census Data, p. 114, Table 3-5) and a standard assumption of 1 employee per 500 square feet.

Table B2: Summary of Average Greenhouse Gas Emissions

Emissions Scenario	CO2e (metric tons/year)	CO2e (metric tons/year/ service population)
Construction [A]	13	0.021
Operation - Area	3	0.005
Operation - Energy	376	0.612
Operation - Mobile	970	1.580
Operation - Waste	54	0.088
Operation - Water	29	0.047
Total Project Emissions	1,445	2.35
City of Oakland's Thresholds	1,100	4.6
Threshold Exceedance?	Yes	No

Source: CalEEMod (Attachment C)

[A] In accordance with CEQA guidance from the City of Oakland, GHG emissions during construction are amortized over 40 years.

ATTACHMENT C

CalEEMod Results

19th and Harrison

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	90.00	1000sqft	0.00	90,000.00	0
Apartments Mid Rise	240.00	Dwelling Unit	1.02	214,554.00	686
Regional Shopping Center	8.00	1000sqft	0.00	8,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	427	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity factor changed to the 2013 emission factor reported in PG&E’s (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers

Land Use - Lot acreage and building square footage based on maximum construction scenario.
Non-residential acreages zeroed out since the project is a mixed-use development located on the same footprint.

Construction Phase - No site preparation included because the project site is devoid of vegetation.

Demolition - Based on the proposed project description, 2,500 tons of debris from excavation of parking lots will be hauled offsite.

Grading - Based on the proposed project description, 5,000 cubic yards of excavated soil will be hauled offsite from excavation.

Architectural Coating -

Vehicle Trips - Weekday trip rate based on Fehr & Peers (2016). Weekend ITE trip rates reduced by 43% in accordance with the City of Oakland Transportation Impact Study Guidelines for development in an urban environment that is within 0.25 miles of a BART station.

Woodstoves - No woodstoves or fireplaces.

Energy Use - CO2 intensity factor changed to the 2013 emission factor reported in PG&E’s (2015) Greenhouse Gas Emission Factors: Guidance for PG&E Customers.

Water And Wastewater - EBMUD would service the proposed project and applies 100 percent aerobic process and 100 percent cogeneration.

Construction Off-road Equipment Mitigation - Project sponser has comitted to use of best availabel control technologies (Tier 4 equivalent emissions). These emission reductions are considered part of the project's unmitigated emissions.

Energy Mitigation - Current 2013 Title 24 energy standards exceed 2008 Title 24 energy standards by 25%. These emission reductions are considered part of the project's unmitigated emissions.

Water Mitigation - CALGreen Code mandatory requirement. These emission reductions are considered part of the project's unmitigated emissions.

Trips and VMT -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblFireplaces	NumberGas	132.00	0.00
tblFireplaces	NumberNoFireplace	74.40	0.00
tblFireplaces	NumberWood	33.60	0.00
tblGrading	MaterialExported	0.00	5,000.00
tblLandUse	LandUseSquareFeet	240,000.00	214,554.00
tblLandUse	LotAcreage	2.07	0.00
tblLandUse	LotAcreage	6.32	1.02
tblLandUse	LotAcreage	0.18	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	427
tblProjectCharacteristics	OperationalYear	2014	2020
tblVehicleTrips	ST_TR	7.16	4.08

tblVehicleTrips	ST_TR	49.97	28.48
tblVehicleTrips	SU_TR	6.07	3.46
tblVehicleTrips	SU_TR	25.24	14.39
tblVehicleTrips	WD_TR	6.59	3.74
tblVehicleTrips	WD_TR	42.94	27.08
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
tblWater	AnaDigestCogenCombDigestGasPercent	0.00	100.00
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tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
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tblWater	SepticTankPercent	10.33	0.00
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tblWoodstoves	NumberCatalytic	1.20	0.00
tblWoodstoves	NumberNoncatalytic	1.20	0.00

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					
2017	2.4855	2.8955	3.4564	6.2400e-003	0.2686	0.1539	0.4225	0.0714	0.1474	0.2188	0.0000	508.9491	508.9491	0.0573	0.0000	510.1532
Total	**2.4855**	**2.8955**	**3.4564**	**6.2400e-003**	**0.2686**	**0.1539**	**0.4225**	**0.0714**	**0.1474**	**0.2188**	**0.0000**	**508.9491**	**508.9491**	**0.0573**	**0.0000**	**510.1532**

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					
2017	2.1848	0.9964	3.2671	6.2400e-003	0.2686	0.0122	0.2808	0.0714	0.0115	0.0829	0.0000	508.9488	508.9488	0.0573	0.0000	510.1529
Total	**2.1848**	**0.9964**	**3.2671**	**6.2400e-003**	**0.2686**	**0.0122**	**0.2808**	**0.0714**	**0.0115**	**0.0829**	**0.0000**	**508.9488**	**508.9488**	**0.0573**	**0.0000**	**510.1529**

	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**	**N20**	**CO2e**
Percent Reduction	**12.10**	**65.59**	**5.48**	**0.00**	**0.00**	**92.07**	**33.54**	**0.00**	**92.19**	**62.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Energy	0.0117	0.0998	0.0433	6.4000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	418.9754	418.9754	0.0228	6.3800e-003	421.4331
Mobile	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Waste						0.0000	0.0000		0.0000	0.0000	24.1153	0.0000	24.1153	1.4252	0.0000	54.0440
Water						0.0000	0.0000		0.0000	0.0000	5.7420	22.3536	28.0957	0.0213	0.0128	32.5109
Total	**2.0606**	**1.6316**	**7.8509**	**0.0143**	**0.8853**	**0.0403**	**0.9256**	**0.2379**	**0.0385**	**0.2765**	**29.8574**	**1,413.8855**	**1,443.7429**	**1.5059**	**0.0192**	**1,481.3135**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Energy	9.2900e-003	0.0795	0.0345	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	373.7407	373.7407	0.0209	5.6500e-003	375.9296
Mobile	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Waste						0.0000	0.0000		0.0000	0.0000	24.1153	0.0000	24.1153	1.4252	0.0000	54.0440
Water						0.0000	0.0000		0.0000	0.0000	4.5936	20.5361	25.1297	0.0172	0.0103	28.6773
Total	**2.0582**	**1.6113**	**7.8421**	**0.0142**	**0.8853**	**0.0387**	**0.9239**	**0.2379**	**0.0369**	**0.2748**	**28.7090**	**1,366.8333**	**1,395.5423**	**1.4999**	**0.0159**	**1,431.9765**

	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	N20	CO2e
Percent Reduction	**0.12**	**1.24**	**0.11**	**0.91**	**0.00**	**4.07**	**0.18**	**0.00**	**4.26**	**0.59**	**3.85**	**3.33**	**3.34**	**0.40**	**16.94**	**3.33**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	1/28/2017	2/2/2017	5	4	
3	Building Construction	Building Construction	2/3/2017	11/9/2017	5	200	
4	Paving	Paving	11/10/2017	11/23/2017	5	10	
5	Architectural Coating	Architectural Coating	11/24/2017	12/7/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 434,472; Residential Outdoor: 144,824; Non-Residential Indoor: 147,000; Non-Residential Outdoor: 49,000 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	247.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	625.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	213.00	42.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Clean Paved Roads

3.2 Demolition - 2017

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					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4126
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**0.0268**	**0.0161**	**0.0428**	**4.0500e-003**	**0.0150**	**0.0191**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4126**

3.2 Demolition - 2017

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	2.6400e-003	0.0332	0.0294	9.0000e-005	2.0800e-003	4.3000e-004	2.5100e-003	5.7000e-004	3.9000e-004	9.7000e-004	0.0000	8.3763	8.3763	6.0000e-005	0.0000	8.3775
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.3100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0324	1.0324	6.0000e-005	0.0000	1.0336
Total	**3.0800e-003**	**0.0339**	**0.0357**	**1.0000e-004**	**3.2600e-003**	**4.4000e-004**	**3.7000e-003**	**8.8000e-004**	**4.0000e-004**	**1.2900e-003**	**0.0000**	**9.4087**	**9.4087**	**1.2000e-004**	**0.0000**	**9.4112**

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					0.0268	0.0000	0.0268	4.0500e-003	0.0000	4.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8400e-003	0.0123	0.1484	2.4000e-004		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4125
Total	**2.8400e-003**	**0.0123**	**0.1484**	**2.4000e-004**	**0.0268**	**3.8000e-004**	**0.0271**	**4.0500e-003**	**3.8000e-004**	**4.4300e-003**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4125**

3.2 Demolition - 2017

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	2.6400e-003	0.0332	0.0294	9.0000e-005	2.0800e-003	4.3000e-004	2.5100e-003	5.7000e-004	3.9000e-004	9.7000e-004	0.0000	8.3763	8.3763	6.0000e-005	0.0000	8.3775
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	6.6000e-004	6.3100e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0324	1.0324	6.0000e-005	0.0000	1.0336
Total	**3.0800e-003**	**0.0339**	**0.0357**	**1.0000e-004**	**3.2600e-003**	**4.4000e-004**	**3.7000e-003**	**8.8000e-004**	**4.0000e-004**	**1.2900e-003**	**0.0000**	**9.4087**	**9.4087**	**1.2000e-004**	**0.0000**	**9.4112**

3.3 Grading - 2017

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					0.0101	0.0000	0.0101	5.0900e-003	0.0000	5.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**0.0101**	**2.1300e-003**	**0.0122**	**5.0900e-003**	**1.9600e-003**	**7.0500e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

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	6.6800e-003	0.0841	0.0745	2.4000e-004	5.2700e-003	1.0800e-003	6.3600e-003	1.4500e-003	1.0000e-003	2.4400e-003	0.0000	21.1950	21.1950	1.5000e-004	0.0000	21.1982
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1271	0.1271	1.0000e-005	0.0000	0.1272
Total	**6.7300e-003**	**0.0841**	**0.0752**	**2.4000e-004**	**5.4200e-003**	**1.0800e-003**	**6.5100e-003**	**1.4900e-003**	**1.0000e-003**	**2.4800e-003**	**0.0000**	**21.3221**	**21.3221**	**1.6000e-004**	**0.0000**	**21.3255**

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					0.0101	0.0000	0.0101	5.0900e-003	0.0000	5.0900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	1.4800e-003	0.0170	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.4000e-004**	**1.4800e-003**	**0.0170**	**3.0000e-005**	**0.0101**	**5.0000e-005**	**0.0102**	**5.0900e-003**	**5.0000e-005**	**5.1400e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

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	6.6800e-003	0.0841	0.0745	2.4000e-004	5.2700e-003	1.0800e-003	6.3600e-003	1.4500e-003	1.0000e-003	2.4400e-003	0.0000	21.1950	21.1950	1.5000e-004	0.0000	21.1982
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1271	0.1271	1.0000e-005	0.0000	0.1272
Total	**6.7300e-003**	**0.0841**	**0.0752**	**2.4000e-004**	**5.4200e-003**	**1.0800e-003**	**6.5100e-003**	**1.4900e-003**	**1.0000e-003**	**2.4800e-003**	**0.0000**	**21.3221**	**21.3221**	**1.6000e-004**	**0.0000**	**21.3255**

3.4 Building Construction - 2017

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	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5473	184.5473	0.0387	0.0000	185.3605
Total	**0.2955**	**1.9109**	**1.4311**	**2.2000e-003**		**0.1226**	**0.1226**		**0.1182**	**0.1182**	**0.0000**	**184.5473**	**184.5473**	**0.0387**	**0.0000**	**185.3605**

3.4 Building Construction - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.3805	0.5771	1.0100e-003	0.0272	5.5300e-003	0.0327	7.8000e-003	5.0900e-003	0.0129	0.0000	89.9909	89.9909	7.0000e-004	0.0000	90.0056
Worker	0.0721	0.1079	1.0341	2.3100e-003	0.1933	1.5700e-003	0.1949	0.0514	1.4500e-003	0.0529	0.0000	169.1619	169.1619	9.0900e-003	0.0000	169.3527
Total	**0.1194**	**0.4884**	**1.6112**	**3.3200e-003**	**0.2205**	**7.1000e-003**	**0.2276**	**0.0592**	**6.5400e-003**	**0.0658**	**0.0000**	**259.1527**	**259.1527**	**9.7900e-003**	**0.0000**	**259.3583**

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	0.0292	0.3707	1.3082	2.2000e-003		3.0100e-003	3.0100e-003		3.0100e-003	3.0100e-003	0.0000	184.5471	184.5471	0.0387	0.0000	185.3603
Total	**0.0292**	**0.3707**	**1.3082**	**2.2000e-003**		**3.0100e-003**	**3.0100e-003**		**3.0100e-003**	**3.0100e-003**	**0.0000**	**184.5471**	**184.5471**	**0.0387**	**0.0000**	**185.3603**

3.4 Building Construction - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0472	0.3805	0.5771	1.0100e-003	0.0272	5.5300e-003	0.0327	7.8000e-003	5.0900e-003	0.0129	0.0000	89.9909	89.9909	7.0000e-004	0.0000	90.0056
Worker	0.0721	0.1079	1.0341	2.3100e-003	0.1933	1.5700e-003	0.1949	0.0514	1.4500e-003	0.0529	0.0000	169.1619	169.1619	9.0900e-003	0.0000	169.3527
Total	**0.1194**	**0.4884**	**1.6112**	**3.3200e-003**	**0.2205**	**7.1000e-003**	**0.2276**	**0.0592**	**6.5400e-003**	**0.0658**	**0.0000**	**259.1527**	**259.1527**	**9.7900e-003**	**0.0000**	**259.3583**

3.5 Paving - 2017

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	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.9300e-003**	**0.0605**	**0.0452**	**7.0000e-005**		**3.6700e-003**	**3.6700e-003**		**3.3800e-003**	**3.3800e-003**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.1600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5162	0.5162	3.0000e-005	0.0000	0.5168
Total	**2.2000e-004**	**3.3000e-004**	**3.1600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5162**	**0.5162**	**3.0000e-005**	**0.0000**	**0.5168**

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	7.9000e-004	3.4100e-003	0.0485	7.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.9000e-004**	**3.4100e-003**	**0.0485**	**7.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-004	3.3000e-004	3.1600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5162	0.5162	3.0000e-005	0.0000	0.5168
Total	**2.2000e-004**	**3.3000e-004**	**3.1600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5162**	**0.5162**	**3.0000e-005**	**0.0000**	**0.5168**

3.6 Architectural Coating - 2017

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	2.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**2.0230**	**0.0109**	**9.3400e-003**	**1.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	1.0900e-003	0.0104	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7075	1.7075	9.0000e-005	0.0000	1.7094
Total	**7.3000e-004**	**1.0900e-003**	**0.0104**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.7075**	**1.7075**	**9.0000e-005**	**0.0000**	**1.7094**

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	2.0213					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**2.0215**	**6.4000e-004**	**9.1600e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	1.0900e-003	0.0104	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.7075	1.7075	9.0000e-005	0.0000	1.7094
Total	**7.3000e-004**	**1.0900e-003**	**0.0104**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.7075**	**1.7075**	**9.0000e-005**	**0.0000**	**1.7094**

4.0 Operational Detail - Mobile

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	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532
Unmitigated	0.5716	1.5111	6.0188	0.0136	0.8853	0.0224	0.9077	0.2379	0.0207	0.2586	0.0000	969.6439	969.6439	0.0338	0.0000	970.3532

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	898.32	979.49	830.38	2,009,596	2,009,596
Regional Shopping Center	216.60	227.86	115.09	357,163	357,163
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	1,114.92	1,207.35	945.47	2,366,759	2,366,759

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
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	Primary	Diverted	Pass-by
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.543091	0.062201	0.166716	0.110184	0.030625	0.004564	0.019041	0.050825	0.001789	0.003661	0.005684	0.000199	0.001418

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

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						0.0000	0.0000		0.0000	0.0000	0.0000	281.7639	281.7639	0.0191	3.9600e-003	283.3931
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	303.5345	303.5345	0.0206	4.2700e-003	305.2896
NaturalGas Mitigated	9.2900e-003	0.0795	0.0345	5.1000e-004		6.4200e-003	6.4200e-003		6.4200e-003	6.4200e-003	0.0000	91.9768	91.9768	1.7600e-003	1.6900e-003	92.5366
NaturalGas Unmitigated	0.0117	0.0998	0.0433	6.4000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	115.4409	115.4409	2.2100e-003	2.1200e-003	116.1435

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/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.12488e+006	0.0115	0.0979	0.0417	6.2000e-004		7.9200e-003	7.9200e-003		7.9200e-003	7.9200e-003	0.0000	113.3917	113.3917	2.1700e-003	2.0800e-003	114.0818
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	38400	2.1000e-004	1.8800e-003	1.5800e-003	1.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	2.0492	2.0492	4.0000e-005	4.0000e-005	2.0616
Total		**0.0117**	**0.0998**	**0.0432**	**6.3000e-004**		**8.0600e-003**	**8.0600e-003**		**8.0600e-003**	**8.0600e-003**	**0.0000**	**115.4409**	**115.4409**	**2.2100e-003**	**2.1200e-003**	**116.1435**

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/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	30200	1.6000e-004	1.4800e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6116	1.6116	3.0000e-005	3.0000e-005	1.6214
Apartments Mid Rise	1.69338e+006	9.1300e-003	0.0780	0.0332	5.0000e-004		6.3100e-003	6.3100e-003		6.3100e-003	6.3100e-003	0.0000	90.3652	90.3652	1.7300e-003	1.6600e-003	90.9152
Total		**9.2900e-003**	**0.0795**	**0.0344**	**5.1000e-004**		**6.4200e-003**	**6.4200e-003**		**6.4200e-003**	**6.4200e-003**	**0.0000**	**91.9768**	**91.9768**	**1.7600e-003**	**1.6900e-003**	**92.5366**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	867684	168.0565	0.0114	2.3600e-003	169.0282
Enclosed Parking with Elevator	606600	117.4887	7.9800e-003	1.6500e-003	118.1680
Regional Shopping Center	92880	17.9894	1.2200e-003	2.5000e-004	18.0934
Total		**303.5345**	**0.0206**	**4.2600e-003**	**305.2896**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	848961	164.4301	0.0112	2.3100e-003	165.3809
Enclosed Parking with Elevator	518400	100.4058	6.8200e-003	1.4100e-003	100.9863
Regional Shopping Center	87400	16.9280	1.1500e-003	2.4000e-004	17.0259
Total		**281.7639**	**0.0191**	**3.9600e-003**	**283.3931**

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	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Unmitigated	1.4773	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724

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	0.2021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0545	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Total	**1.4773**	**0.0207**	**1.7889**	**9.0000e-005**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**	**0.0000**	**2.9127**	**2.9127**	**2.8400e-003**	**0.0000**	**2.9724**

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	0.2021					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0545	0.0207	1.7889	9.0000e-005		9.8300e-003	9.8300e-003		9.8300e-003	9.8300e-003	0.0000	2.9127	2.9127	2.8400e-003	0.0000	2.9724
Total	**1.4773**	**0.0207**	**1.7889**	**9.0000e-005**		**9.8300e-003**	**9.8300e-003**		**9.8300e-003**	**9.8300e-003**	**0.0000**	**2.9127**	**2.9127**	**2.8400e-003**	**0.0000**	**2.9724**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	25.1297	0.0172	0.0103	28.6773
Unmitigated	28.0957	0.0213	0.0128	32.5109

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.637 / 9.85809	27.0766	0.0205	0.0123	31.3307
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.59258 / 0.363194	1.0191	7.8000e-004	4.7000e-004	1.1802
Total		**28.0957**	**0.0213**	**0.0128**	**32.5109**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	12.5096 / 9.85809	24.2190	0.0166	9.9000e-003	27.6370
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.474064 / 0.363194	0.9108	6.3000e-004	3.8000e-004	1.0403
Total		**25.1297**	**0.0172**	**0.0103**	**28.6773**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.1153	1.4252	0.0000	54.0440
Unmitigated	24.1153	1.4252	0.0000	54.0440

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	110.4	22.4102	1.3244	0.0000	50.2227
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.4	1.7051	0.1008	0.0000	3.8213
Total		**24.1153**	**1.4252**	**0.0000**	**54.0440**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	110.4	22.4102	1.3244	0.0000	50.2227
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	8.4	1.7051	0.1008	0.0000	3.8213
Total		**24.1153**	**1.4252**	**0.0000**	**54.0440**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

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