

Final Report

CITY OF OAKLAND

Industrial District Strategy Support
Public Infrastructure Report

Mandela Parkway / 3rd Street Corridor
Commercial / Industrial Zones

March 1, 2011

Prepared for:

City of Oakland

Community and Economic Development Agency

(CEDA)

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I. INTRODUCTION

A. Acknowledgements

While funded by the City of Oakland Redevelopment Agency, this report relies on the cooperative efforts of the City of Oakland's Community & Economic Development Agency's Business Development Services; Public Works Agency's Project Management & Street Engineering & Construction & Lighting Divisions; and other local public utilities agencies. The contributions of West Oakland Commerce Association and business leaders from the West Oakland Business Alert Committee are commended, with appreciation, for it is with the participation of local leaders, property owners and operating businesses that such studies are grounded in real everyday physical and economic conditions, experienced by the community at large.

B. Preface

A contemporary and sufficient infrastructure system comprises the core of every successful built environment. A strong infrastructure system is the backbone of our homes, offices, schools, factories and hospitals, complimenting and supporting elegant design and functional facilities. It is the vehicle for business development and the productive economy; allowing the private sector to stimulate revenue and jobs. As such, infrastructure was a target and a symbol used by the Obama administration to convey billions of dollars of federal and state funds towards job-producing projects, many of them limited in duration by the construction cycle associated with their products.

The infrastructure improvements are not just an end in themselves, but serve to support permanent private sector and some public agency jobs, fulfilling the larger municipal mission to support overall community development and provide core services to support residential and commercial development. The following West Oakland Public Infrastructure Assessment and Recommendations Report provides groundwork for implementing a greater Industrial District Strategy to encourage revenue growth and job generation in the City of Oakland. It is a companion to the 2009 East Oakland Infrastructure Needs Assessment and Recommendations Report.

C. Framework

The knowledge of Oakland's infrastructure inventory and conditions, like any municipality, is held in a myriad of departments and increasingly in the imbedded knowledge of individual of those departments who deal on a daily basis with street surface and paving, lighting, sewers and storm drains, and other matters. As time passes and staff turns over, the history condition of such a system is maintained only in digitized maps and charts, and rarely if ever viewed in a comprehensive way. Furthermore, the conditions in industrial districts are unknown territory to most residents, and even to most city staff and elected officials.

Since 2001 staff of the Community & Economic Development Agency has been trying to decrease that knowledge gap, by the adoption of modern industrial zoning and a sensible industrial land preservation policy. The Industrial District Strategy was created in 2006 as a next step to move beyond advocacy legislation, and to support business development in its 5,000 plus acres of privately-held industrial land in the City of Oakland. The Oakland Industrial District Strategy is to be used as a prioritizing tool to inform citizens and policymakers of the importance of these areas as the "jobsheds" of their communities, as well as to create a network among businesses engaged in the research and publication of this report, to improve the quality of these communities.

Accompanied by the Infrastructure Assessment and Recommendations, the completed Strategy will outline the physical geography and regulation of these areas (accomplished through the Re-Zoning effort of 2002-2006). City Staff is further refining the economic goals for these areas, as the market shifts and a broader diversity of "New Economy" uses develops in these areas. New Digital Media, Trade & Logistics, Life Science and Healthcare, Green Technology, Green Design & Construction and Specialty Food Production are expected to be the target industry clusters sought to complement existing business models in these areas. New infrastructure modernization is crucial for this type of business attraction and development to occur.

Two focused areas targeted for this current study include:

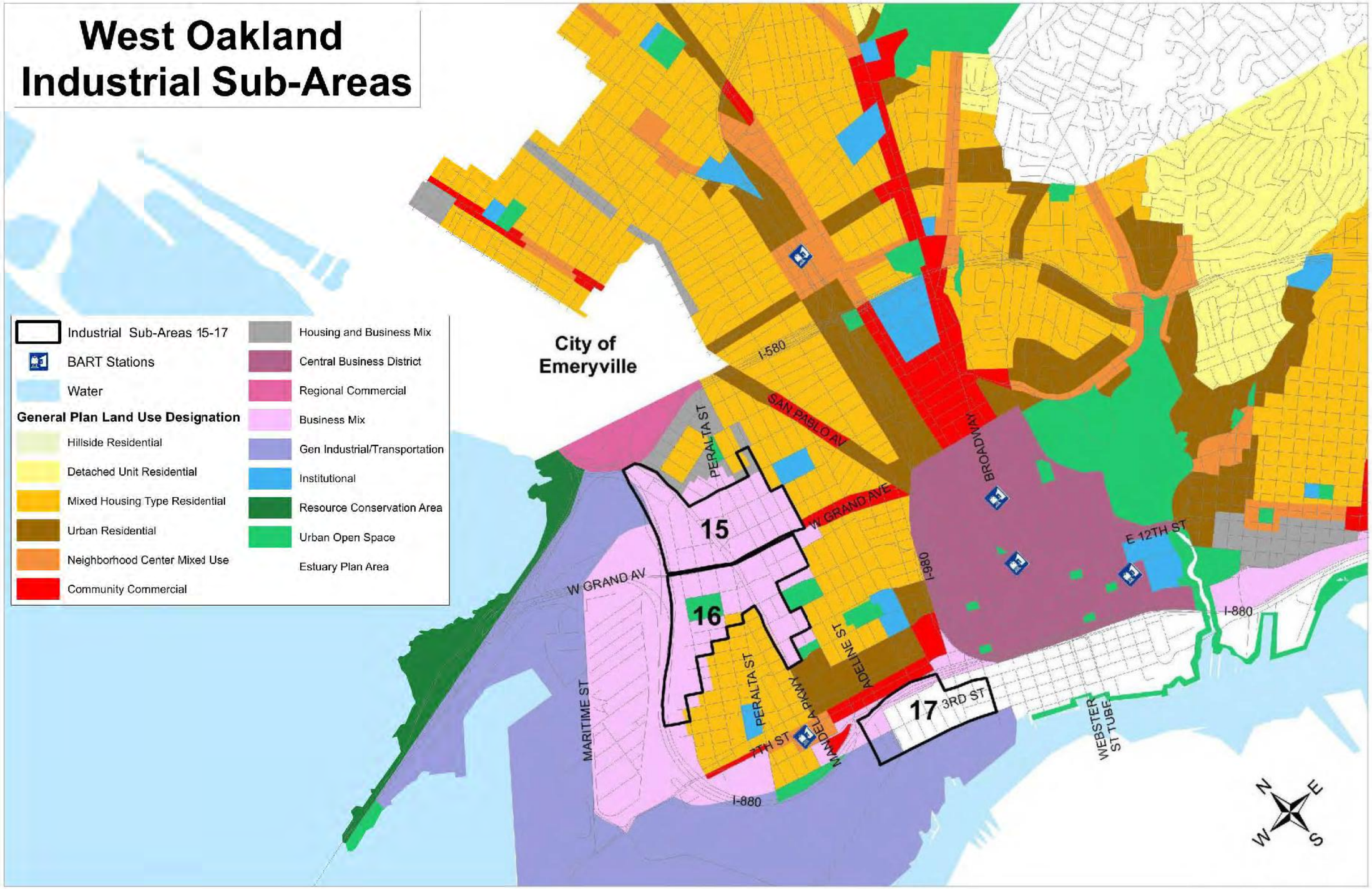
- Mandela Parkway Commercial Industrial Zone, and
- 3rd Street Corridor Commercial Industrial Zone

These areas comprise West Oakland industrial areas near the Port of Oakland and the Oakland Army Base. CEDA defined these industrial zones' limits based on their existing land uses and proximity to regional transportation networks. These areas have been designated as Industrial Sub-Areas 15 and 16 for the Mandela Parkway Commercial Industrial Zone and Industrial Sub-Area 17 for the 3rd Street Corridor Commercial Industrial Zone. See Figure I.1 to see the West Oakland Industrial Sub Areas limits. See Figure I.2, I.3, and I.4 for aerial photos and District Boundaries.

This Public Infrastructure Assessment and Recommendations Report provides groundwork for implementing the Industrial District Strategy.

From a regional perspective, both the Mandela Parkway and 3rd Street Corridor Commercial Industrial Zones are situated near major transportation networks. The areas are served by and have direct access to the Port of Oakland; BNSF and Union Pacific Railroads; State Routes 80, 880, and 580; and the West Oakland BART Station. Additionally, the Oakland International Airport is approximately 10-miles away to the south. Within this context, the zones are ideally situated to promote and enable commercial and industrial activity.

West Oakland Industrial Sub-Areas



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FIGURE I.1
INDUSTRIAL SUB-AREAS EXHIBIT

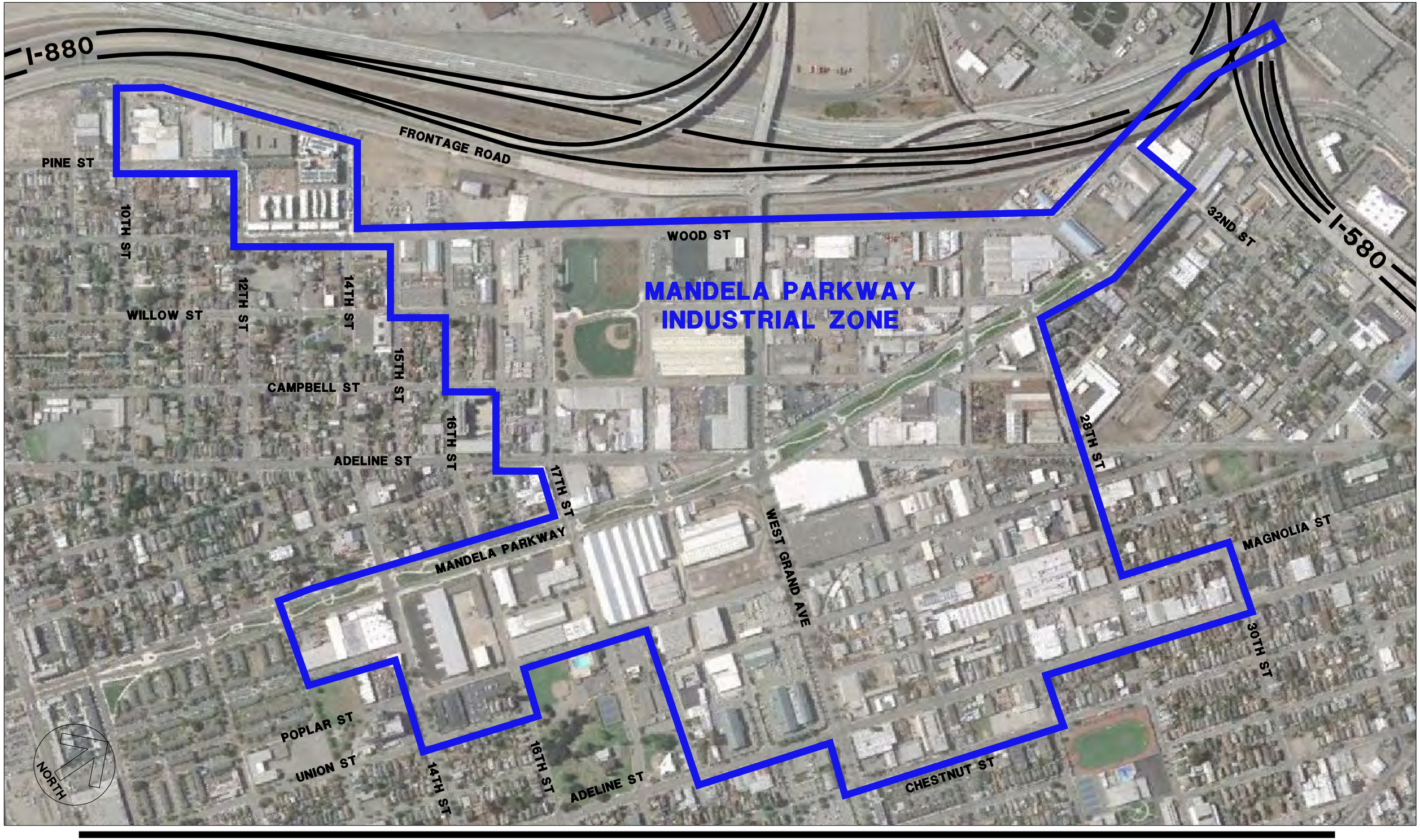
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FIGURE I.2
3RD STREET CORRIDOR INDUSTRIAL/COMMERCIAL ZONE

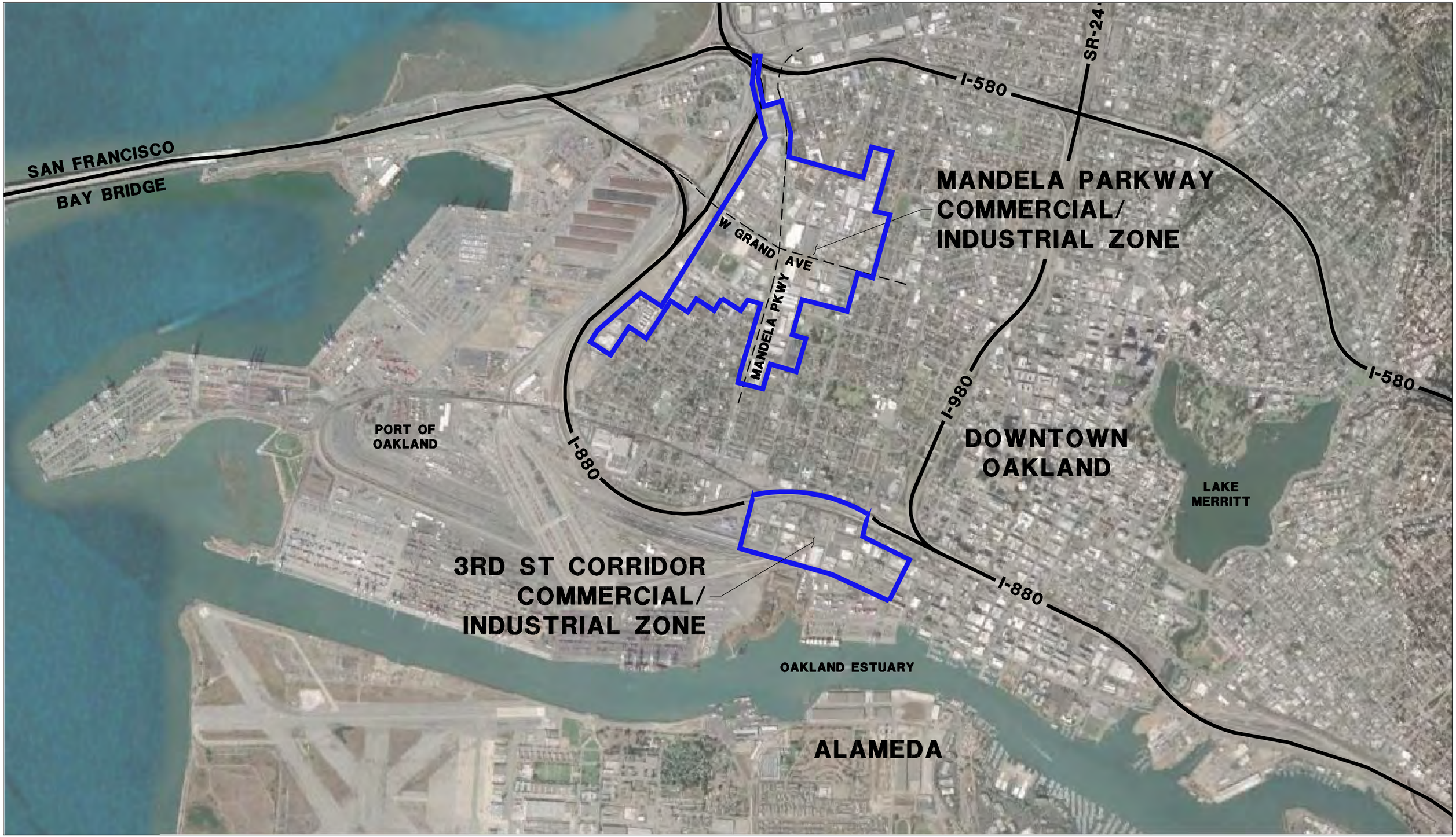
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FIGURE I.3
MANDELA PARKWAY INDUSTRIAL/COMMERCIAL ZONE

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FIGURE I.4
OVERALL ZONE LOCATION EXHIBIT

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Both the Mandela Parkway Commercial Industrial Zone and the 3rd Street Corridor Commercial Industrial Zone have served the City of Oakland for over a century. From a macro perspective, the transportation system network provides an excellent framework for attracting and serving users; but from a ground level view most of the infrastructure components are at or beyond their useful design life. With the exception of the new Mandela Parkway that was created out of the Loma Prieta Earthquake devastation and the rerouting of State Route 880, the surrounding areas are in critical need for repair and rehabilitation. Significant infrastructure investment is immediately needed both to serve the existing community and to attract new businesses.

II. EXECUTIVE SUMMARY

A. Purpose

This West Oakland Public Infrastructure Assessment and Recommendations Report examines Mandela Parkway and 3rd Street Corridor Commercial Industrial Zones' current transportation network and infrastructure to develop an infrastructure framework that sets the foundation for further planning and design efforts needed to implement the Community & Economic Development Agency's overall Industrial District Strategy.

Strategies to address safety concerns, connectivity, and function are provided for each multi-modal transportation system component. A field and systems review of the current roadway and utility infrastructure enabled cataloguing deficiencies, determining strategies, and developing a needs assessment. Recommended improvements with associated costs are then prioritized for future funding procurement.

B. Background

The surface infrastructure that supports these industrial zones comprises a network of transportation systems. These transportation systems, comprised of streets, railroad spurs, bicycle routes, and pedestrian paths, work together to provide access to and through the areas and to deliver/ship freight and supplies. These local systems connect with a broader network of regional systems that include direct access to the Port of Oakland; BNSF and Union Pacific Railroad Corridors; California Interstate Routes 80, 880, 980 and 580; and the West Oakland BART Station. Additionally, the Oakland International Airport is located approximately 10-miles south of the Industrial Zones.

Utility Infrastructure also support these Industrial Zones with stormwater and wastewater collection systems; domestic and fire suppression water networks; electric, gas, and communication networks. These systems' capacity and capability to support the current businesses and land use, as well as future development/redevelopment, is vital for the long-term viability of these Industrial Zones.

Research, Analysis, and Strategies

Within the Mandela Parkway Corridor Commercial Industrial Zone and the 3rd Street Corridor Commercial Industrial Zone, infrastructure analysis, discussion and recommendations is divided into Transportation Systems and Infrastructure Inventory and Evaluation categories.

The street network, railroad facilities, bicycle routes, and pedestrian circulation in and through the industrial zone areas are part of the Transportation Systems category. The Infrastructure Inventory and Evaluation provides a roadway surface conditions field review and assessment; delineates street plan lines and cross-sections to provide adequate roadway travel, parking, and pedestrian zones (curbs, gutters and sidewalks); determines the sufficiency of wastewater and stormwater collection and transmission facilities; adequacy of water, power, and communications networks; and the suitability of the existing street lighting.

These reviews lead to the following Transportation Systems and Infrastructure strategies:

Strategy A – Street Network and Circulation. The street network within and through each district provides an excellent framework for industrial and commercial activities, as both the Mandela Parkway and 3rd Street Corridor Commercial Industrial Zones are situated near major transportation networks which provide good connectivity and access, both locally and regionally. Specific network and circulations strategies include:

A.1 Safety. Specific traffic safety concerns and deficiencies are identified at key locations in the Industrial Zones. Improvements to these roadway configurations would improve sight distance and traffic flow, and, thereby, decrease the potential for traffic collisions. These issues should be addressed promptly.

A.2 Gateways. In order to signify the entry into each Commercial Industrial Zone, gateway monuments should be installed at strategic locations to help identify and focus on the particular zone as a “place”, that is specifically recognized by the City and the public.

Strategy B – Rail Lines. A comprehensive strategy that addresses the disposition and condition of the rail lines and affected streets that share alignments is needed for both the near (the next 5-years), and the long term (15+ years) future.

For the long term, decisions need to be made by stakeholders, including the City, the railroads and property owners about which rail lines will remain in perpetuity, in what streets, and to serve which parcels. Those spur lines designated to stay should be brought up to appropriate current standards of construction and safety. The streets that the spurs share an alignment with should be reconstructed with appropriate, modern

features such as proper sub-drainage and adequate rail crossing panels throughout their length. The rail lines not identified for reuse should be removed, and the roadways reconstructed in accordance with appropriate construction standards and environmental practices.

Strategy C – Bicycle Facilities. Bicycle routes through the industrial areas are an integral part of the transportation network. Bicycles are an increasingly popular means for employees to travel to their workplaces in West Oakland, especially given the lack of on-site and off-street parking opportunities in the area. While major bicycle routes run through West Oakland (Bay Trail), an increased emphasis on both resident commuter and employee cycling opportunities is an important component of decreasing congestion and the carbon footprint of the business districts in Oakland.

Both interim and permanent bicycle routes and lanes should be established through the industrial districts. Current designated routes should be connected ("gaps" closed) and signed to further promote bicycle use in and through the district(s) boundaries.

Strategy D – Pedestrian Connections. Pedestrian connectivity within the Study area is important for access for employees who may travel from Downtown by bike or bus, from BART on foot, or from the surrounding residential neighborhoods to the employment centers in the District, especially as it grows with new economic uses. The current zoning allows a great variety of economic models and activities, from office and R & D parks, to campuses for technology and life-science to food production facilities or even retail big box complexes. Therefore the pedestrian connections within the existing industrial districts must be part of future development and reuse potentialities.

Interim and permanent (sidewalks) pedestrian zones should be delineated throughout the industrial districts. Current designated paths should be connected ("gaps" closed) and provisions for future sidewalks enhanced.

Strategy E – Infrastructure. While the transportation network provides an excellent framework, most of the infrastructure components are at or beyond their useful design life. Except for the new Mandela Parkway, the surrounding industrial areas are in critical need of repair and rehabilitation. Significant infrastructure investment is needed both to serve the existing community and to attract new businesses.

E.1 Roadways. Based on field review, and confirmed by records kept as part of the Metropolitan Transportation Commission pavement management system that the City uses , the roadways are generally in poor condition and in dire need of repair and long-term rehabilitation.

E.2 Sidewalks. Based on field review and as indicated in Strategy D, many streets have many gaps in sidewalks and inaccessible paths of travel. Many intersections are either lacking accessible curb ramps or have ramps that do not meet current accessibility standards.

E.3 Wastewater. An overall wastewater system study is needed to determine the condition of the system, recommend immediate repairs, and long-term upgrades to the system. Additionally underground utility infrastructure improvements should be coordinated with and installed prior to intersection and streetscape improvements.

E.4 Storm Drains. An overall drainage system study is needed to determine the condition of the system, suitability for reuse, recommend immediate repairs, and long-term upgrades to the system. As the area improves, storm drain lines and structures should be added and or replaced to serve the Industrial Zones.

E.5 Domestic Water. As many of the conveyance lines are old, likely to be in poor condition, and appear undersized to meet current fire flow requirements, an overall water system model and study is needed to determine interim and ultimate replacement, upgrades, and main line extensions.

E.6 Street Lighting. As an interim measure, street lights should be maintained and fixtures replaced to increase lighting and therefore increase public safety. Ultimately, street lights should be replaced with intersection and streetscape improvements utilizing appropriate industrial lighting standards and fixtures determined through a lighting master plan study.

E.7 Electricity and Telecommunications

a. Power and Undergrounding of Aerial Wires and Structures

As use in the District(s) intensifies, the demands for electricity may exceed the capacity of the existing infrastructure. PG&E will need to evaluate from a macro perspective and a case by case development as to how and where they will need to expand capacity for delivery of electrical power to the Districts, and then how to distribute that power within each District. Additionally, the City should determine its available balance of undergrounding credits with PG&E, develop and incorporate the districts into a citywide prioritization plan to relocate overhead utility lines underground.

b. Broadband Network

Because of the backbone infrastructure in the area, there is potential for extensive broadband connectivity. A Broadband Network master plan should be coordinated with current network operators to program and plan the facilities.

E.8 Parking. With the limited availability for on-street and off-street parking with the Industrial Zones, a comprehensive parking plan will be needed to coordinate development, street enhancements, and the potential for shared parking or other Traffic Demand Management (TDM) resources to reduce parking need.

C. Recommendations and Prioritization

The recommendations for infrastructure improvements within each district fall into various priority categories. While it is anticipated that implementing projects by priority may provide the best leverage of funding, street improvement projects that address multiple priorities simultaneously could be leveraged if sufficient funding is available.

Priority 1 – Safety. The first priority level addresses specific traffic safety concerns and deficiencies. Improvements to these roadway configurations would improve sight distance and traffic flow, thereby decreasing the potential for traffic collisions. Issues related the Campbell Street/West Grand Avenue turning movements and the Wood Street/32nd Street intersection geometry are in immediate need for improvement.

Priority 2 – Maintenance and Repair. Pavement repair within the entire study area will improve the roadway conditions for their multimodal users and will signify to the public that the West Oakland Industrial Districts are active. Costs are estimated for improvements that would provide a 5 to 10-year design life.

Priority 3 – Gateways. Projects to delineate gateway opportunities are designated priority three. These could include monuments and/or signage at strategic locations to advise visitors that they are entering a distinct District within the City of Oakland.

Priority 4 – Intersection Improvements. Street intersection improvements to street intersections including curbs, gutters, sidewalks, accessible curb ramps, pavement rehabilitation, striping, signage and gateway monuments. Each intersection, by definition, serves as a gateway to as many as four street segments. Projects within this priority grouping are divided to differentiate costs associated with reconstructing intersections with between (Group A) and without (Group B) upgrades and railroad spur replacement. Estimated costs would provide a 20-year plus design life to the intersections.

Priority 5 – Streetscape and Roadway Reconstruction. Full street reconstruction improvements would replace curbs, gutters, sidewalks, pavement, striping, signage, lighting, underground utilities and landscaping. Streetscapes are assigned a lower priority level due to the costs associated with improvements. As with Priority 4, separate groups for improvements with and without railroad improvements are identified for design life expectancy of 20 plus years.

Priority 6 – Circulation. Projects that improve circulation through the area are assigned a relatively low priority level, partly due to cost, and partly due to the level of further study that would realistically be required prior to their implementation. Projects could include installing a roundabout within the W. Grand Avenue/Mandela Parkway intersection to facilitate smoother traffic flow and reopening the 10th Street barricade.

Rough, order of magnitude construction costs estimate by quadrant the recommended improvements at each priority level (for the full reconstruction of streets and intersections, the costs have been separated further into categories that include replacing the rail within the streets, and that include removing rail in the streets and replacing with pavement). Costs are presented in Table II.1.

Table II.1 Mandela Parkway Commercial Industrial Zone – Rough Order of Magnitude Costs (in millions)

Priority	Northwest Quadrant	Northeast Quadrant	Southwest Quadrant	Southeast Quadrant	Total
Priority Level 1 - Safety	$ 0.1		$ 0.1		$ 0.1
Priority Level 2 – Maintenance and Repair	$ 1.8	$ 4.9	$ 3.5	$ 2.0	$ 12.2
Priority Level 3 – Gateways	$ 0.2	$ 0.1	$ 0.1		$ 0.4
Priority Level 4 (Either 4A or 4B or combination)					$ -
4A – Intersection Improvements without Rail	$ 2.0	$ 5.0	$ 4.5	$ 3.4	$ 14.9
4B – Intersection with Rail Replacement	$ 1.6	$ 4.2	$ 3.9	$ 2.8	$ 12.5
Priority Level 5 (Either 5A or 5B or combination)					$ -
5A – Streetscape without Rail	$ 11.0	$ 29.0	$ 22.0	$ 13.0	$ 75.0
5B – Streetscape with Rail Replacement	$ 14.0	$ 33.0	$ 26.0	$ 18.0	$ 91.0
Priority Level 6 – Traffic Circulation	$ 4.7				$ 4.7
Total (without Rail Replacement)	$ 19.8	$ 39.0	$ 30.2	$ 18.4	$ 107.3
Total (with Rail Replacement)	$ 22.4	$ 42.2	$ 33.6	$ 22.8	$ 120.9

In the 3rd Street Corridor, because full streetscape replacements do not appear to be necessary, the priority levels are different. Priority levels 1-2 are the same, and priority level 3 includes upgrades to the sewer and storm drain systems, as well as upgrades to the water delivery systems. Priority level #4 includes upgrades to streetlights. Priority level #5 includes miscellaneous projects to improve circulation in the area, as described in Section VI.C, including updating curb ramps throughout the district, and making improvements described near Martin Luther King Jr. Way, and Castro Street.

Rough, order of magnitude construction costs have been estimated for recommended improvements at each priority level for the 3rd Street Corridor. Costs are presented in Table II.2.

Table II.2 3rd Street Corridor Commercial Industrial Zone – Rough Order of Magnitude Costs (in millions)

Priority		Total
Priority Level 1 – Maintenance and Repair	$	2.6
Priority Level 2 – Gateways	$	0.4
Priority Level 3 – Utility Upgrades	$	7.4
Priority Level 4 – Streetlight Improvements	$	1.4
Priority Level 5 – Traffic Circulation	$	0.7
Total (without Rail Replacement)	$	12.5

III. APPROACH

The infrastructure in each zone was divided into categories for analysis, discussion and recommendations. The infrastructure categories include:

- Transportation Systems: including streets, rail, bicycle and pedestrian circulation networks.

- Infrastructure Inventory and Evaluation: including roadway surface conditions; adequacy street plan lines and cross-sections to delineate roadway travel, parking, and pedestrian zones (curbs, gutters and sidewalks); sufficiency of wastewater and stormwater collection and transmission facilities; and the suitability of the existing street lighting.

Based on each street's function within both their district zone and within the context of the overall City street network grid, streets are designated as Tier 1, 2, or 3. Tier 1 roadways, the streets of highest precedence, were determined based on their connectivity to the grid and circulation within the district zone (See Figures III.1 and III.2).

Once the infrastructure needs were assessed based on their condition, recommendations for improvements were prioritized. Highest priority improvement recommendations are those that mitigate existing safety concerns. Next, improvements that have a high level of visibility relative to their costs of implementation are recommended. Third are projects that, piece by piece, bring the infrastructure in the area up to or near current standards. Last, improvement projects that improve overall circulation are recommended.

This general implementation order reflects an understanding that, though full streetscape and roadway surfacing improvements throughout the area are the ultimate goal for the program, the funding for such an enterprise is unlikely to be available in a single phase.

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LEGEND

TIER 1 ROADWAYS

TIER 2 ROADWAYS

GATEWAYS (TIER 1)

GATEWAYS (TIER 2)

POTENTIAL ROUNDABOUT/ GATEWAY

500 0 250 500 1000

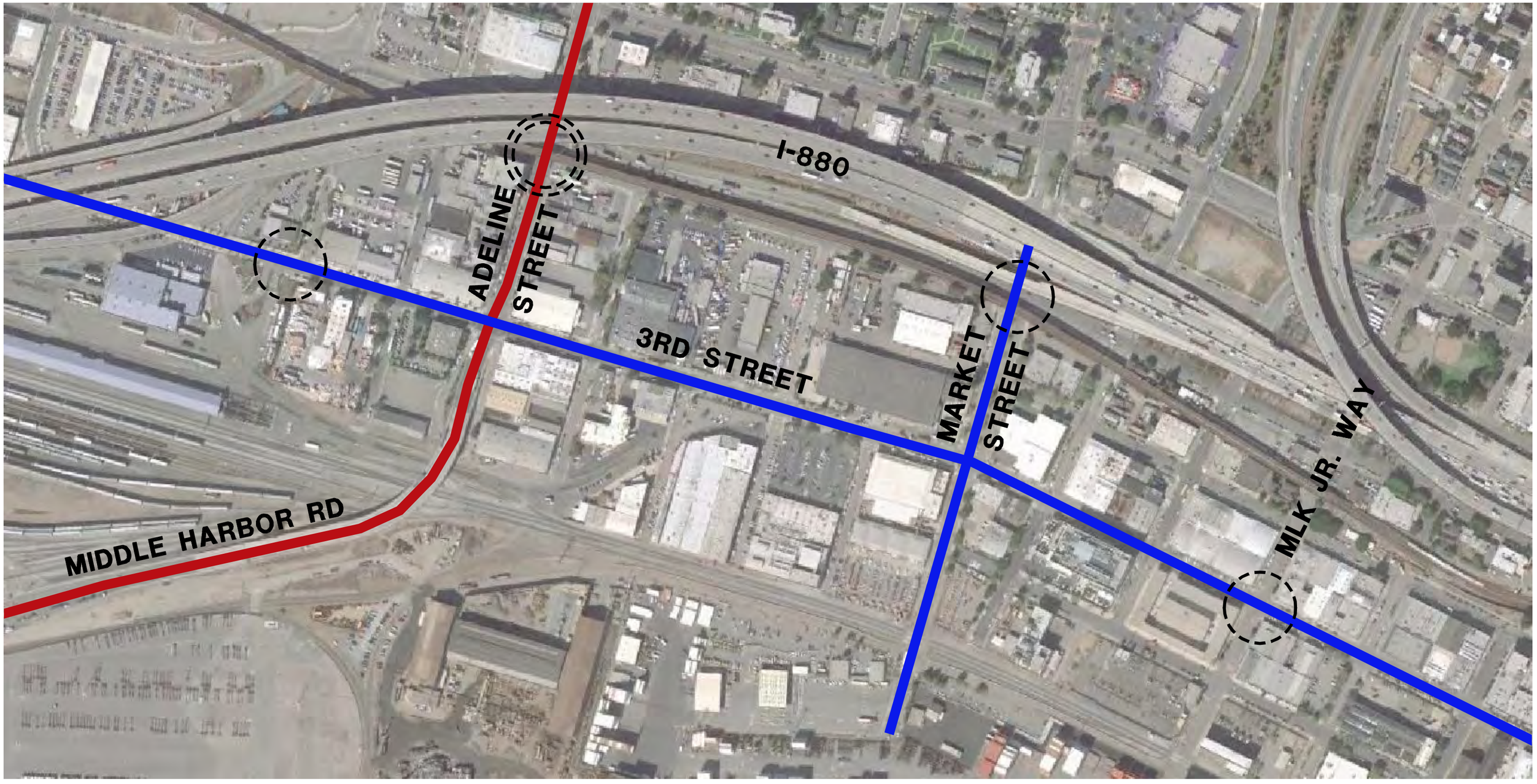
(IN FEET)
1 inch = 500 ft.

NORTH

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FIGURE III.1
MANDELA STREET CIRCULATION AND GATEWAY OPPORTUNITIES

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LEGEND

TIER 1 ROADWAYS

TIER 2 ROADWAYS

TIER 3 ROADWAYS

GATEWAYS (TIER 1)

GATEWAYS (TIER 2)

300 0 150 300 600

(IN FEET)
1 inch = 300 ft.

NORTH

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FIGURE III.2
3RD STREET CIRCULATION AND GATEWAY OPPORTUNITIES

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IV. TRANSPORTATION SYSTEMS

Transportation systems within each zone consist of street networks, rail spur lines, pedestrian and bicycle facilities. Below is a background description of how these systems and facilities operate within each Zone, and how they tie each Zone into regional and City-wide systems. Analyses of their apparent issues and deficiencies are also included.

A. Street Network and Circulation

i. Mandela Parkway Commercial Industrial Zone - Background

West Grand Avenue serves as an arterial road traversing the Mandela Parkway Commercial Industrial Zone east and west directions, easily defining the study area into Mandela Parkway NW, NE (Industrial Sub-area 15) and Mandela Parkway SW and SE. (Subarea 16). Adeline Street and the Interstate 880 Frontage Road act as arterials, defining the edges of the Sub-area in the north and south direction. Mandela Parkway and Peralta Street north of W. Grand Avenue function as collector streets.

The primary arterial in the center of the West Oakland community, West Grand Avenue carries traffic through the Study Area to/from Downtown Oakland and Interstate 980 to the east and to/from the Port of Oakland and the Oakland-San Francisco Bay Bridge, Interstate 80 and Interstate 880 to the west. It also is part of the citywide Truck Route and carries heavy commercial traffic out of the Downtown area to the Port of Oakland, and occasionally and erroneously used by truckers traveling through West Oakland to get to the I-980 via Brush Street on ramps. This corridor was identified in the 1998 General Plan Congress as a primary commercial arterial, and was designated at that time for large scale regional commercial uses leading to the Downtown.

The easternmost boundary of the Industrial zone is Adeline Street, which carries traffic from The Port of Oakland, Interstate 880 and the West Oakland BART Station in the south to Emeryville and Berkeley traveling north. Adeline is a mixed use street with small to mid-sized industrial parcels at 3rd Street, and a core intersection for (non-heavy weight) travel into the Port of Oakland. It turns entirely residential from Seventh Street through to 21st, just before West Grand, where the large East Bay Municipal Utilities District corporate yard is located. To the north the street is a combination of uses, with industrial commercial activity on the west and primarily residential with some live work on the east side, up until its entry into Emeryville. The street primarily caters to local deliveries and does not carry significant through traffic. It is not on the designated Truck Route.

Peralta Street functions as a collector street carrying some commercial traffic out of Emeryville, behind the Bay Bridge shopping center. Peralta Street is on the West Oakland Streetscape Program to define its character and role as an entry from Emeryville to the North, collecting traffic from Hollis Street in Emeryville. It serves the

community and the inter-city traveler alike. Unlike Adeline Street however, it does not provide a through crossing at West Grand. It essentially becomes a local street between W Grand/20thStreet and its terminus at 3rd Street, which itself is prevented by the existing street pattern and neighborhood from connecting to the Third Street Corridor. It does however pose some considerable importance for the Raimondi Park/Subarea 16 commercial traffic, which includes local truck traffic.

Wood Street also functions as a collector street, serving the local needs of industry, including large distribution as well as freight logistics companies located in both Subarea 16 and 15. Increasingly it will be used, once repaired, but the local development residential community. Wood Street is among the most challenged of all the industrial zoned streets, perhaps the worst street conditions in West Oakland, yet it does connect to the City of Emeryville, while not being easily accessed from West Grand. It therefore is of benefit to the business community without interference from regional traffic flow.

The Interstate 880 Frontage Road, which was constructed after the Cypress Freeway re-routing, extends along the westernmost boundary of Subarea 15 and 16. Frontage Road carries mainly Port of Oakland traffic from 7th Street around the Study Area to the west, as well as local traffic from the Transit Village area destined for I-80 north and the City of San Francisco via the W Grand onramp to I-80 west. Frontage Road connects to West Grand Avenue before merging back onto Interstate 880. Access to the I-880 Frontage Road from the Study Area is limited to only the West Grand and 7th Street intersections. Both 14th (due to a new housing development) and 10th (due to a k-rail that functions as a street barricade, installed to prevent industrial truck traffic, originating from the recycling facility there, from entering the neighborhood) Streets are currently closed to through traffic.

Mandela Parkway bisects the Study Area from north to south. It connects the West Oakland BART Station and 7th Street on the south to the East Bay Bridge Shopping Center in Emeryville in the north. A signalized intersection at West Grand Avenue effectively acts like two separate intersections and operates inefficiently due to the width of Mandela Parkway's median.

ii. Mandela Parkway Commercial Industrial Zone - Analysis

In 1999, ten years after the Loma Prieta Earthquake destroyed the West Oakland portion of the Cypress Freeway, the California Department of Transportation (Caltrans) funded a $12 million streetscape revitalization project and created Mandela Parkway. Formerly a frontage road underneath the elevated Cypress Freeway, this street, known as "Cypress Street", had physically divided the community into an "East and West". Its initial construction in the 1960's was the cause of much protest from the community itself for what it would do to the community, and the revitalization of the street with a pedestrian median greenbelt down its center, and a re-routed freeway to the far

western boundary between the community and the Port of Oakland, was a much celebrated event. Caltrans involved the community and City in its design.

Despite the beauty of the Parkway, albeit it now challenged by lack of a funding source for ongoing maintenance, circulation within the Study Area on either side of the Parkway is negatively affected by both the poor street surface conditions, and by the Parkway's bisection over the historic gridded street network. Mandela Parkway intersects the street grid north of Mandela West Grand Avenue on a skewed angle, creating several small, triangular shaped "blocks." Additionally, a segment of Campbell Street between 26th and 28th Streets has been effectively abandoned by the City and is gated off and used by the fronting properties for parking.

iii. 3rd Street Corridor Commercial Industrial Zone- Background

Third Street has served historically as the primary corridor for logistics and transportation industrial use. There are many truck companies, freight forwarders, and other businesses related to Port private commercial activity. As such, 3rd Street is on and will remain a route that carries significant truck traffic, though the area's smaller warehouses and post century, brick historic structures are beginning to transition to more creative uses such as professional services (architecture and engineering) book publishing, wine and breweries and custom food uses. It therefore makes an easy transition to the Jack London Square off price retail district/arts & entertainment district in land use, but not in circulation. In addition to the truck traffic it carries, the street is heavily utilized for off street parking (few warehouse and converted buildings have space or yard available for on-site parking) and is a designated as part of the "Bay Trail" and therefore part of the City's Bicycle Master Plan designated route. 3rd Street, along with its other functions, carries the Trail from Mandela Parkway and the WO Bart Station through Jack London, amid the Produce District, to Jack London Square.

Adeline Street flowing in the north-south direction serves as the arterial through the 3rd Street Corridor Commercial Industrial Zone. 3rd Street, oriented in the east-west direction, serves as a collector street.

South of the 3rd Street Intersection, Adeline Street turns into Middle Harbor Drive, one of the three Port of Oakland entrances. To the north, Adeline Street carries traffic to Interstate 880, immediately north of the study area. It also flows to 7th Street, another arterial in the east-west direction that serves as another entrance to the Port of Oakland to the west. Vehicles traveling to Downtown Oakland and Interstate 980 / State Route 24 to the east also use Adeline Street. Adeline Street also continues north from 7th Street into Berkeley and Emeryville.

iv. 3rd Street Corridor Commercial Industrial Zone- Analysis

Because the Port of Oakland does not open until 8:00 in the morning, trucks tend to park in the middle of Adeline Street between 3rd and 5th Streets while they await the

Port's opening. This is disruptive to other traffic and businesses on Adeline Street. The challenge is to deal with ongoing truck congestion in this area, while easing circulation and roadway width for denser employment and commercial activity, while ensuring safety of bicyclists through this area.

Strategy A – Street Network and Circulation.

The street network within and through each district provides the industrial setting and opportunities. Both the Mandela Parkway and 3rd Street Corridor Commercial Industrial Zones are situated near major transportation networks which provide good connectivity and access. Specific network and circulations strategies include:

A.1 Safety. Specific traffic safety concerns and deficiencies are identified at key locations in the Industrial Zones. Improvements to these roadway configurations would improve sight distance and traffic flow, and, thereby, decrease the potential for traffic collisions. These issues should be addressed promptly.

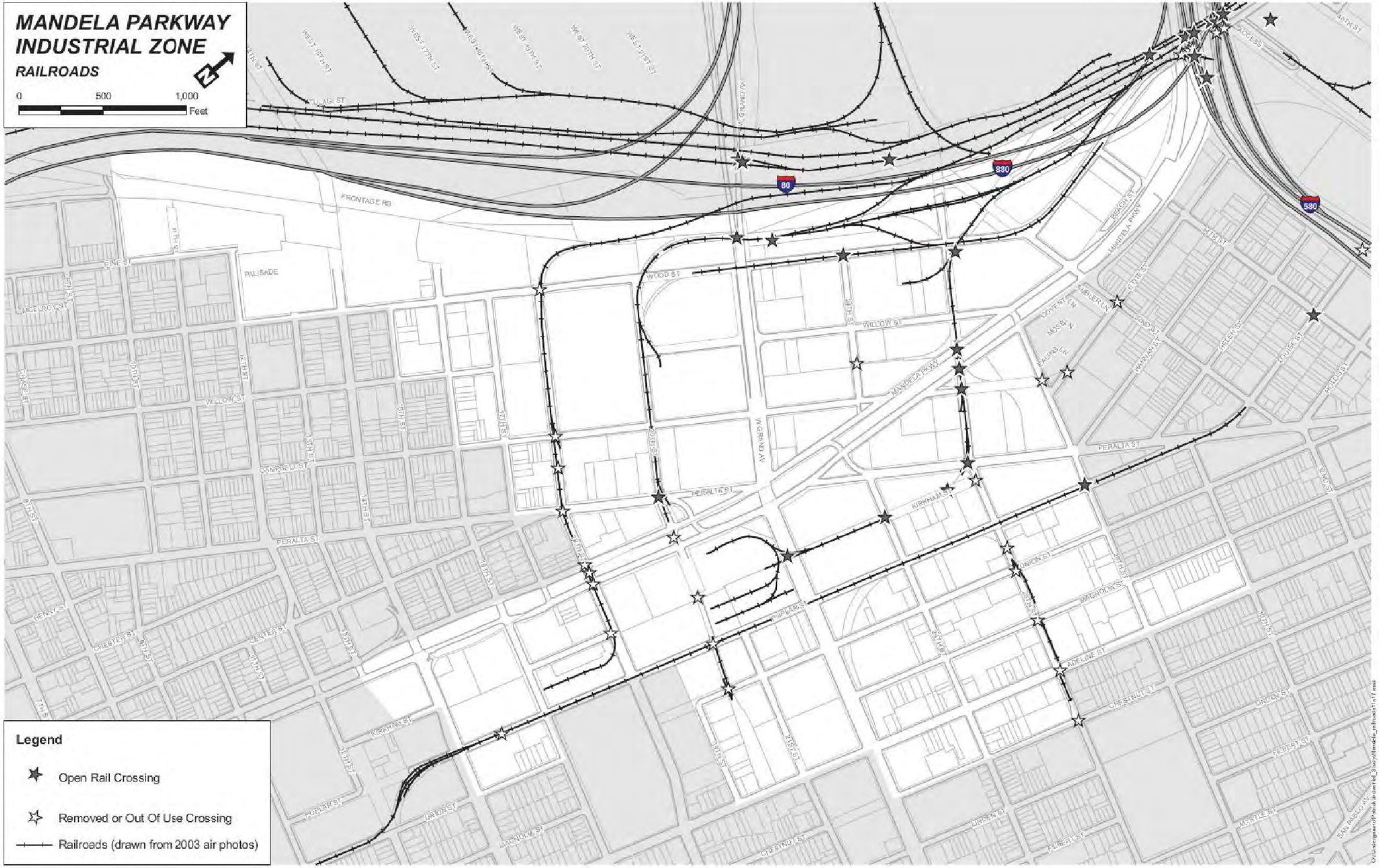
A.2 Gateways. In order to signify the entry into each Commercial Industrial Zone, gateway monuments should be installed at strategic locations to help identify and focus on the particular zone as a "place", that is specifically recognized by the City and the public.

B. Rail Lines

i. Mandela Parkway Commercial Industrial Zone - Background

The Mandela Parkway Commercial Industrial Zone sits adjacent to the Port of Oakland and, subsequently, to the backbone rail infrastructure that serves the Port, both to the south and west (See figure IV.1). The study area originally developed as a manufacturing and warehousing hub that utilized its proximity to the Port and the rail infrastructure through rail spurs that share alignments with Wood, 18th, 20th and 26th Streets from the west, and with Poplar Street from the south. As land values have increased in the heart of the Bay Area, manufacturing and warehousing industries have moved from West Oakland, or evolved with less dependency on rail Much of the utility the rail spurs offered has declined, or businesses continuing to use such rail have found locations in East Oakland or further into the San Joaquin Valley.

While a disposition analysis both to the ownership and beneficiaries of the spur lines is outside of the scope of this report, based on the current composition of California railroad providers, we anticipate that either Burlington Northern Santa Fe (BNSF) or Union Pacific (UP) Railroad lines have the major stakes. In general, the railroads own fee title to the underlying land, but in some cases, fee title is owned by the City of Oakland and easements are granted to the railroads for the operation and maintenance of their facilities. The City of Oakland is in the process of updating franchise agreements with BNSF and UP. Generally, it is the railroads' responsibility to maintain



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FIGURE IV.1
MANDELA PARKWAY ZONE RAIL LINES

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an area between imaginary lines that would sit 2.5-feet outside of the outermost rail in the track alignment.

In addition to the "main" spurs mentioned above, smaller spurs directly feed various parcels, often times by splitting from the "main" in the street and traversing onto the sidewalk to access loading areas that front to the public rights-of-way (see Photo IV.1).

ii. Mandela Parkway Commercial Industrial Zone - Analysis

In their current condition, these auxiliary spurs can cause tripping hazards for pedestrians and could create difficulties for implementing accessibility and ADA compliance programs. Additionally the interface between the street pavement surface and rail is in poor condition and exhibits significant pavement distress (potholes, cracks, etc.). Neither the rail spurs, nor have the streets enveloping them been adequately maintained.



Photo IV.1: Rail lines encroaching into sidewalk corridor

3rd Street Corridor Commercial Industrial Zone- Background

Existing rail lines define the entire south edge of the 3rd Street Corridor as Magnolia, Chestnut, Linden, Filbert, Myrtle and Brush Streets all terminate on the north side of the rail right-of-way. Market Street and Martin Luther King Way cross the rail lines at grade, and Adeline Street is elevated to cross above the rail lines (See Figure IV.2).

An existing spur serves the parcels in the block surrounded by Linden, Filbert and 3rd Streets.

iii. 3rd Street Corridor Commercial Industrial Zone- Analysis

The at-grade crossings at Market Street and at Martin Luther King Jr. Way are in poor condition and should be repaired.

Since the spur that serves the block surrounded by Linden, Filbert and 3rd Streets does not cohabitate with the street system, it creates a viable long term rail service corridor.

Strategy B – Rail Lines.

A comprehensive strategy that addresses the disposition and condition of the rail lines and affected streets that share alignments is needed for both the near (the next 5-years), and the long term (15+ years) future.

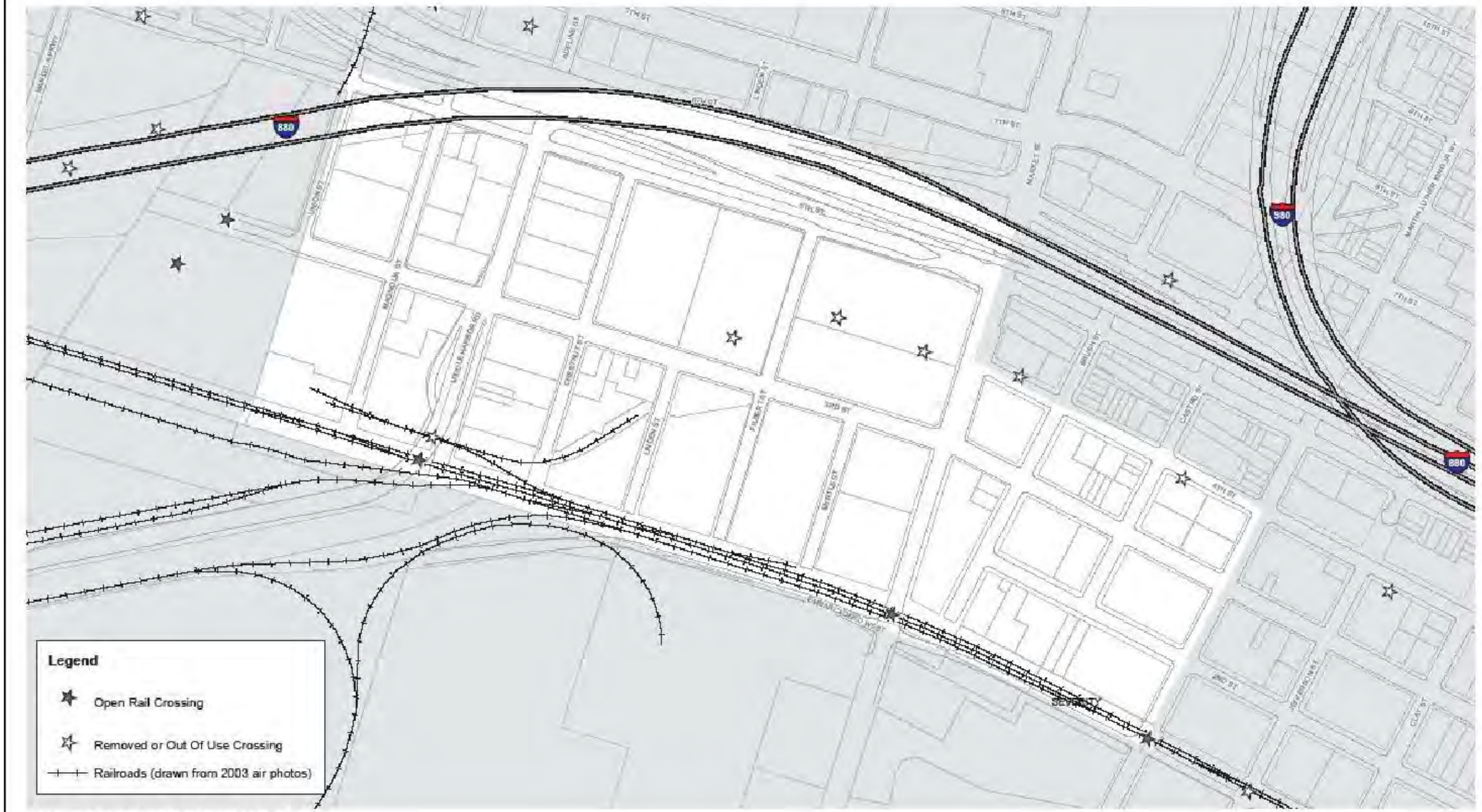
For the long term, decisions need to be made by stakeholders, including the City, the railroads and property owners about which rail lines will remain in perpetuity, in what streets, and to serve which parcels. Those spur lines designated to stay should be brought up to appropriate current standards of construction and safety. The streets that the spurs share an alignment with should be reconstructed with appropriate, modern features such as proper sub-drainage and adequate rail crossing panels throughout their length. The rail lines not identified for reuse should be removed, and the roadways reconstructed in accordance with appropriate construction standards and environmental practices.

C. Bicycle Lanes

The provision of bicycle lanes creates a street friendly environment as well as a safer ambiance for pedestrian who are employees or customers/clients of local businesses. Bicycles are an increasingly popular means for employees to travel to their workplaces in West Oakland, especially given the lack of on-site and off-street parking opportunities in the area. While major bicycle routes run through West Oakland (Bay Trail), an increased emphasis on both resident commuter and employee cycling opportunities is an important component of decreasing congestion and the carbon footprint of the business districts in Oakland.

i. Mandela Parkway Commercial Industrial Zone - Background

The Cypress Freeway Replacement Project that created Mandela Parkway in 1998 provided a new Bay Trail alignment consisting of two Class 2 bike lanes, one on each side of the street. In addition to being a part of the Bay Trail, the Class 2 bike lanes connect directly to the West Oakland BART Station just south of the study area. A portion of the bike route on 14th Street is completed with another section planned joining Mandela Parkway to downtown. 8th Street is part of the east-west bicycle route segment, and new bicycle lanes are to be added through the Seventh Street Streetscape improvements.



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FIGURE IV.2
3RD STREET ZONE RAIL LINES

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These routes are indicated on the 'Design Status of Bikeway Projects' dated 25 May 2010 by the City of Oakland, Transportation Services Division.

ii. Mandela Parkway Commercial Industrial Zone - Analysis

The gaps in these routes should be implemented with the study area projects if they are not already filled with other projects at the time of final design.

iii. 3rd Street Corridor Commercial Industrial Zone- Background

3rd Street is identified as part of the San Francisco Bay Trail by the Association of Bay Area Governments' (ABAG) web site and contains Class 2 bicycle lanes between Mandela Parkway and Brush Street along both sides of the street. The Bay Trail, as shown on ABAGs' maps, turns south down Brush Street and continues on 2nd Street to Broadway, where it then connects to Jack London Square and the Ferry Building to the south, and continues to the east along the Embarcadero. The City Transportation Services Division's 'Design Status of Bikeway Projects' map dated 25 May 2010 indicate a designed bikeway on 7th Street and 2nd Street.

Market Street is the only other street in the corridor that provides bicycle lanes. From 5th Street south to 3rd Street bicycle lanes are striped in both street directions.

iv. 3rd Street Corridor Commercial Industrial Zone- Analysis

3rd Street will grow in importance as a cyclist option for Jack Lond Square and City of Alameda destinations as more regional cyclists access the Mandela Parkway. ABAG's map identifies Middle Harbor Road, which is the extension of Adeline Street south of 3rd Street into the Port of Oakland as "Unimproved Bay Trail (on street), no bike lanes and/or no sidewalks." This Bay Trail link appears be a second access to Middle Harbor Shoreline Park at the west edge of the Port of Oakland. In reality this stretch of road is currently a narrow bridge over the railroad lines that serve the Port and carries heavy truck traffic in 4-travel lanes (2-lanes in each direction) with no shoulders. In its current condition, this route appears to be unfriendly and potentially unsafe as a bicycle route.

Strategy C – Bicycle Facilities.

Bicycle routes through the industrial areas are an integral part of the transportation network. Bicycles are an increasingly popular means for employees to travel to their workplaces in West Oakland, especially given the lack of on-site and off-street parking opportunities in the area. While major bicycle routes run through West Oakland (Bay Trail), an increased emphasis on both resident commuter and employee cycling opportunities is an important component of decreasing congestion and the carbon footprint of the business districts in Oakland.

Both interim and permanent bicycle routes and lanes should be established through the industrial districts. Current designated routes should be connected ("gaps" closed) and signed to further promote bicycle use in and through the district(s) boundaries (See figure IV.3).

D. Pedestrian Connections

Pedestrian connections within the Study area are important for access for employees who may travel from Downtown by bike or bus, from BART on foot, or from the neighborhood to the employment centers in the District, especially as it grows with new economic uses. The current zoning allows a great variety of economic models and activities, from office and R & D parks, to campuses for technology and life-science to food production facilities or even retail big box complexes. Therefore the pedestrian connections within the existing industrial districts must assume some of these future development potentialities.

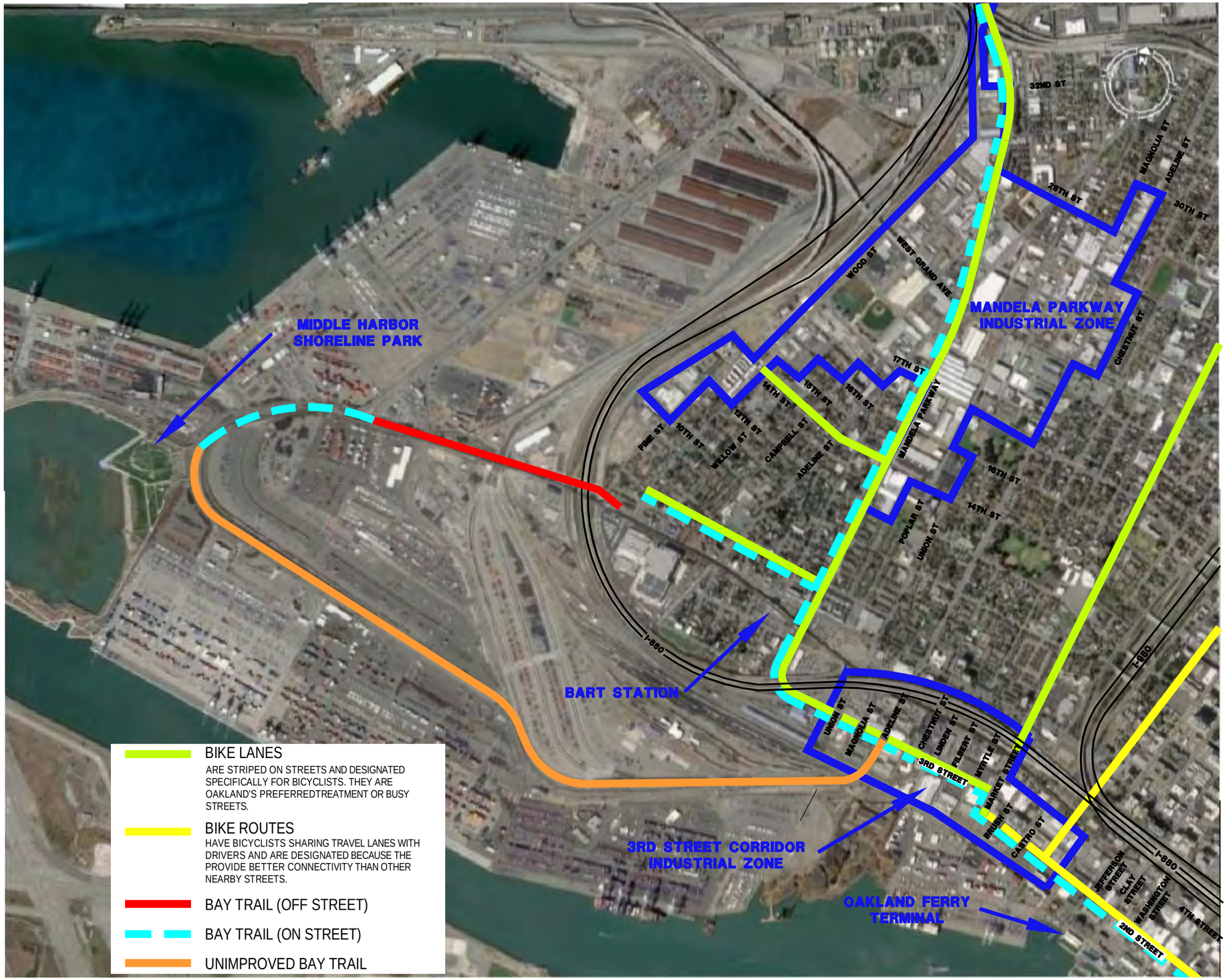
i. Mandela Parkway Commercial Industrial Zone - Background

The Mandela Parkway Southwest includes a large park (Raimondi) which has benefitted from enormous fundraising and support from the citizens and business community. Tree planting projects are improving the quality for pedestrian travel, but cross pedestrian connections to and from Downtown, through the West Oakland neighborhood to the employment areas of Mandela Parkway are greatly lacking.

The Cypress Freeway Replacement Project that created Mandela Parkway in 1998 provided a 10-foot-wide meandering concrete pathway in the median, which is lighted and extends from 8th Street to 32nd Street. This trail can be accessed via the sidewalks on Mandela Parkway that extend south to the West Oakland BART Station. The BART Station is almost 1-mile from the intersection of Mandela Parkway and Grand Avenue. This provides continuous north south pedestrian connections, from Emeryville to the Jack London District via Third Street. However the east-west connections important to the business community, such as 14th, 18th/20th (from I-980 to Wood Street) are lacking, as well as an upper connection in the upper Mandela area, along either 28th or 32nd Street.

ii. Mandela Parkway Commercial Industrial Zone - Analysis

As described in Section V, many of the sidewalks throughout the Study Area are in disrepair or are non-existent and pedestrian safety lighting within the Study Area is not consistently adequate. Additionally, many of the walkways, ramps (where they exist), and pavement conditions at street crossings (particularly where there are rail lines) do not meet current codes for compliance with the Americans with Disabilities Act.



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FIGURE IV.3

3RD STREET & MANDELA PARKWAY INDUSTRIAL ZONE BICYCLE ROUTES

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iii. 3rd Street Corridor Commercial Industrial Zone- Background

The 3rd Street Corridor is transitioning from a primary trucking and warehouse activity hub, related to the Port and other distribution facilities, to a business district which values its central location, its historic architecture of older brick buildings, and its proximity to Jack London Square amenities. Given this, the City anticipates the area will increase in employment density as older warehouses are being used for more office related or other purposes. The study area has pedestrian access to three major transportation hubs: The West Oakland BART Station is approximately a ¼ mile from the northwest corner of the study area; the Ferry Terminal is less than a ¼ mile from the southeast corner of the study area; and the 12th Street BART Station in Downtown Oakland is less than ¾ of a mile from the northeast corner of the study area. Sidewalks are continuous between all of these hubs, but not all ADA ramps comply with current standards.

iv. 3rd Street Corridor Commercial Industrial Zone- Analysis

3rd St needs to create a more pedestrian friendly environment, accompanying the use of the area as part of the Bay Trail Considerations include the manner and way of increasing on-street parking for increased employee and customer/client visits to the area, and the way the Bay Trail bicycle lanes can fit within these needs. A balance of on-street parking availability with the needs for pedestrian access will require a creative plan for improved circulation as denser development occurs in the area.

Strategy D – Pedestrian Connections

Pedestrian connectivity within the Study area is important for access for employees who may travel from Downtown by bike or bus, from BART on foot, or from the neighborhood to the employment centers in the District, especially as it grows with new economic uses. The current zoning allows a great variety of economic models and activities, from office and R & D parks, to campuses for technology and life-science to food production facilities or even retail big box complexes. Therefore the pedestrian connections within the existing industrial districts must be part of future development and reuse potentialities.

Interim and permanent pedestrian zones (sidewalks) should be delineated throughout the industrial districts. Current designated paths should be connected ("gaps" closed) and provisions for future sidewalks enhanced (See Figure IV.4).

V. INFRASTRUCTURE INVENTORY AND EVALUATION

The following inventory and evaluations of existing facilities is a result of field visits, discussions with community groups and City of Oakland staff, and review of CEDA's and the Department of Public Works' databases and various system master plans. Conditions were reviewed and evaluated in the context of what public infrastructure should reasonably be in place, and in

what condition, to adequately serve a vibrant, viable, developed industrial district. These are categorized into roadway (pavement conditions); curbs, gutters and sidewalks; storm drainage and wastewater conveyance systems; and street lighting.

A. Roadways

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone - Background

The City of Oakland, in partnership with the Metropolitan Transportation Commission (MTC), maintains a pavement management system that utilizes the program "Streetsaver", which maintains a database that includes data, including a "Pavement Condition Index" (PCI), on nearly every street segment within the City, including every street segment in the study area. The PCI's are based on known or estimated dates of construction and detailed inspections of each street section performed between 1985 and 2008. Figure V.1 & Figure V.2 presents a graphical representation of the conditions of each street, as indicated in the City of Oakland's database.

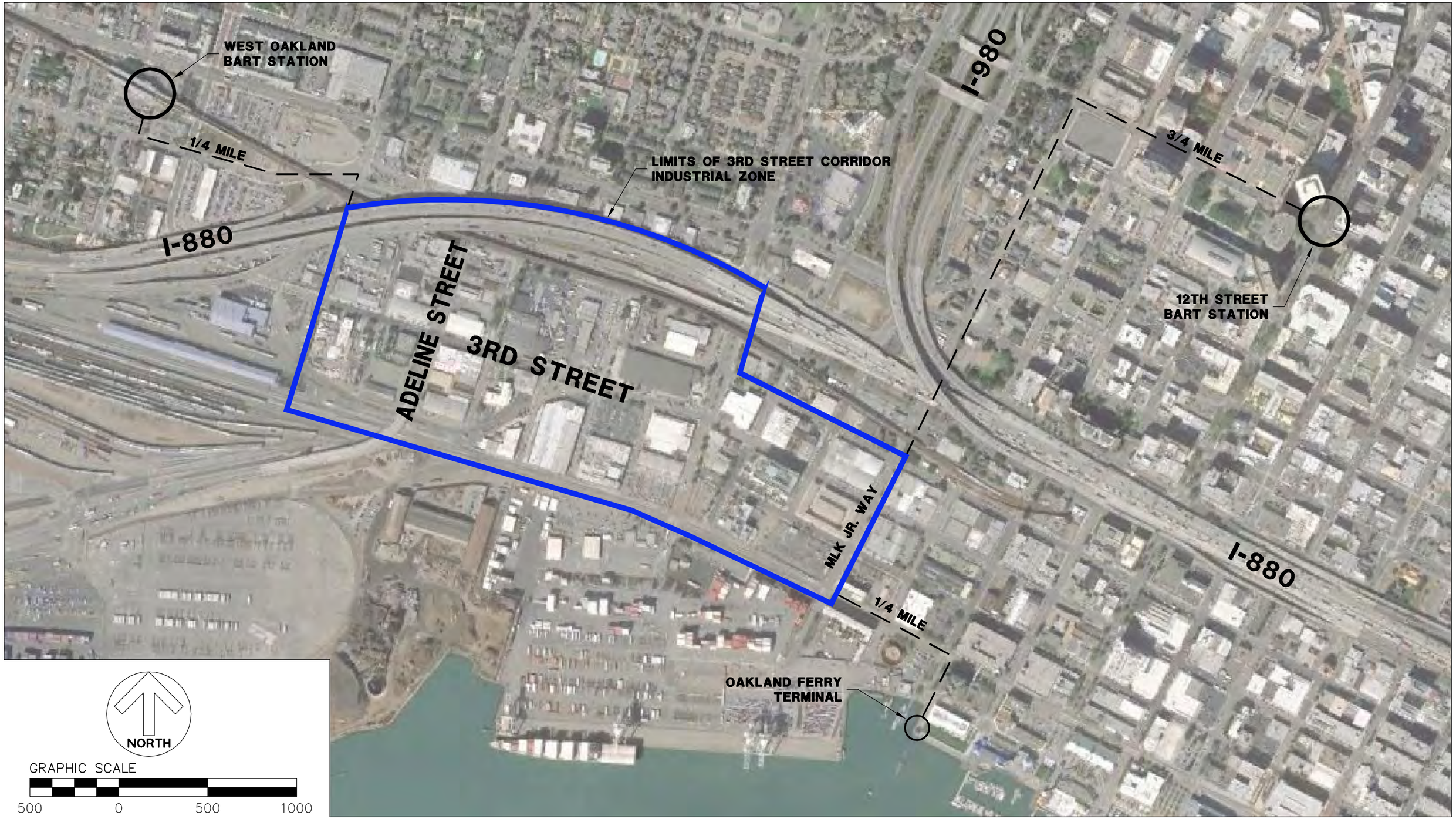
Curbs and gutters are critical elements in the public right-of-way in urbanized area. Typically, the curbs separate the pedestrian and automobile zones and, coupled with appropriate gutters, direct surface run-off to appropriate drain inlets to mitigate unwanted standing water.

While formal surveys to establish new PCI values are very detailed and outside the scope of this report, field visits were conducted whereby each street in the study area was observed in order to evaluate actual conditions and then make general comparisons between the observed conditions and the information in the City database. Additionally, conditions that present operational safety were identified.

ii. Mandela Parkway Commercial Industrial Zone – Analysis

In general, with the exception of Mandela Parkway itself, and the short segments of roadways that were rehabilitated with the Mandela Parkway project, many of the roadways in the Mandela Parkway Commercial Industrial Zone are in very poor condition. Many streets are flat and/or missing appropriate drainage facilities, which results in standing water, which in-turn leads to the expansion and contraction of the soils that underlay the roads as their moisture contents change, and the loss of the structural integrity of, and ultimately the deterioration of the pavement.

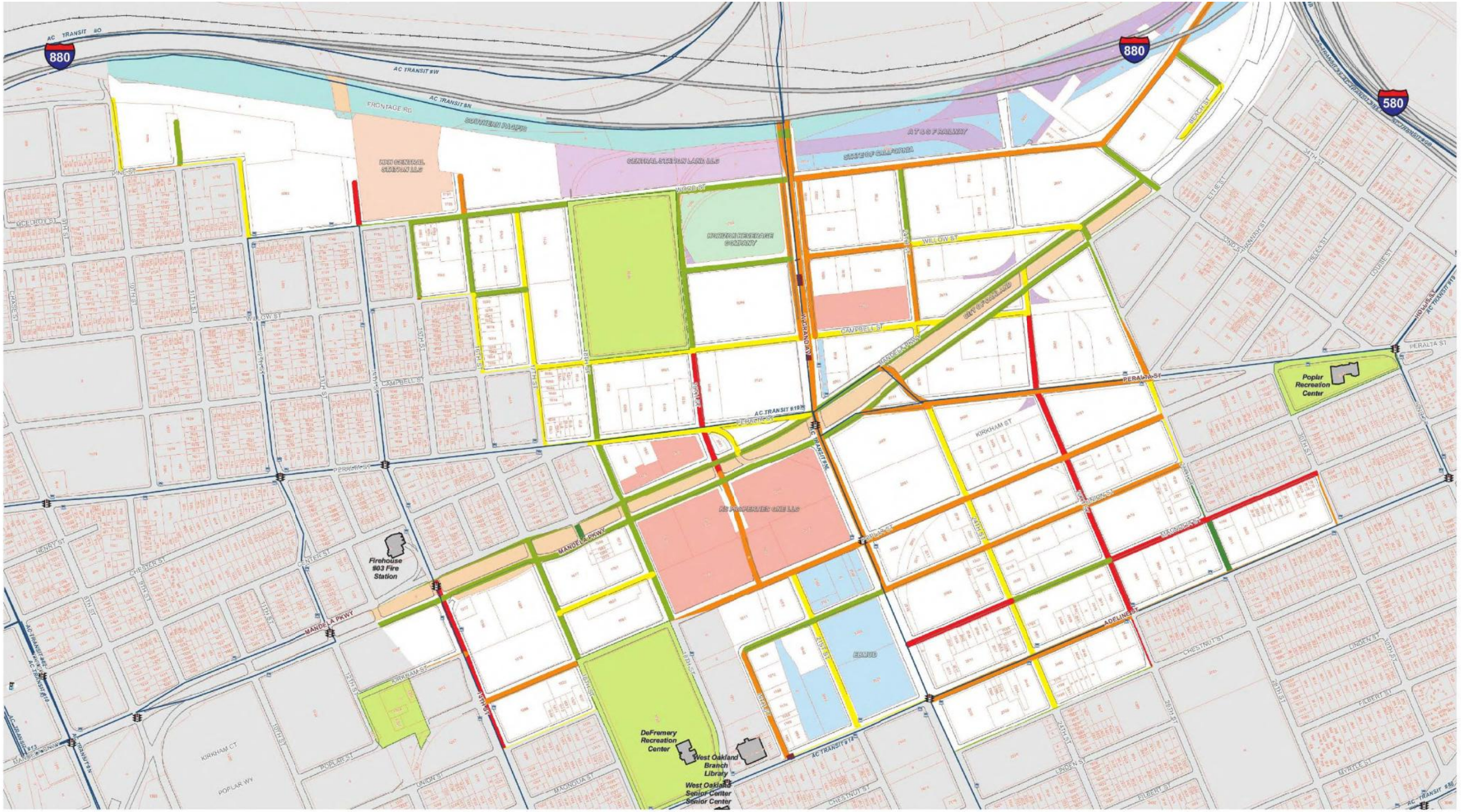
Of particular concern, many of the streets in the District share alignments with rail lines that served (in some cases still serve) existing parcels within the study area. Refer to Photos V.1 and V.2 to see the rail lines. In general, the streets that were observed to exhibit the worst conditions tend to be the streets that share alignments with rail.



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FIGURE IV.4
PEDESTRIAN CONNECTIONS EXHIBIT

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MANDELA PARKWAY INDUSTRIAL ZONE

TRANSPORTATION, PAVEMENT, PROPERTY OWNERS

Legend

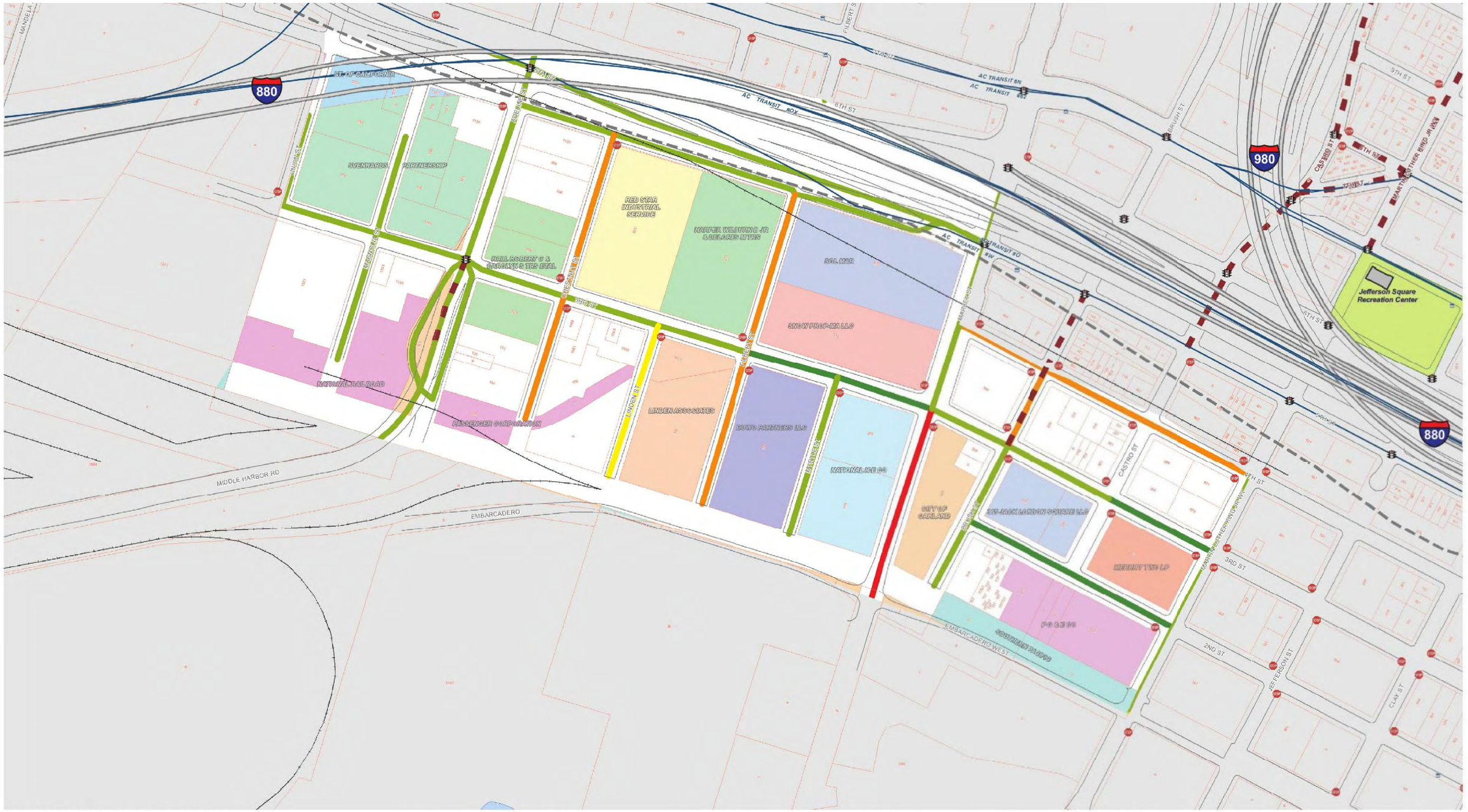
- City Facilities
- Selected Property Owners
- Streets on 5-Year Paving Plan
- Traffic Signals
- Stop Signs
- AC Transit Stop
- AC Transit Line
- BART Line
- BART Line
- Pavement Condition: Worst → Best

0 250 500 Feet

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FIGURE V.1
MANDELA PARKWAY ZONE PAVEMENT CONDITIONS

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3RD STREET COORIDOR INDUSTRIAL ZONE

TRANSPORTATION, PAVEMENT, PROPERTY OWNERS

Legend

- City Facilities
- Selected Property Owners
- Streets on 5-Year Paving Plan
- Traffic Signals
- Stop Signs
- AC Transit Stop
- AC Transit Line
- BART Line
- BART Line
- Pavement Condition: Worst → Best

0 150 300 Feet

N

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FIGURE V.2
3RD STREET ZONE PAVEMENT CONDITIONS

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Photo V.1: Existing rail along 26th St (Photo# 185)



Photo V.2: Rail at the intersection of Poplar St & 20th St (Photo #271)

There are several factors that contribute to pavement deterioration around rails. First, the rails typically sit on wooden ties that have not likely been maintained in decades, and in many cases have rotted, so there is no adequate road base. Secondly, the rail lines act effectively as surface drains, so rain run-off on the street is taken into the sub-grade and not properly conveyed through sub-drainage systems to adequate storm drainage facilities. This further degrades the road base. Thirdly, resurfacing efforts in and around rail lines are inherently difficult just due to the obstacles that the rail lines are to normal paving operations. Fourthly, and perhaps most importantly, the Railroads have the responsibility

to maintain the roadway within a strip of land from 2.5-feet outside of each outboard rail, and they have not done so, it appears, for several decades.

Potholes are evident throughout the Mandela Parkway Commercial Industrial Zone. Road sections that are significantly affected with potholes are presented in Figure V.5. Although the general condition of these roads has been discussed previously, patching these potholes will provide a short-term, inexpensive solution until more extensive pavement rehabilitation can be conducted.

a) Northwest Area (Sub-Area 15)

Wood Street north of West Grand serves as an entrance into Emeryville to the north. It is in poor condition, exhibiting severe block, longitudinal and alligator cracking; potholes; intermittent overlays that are in various stages of disrepair; severe deterioration adjacent to several rail lines that cohabit the street; insufficient surface drainage facilities; and ill-defined edges. The rail lines are in the northbound lanes, and the pavement surrounding them has deteriorated so badly that most traffic uses the southbound lanes to avoid the rough ride along the rails. This is a hazardous condition, as there is enough traffic on this street that head-on collisions are a real danger. The problem is exacerbated both by a curve in the road near 32nd Street, which limits sight distance, and a poorly marked utility pole that sits in traffic near the middle of the 32nd Street intersection.

34th Street between Mandela Parkway and Wood Street is in generally decent condition, although some alligator cracking is evident near the center of the roadway.

32nd Street between Mandela Parkway and Wood Street is mostly in good condition, with the exception of some severe block cracking near the stop sign on Wood Street.

26th Street runs east and west between Mandela Parkway and Wood Street and contains rail lines along its northern edge. The roadway is in very poor condition as it has extensive alligator cracking and potholing, particularly near the rail lines; it is very flat, and has no surface drainage facilities or defined edges.

Willow Street runs north and south between West Grand and Mandela Parkway. The roadway is characterized by significant block cracking, some potholing at the intersections and along the road edges, very limited curbs, partly because repeated overlays over the years have essentially buried them, significant alligator cracking in the southern portion of the street and inadequate drainage facilities.

Campbell Street runs north and south between West Grand and Mandela Parkway. The roadway has significant alligator cracking, particularly in front of the Mutual Express loading driveway. There is 6-inch concrete curb, but no gutter.

24th Street runs east and west between Wood Street and Mandela Parkway and experiences significant truck traffic as there are several active industrial properties along this street. The road has several depressions, significant alligator cracking on the eastern half and in the center of the street and extensive longitudinal cracking. While there are surface drainage facilities, they do not appear to be sloped adequately to convey storm run-off away from the street.

The lower side / frontage street along the north side of West Grand is in generally decent condition, though there is not an adequate surface drain.

b) Northeast Area (Sub-Area 15)

30th Street runs east and west between Adeline and Magnolia Streets and is in very poor condition with significant alligator cracking along its southern half, many localized depressions and no curb and gutter on either side in the eastern portion of the block, so there would be substantial standing water for long periods of time after rainfall. There is significant longitudinal cracking along the entire length of the road.

28th Street runs east and west for 6-blocks between Mandela Parkway and Adeline Street and is on the northern edge of the District, as it is fronted on the north side by residences. The eastern end of the street is generally in decent condition, though the road is moderately cracked and exhibits some weathering. The western portion of the street experiences more industrial traffic and was constructed from concrete, which is a more rigid paving material than asphalt, so it is more prone to cracking, particularly where soils are subject to expansion and contraction, which is exacerbated by the general lack of facilities.

26th Street runs east and west for 7-blocks between Mandela Parkway and Chestnut Street. The street has rail lines that largely have been paved over, though rail has vastly different material properties than asphalt, soil and base rock, so the rail inevitably causes significant cracking in the adjacent asphalt, and eventually becomes exposed again. This is what has happened in much of 26th Street. Most of this roadway is in very poor condition, partly due to a structural section that was insufficient to handle the truck loads on the street, and partly due to the problems that are inherent when asphalt is installed adjacent to rail.

24th Street runs east and west for 7-blocks between Mandela Parkway and Chestnut Street. There are several stretches of this street that are in moderate condition,

particularly between Poplar and Kirkham, and between Peralta and Mandela at the west end, and between Magnolia and Chestnut at the east end. The center portions of the street are characterized by significant block cracking. There is curbing along both sides of the street for much of the street, but the gutter is intermittent, and the street does not appear to be sloped adequately to convey run-off away from the street.

West Grand Avenue runs east and west and carries heavy traffic. It has adequate drainage facilities at its edges, but the road itself exhibits some alligator cracking, and some potholing which is indicative of structural failures and will significantly worsen over time if not addressed.

Poplar Street runs north and south from West Grand and 28th Street. The street has rail in the center and is in terrible condition with significant alligator cracking and a cross-slope that directs drainage to the center (where the tracks are), rather than to the edges, where there is curb and gutter.

Union Street runs north and south from West Grand to 28th Street and is in moderate condition at the south end near West Grand, but is in worse condition and exhibiting some alligator cracking at the north end near 28th Street. In general, there is intermittent curb and gutter.

Adeline Street runs north and south and serves as an arterial, carrying traffic to/from Emeryville and Berkeley to the north, and from/to the Port of Oakland to the south. The road is not significantly cracked and appears to have adequate drainage, though there is pavement damage around an old, unused rail siding crossing just north of West Grand Avenue.

Magnolia Street runs north and south between 30th Street and West Grand. The blocks between 26th and 24th Streets, and between 28th and 30th Streets are in decent condition, except for some alligator cracking near the intersections, but the other sections are characterized by alligator cracking and steep street slopes that are likely the result of numerous overlays.

Peralta Street runs north and south between Mandela and 28th. and carries traffic to Emeryville to the north. Other than evidence of various utility patches and intermittent overlays, the roadway is in decent condition.

c) Southwest Area (Sub-Area 16)

10th and 11th Streets runs east and west between Pine and the Interstate 880 Frontage Road. The pavement is in decent condition, though there is no curb or

gutter, but rather drainage is conveyed by large swales that were built into the asphalt near the transition from travelled way to parking. 10th Street connects Pine and the 880 Frontage Road, but there is a K-Rail near the Pine Street intersection that shuts off this connection.

12th and 14th Streets both front a new multi-family residential development and are relatively new and in decent condition.

Wood Street runs north and south from 15th Street to West Grand and while only exhibits minor cracking, in general, it has long stretches that do not have surface drainage facilities, and most of the western edge along the rail alignments and CalTrans property is ill-defined. Areas of standing water after storms are evident.

Campbell Street runs north and south between 16th Street and West Grand. This road is characterized by significant alligator cracking in the southern block, though there is only minor alligator cracking north of 18th Street, and intermittent surface drainage facilities. The northernmost block between 20th Street and West Grand exhibits more cracking and does not drain adequately. A safety issue at the Campbell and West Grand Avenue intersection relates to inadequate site distances for autos attempting to enter or cross West Grand Avenue from Campbell Street to the south (See Figure V.3). The fence between the ramp descending from the upper portion of West Grand and the at-grade side streets impedes the ability of drivers to see cars traveling eastbound down the ramp.

Eastbound traffic tends to maintain a high rate of speed as it enters the Study Area down the ramp from the west. Cars attempting to turn left from Campbell to go westbound on West Grand Avenue do not have adequate site distance to safely make the turn.

The lower side / frontage street along the south side of West Grand has minor longitudinal and transverse cracks, but is in decent condition, though the gutters do not drain well. There is some patching evident from utility trenching work.

20th Street runs east and west between Wood Street and Mandela Parkway and carries a rail line. The asphalt west of Willow Street is in decent condition, except that which is immediately adjacent to the rails, which is in poor condition. There is some concrete paving between the rail, which is damaged. East of Campbell Street, the road condition worsens considerably, as there are significant alligator cracking, potholes and very poor drainage.

18th Street runs east and west between Wood Street and Mandela Parkway and also carries a rail line. The westernmost block between Wood Street and Mandela

Parkway fronts Raimondi Park and is in decent condition, though there is no curb or gutter along the southern edge, so drainage is poor. The rest of the street has some slight alligator cracking around the rail lines, but is generally in reasonable condition, particularly considering the coexistence with the rails. Curbs and gutters on this street are intermittent.

15th, 16th and 17th Streets run east and west between Wood Street and the residential portions of West Oakland to the east. All have intermittent curb and gutter so drainage is generally poor, though the asphalt surfaces are in moderate condition, exhibiting varying degrees of longitudinal and transverse cracking, isolated areas of alligator cracking and various utility patches.

d) Southeast Area (Sub-Area 16)

21st Street runs east and west between Poplar and Adeline Streets and is in generally good condition with adequate curb and gutter, though there is some cracking in the pavement.

20th Street runs east and west from Mandela Parkway to Poplar and is in very poor condition with no curbs or gutters and significant standing water. There are still traces fo rail below asphalt and significant potholes.

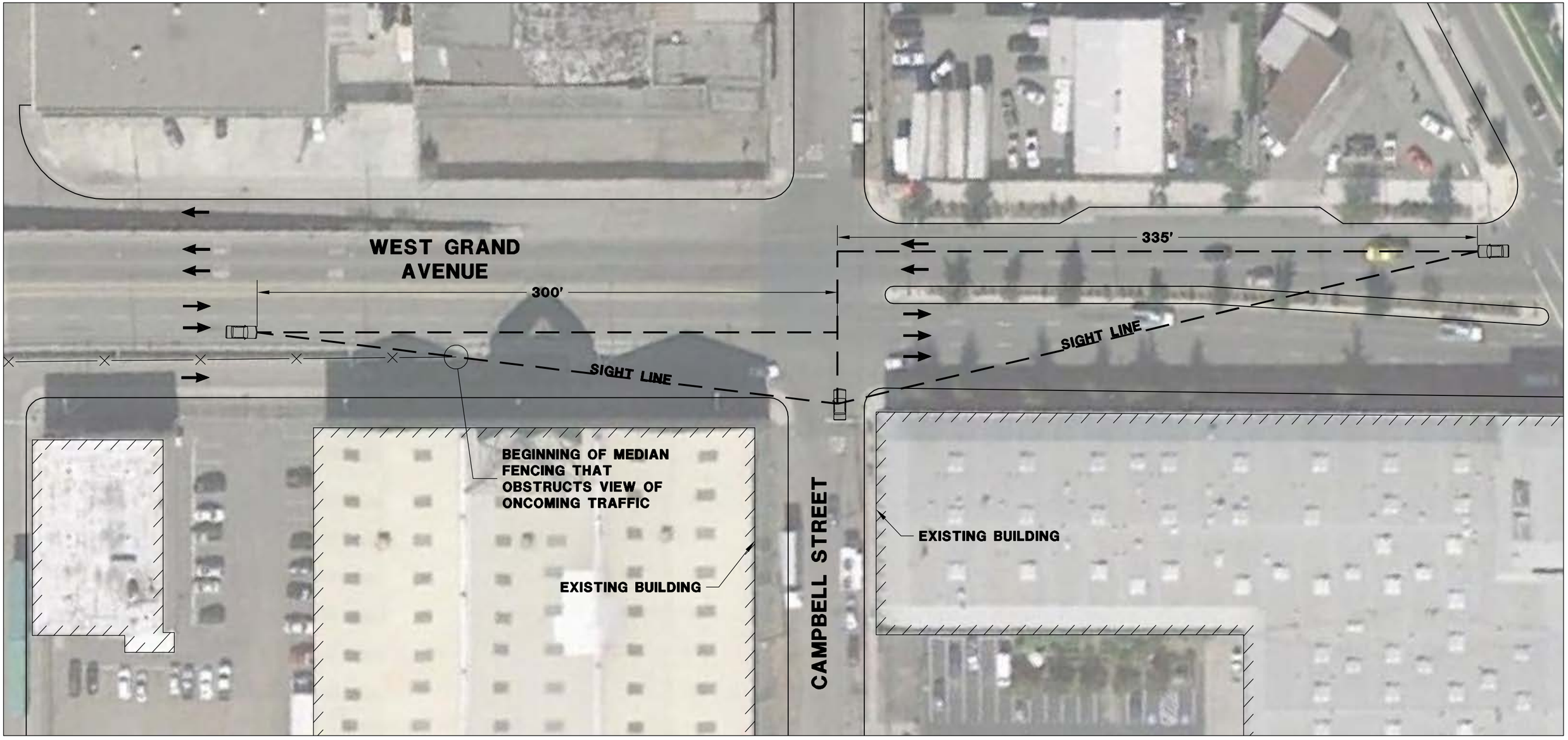
14th, 16th, 18th and 19th Streets all run east and west between Mandela and Poplar. These streets are in relatively good condition with curb and gutter and moderate cracking and relatively few potholes.

Poplar Street runs north and south between 14th Street and West Grand and is generally in terrible condition, as it cohabits with rail lines. Though there are curbs and gutters along most of the street, most of the street drains toward the center and the railroad tracks.

Kirkham Street runs north and south between 16th and 18th Street and is in reasonably decent condition with occasional longitudinal cracks and sidewalks on both sides.

Union Street runs north and south between 19th Street and West Grand and has significant block cracking, thoug there are curbs and gutters on each side.

Adeline Street is the north and south arterial on the eastern edge of the study area and is in adequate condition.



MINIMUM REQUIRED SITE DISTANCE: 590'
ASSUMED DESIGN SPEED 50MPH
4-LANE ROADWAY, TIME GAP 8.0S
(AASHTO GEOMETRIC DESIGN OF HIGHWAYS AND STREETS)

GRAPHIC SCALE
50 0 50 100

NORTH

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ALAMEDA COUNTY

FIGURE V.3
CAMPBELL ST & W GRAND AVE SIGHT DISTANCE EXHIBIT

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The following variations between conditions observed in the field, and conditions recorded in the City of Oakland Database are noted:

11th Street north of Pine Street is indicated to have a PCI range of 70-89. During the field visit it was observed that the road had numerous instances of alligator, longitudinal, and transverse cracking. Many of the observed cracks were at the edge of pavement where surface runoff is poorly mitigated and creates ponding. It is likely that the actual PCI range is below what is indicated by the existing GIS data.

New construction in the properties west of Pine Street, north of 12th Street, west of Wood Street, and south of 14th Street has resulted in improved pavement conditions. Pine Street north of 11th Street, and 12th Street and 14th Street west of Wood Street have pavement conditions ranging from medium to "Worst" in the GIS system. After the field visit, these lengths of road have been completely resurfaced and likely would be categorized as "Best."

Mandela Parkway currently has a PCI range of 70-89 according to the city's GIS data. Based on the field visit, the pavement condition of Mandela Parkway is excellent and currently would likely be categorized as "Best" in both directions. In addition to the pavement condition, the city system shows 17th Street extending across Mandela into the northbound lane, indicated as having a "Best" pavement condition. 17th Street ends as it approaches the southbound lane of Mandela Parkway and does not cross Mandela.

Between Campbell Street and Mandela Parkway, West Grand Avenue's pavement conditions have improved since the GIS data. GIS information indicates that the pavement is in the PCI range of 20-49. However, during the field visit it appeared that recently the pavement had been resurfaced.

Detailed notes are presented in Appendix B that indicate, on a street by street basis, the condition of each street segment and recommended mitigation measures. Figures V.4, V.5, V.6, and V.7; "Observed Pavement Conditions" and "Existing Potholes", graphically depict the existing conditions and locations of potholes in each street in the Mandela and 3rd Street study areas. Photos taken during the site visits are presented in Appendix A.

iii. 3rd Street Corridor Commercial Industrial Zone- Analysis

The streets in the 3rd Street Corridor Industrial Zone are generally in better condition than those in the Mandela Parkway Industrial Zone. There are far fewer instances where rail lines coexist with the streets, and there is curb and gutter in far more of the

street sections.
Streets where significant damage was noted Chestnut Street, which has significant cracking throughout its length, as well as damaged curbs and significant standing water; the northern block of Filbert Street, which has substantial alligator cracking along the road center and significant uplift in the gutters due to tree roots; the south block of Market Street has been significantly damaged, presumably due to the truck traffic that uses it as an auxiliary entry to the Port, and 4th Street between Brush Street and Martin Luther King J. Way, which has several potholes and long sections of severely cracked asphalt.

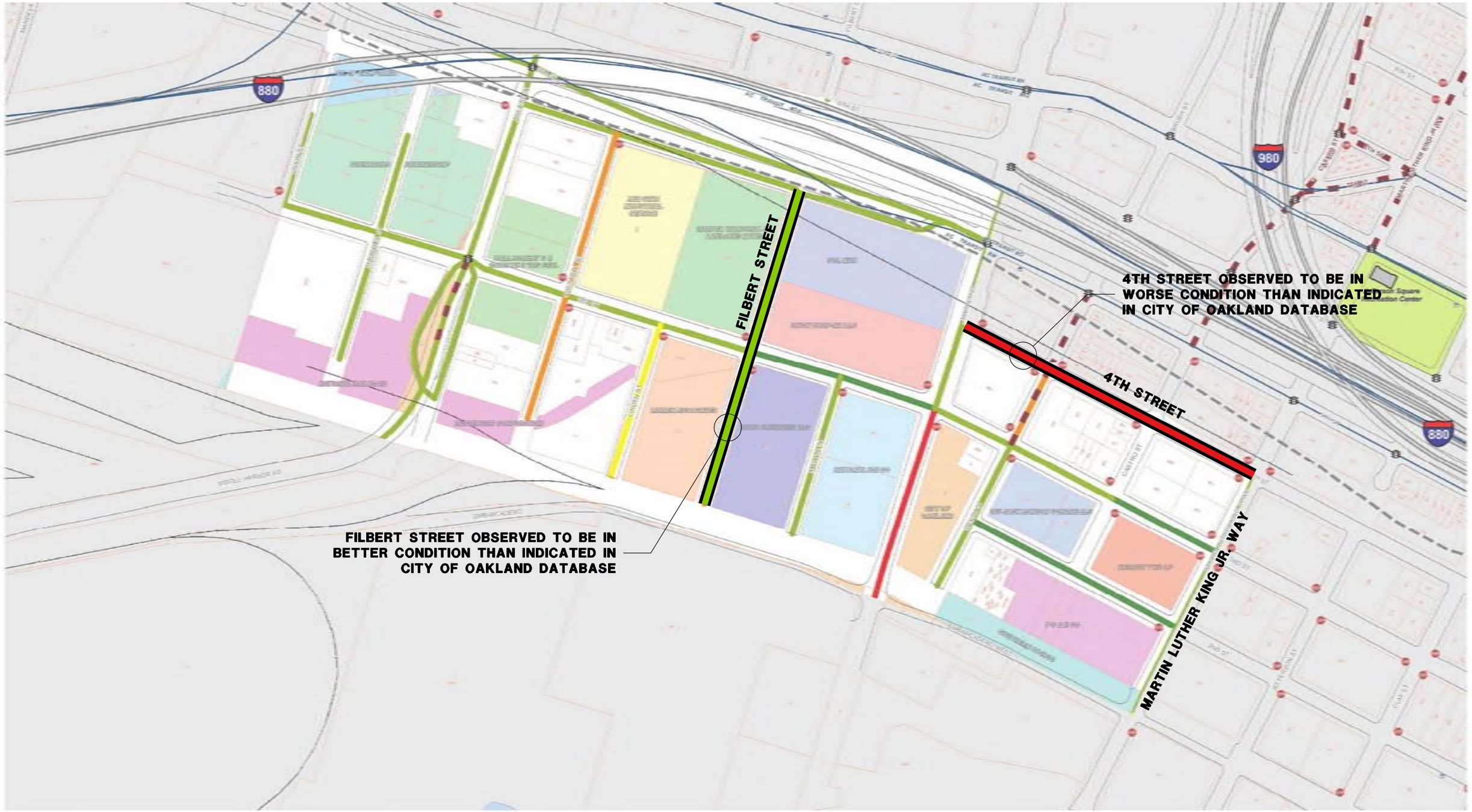
Also, the southern portion of Filbert Street that dead-ends at the railroad tracks is moderately cracked and has several locations where water ponds. This street also poses challenges in that it serves as the only access and parking area to several office suites along Linden Street so access in and out of this area is difficult.

The following variations between conditions observed in the field, and conditions recorded in the City of Oakland Database are noted:

Along 3rd Street the City's GIS data indicates a pavement condition of "Best" between Filbert St and Market St, and between Castro Street and Martin Luther King Jr. Way. Based on field observations, the pavement condition is relatively uniform along the entire length of 3rd Street with a few noted distresses. It is likely that these blocks are now somewhat below the City's PCI database.

The second difference occurs along 4th Street, between Market Street and Martin Luther King Jr. Way. Existing city data indicates that the street is at a PCI range of 25-49. During the field visit, BKF observed the street to be in extremely poor condition. Photos taken of 4th Street can be viewed on Photos 31-34 in Appendix C. Block cracking, alligator cracking, and potholes would indicate complete deteriorating structural support (failure) in this segment. This failure could be caused by inadequate structural section and poor runoff mitigation. Based on the field visit, it is likely that the existing pavement condition has deteriorated well below the database information.

The final discrepancy is along Filbert Street. Existing city data indicates that the street is at a PCI range of 25-49. During the field visit, we observed that Filbert Street appears to have been recently resurfaced and is in good condition. The block south of 3rd Street had few minor depressions and a few instances of cracking, but little to indicate significant structural problems. The block north of 3rd Street was in generally good condition but with more instances of cracking. Photos of the observed conditions can be seen on Photos 17-29 in Appendix A.



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FIGURE V.5
3RD STREET ZONE OBSERVED PAVEMENT CONDITIONS

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EXISTING POTHOLE

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FIGURE V.6
MANDELA ZONE EXISTING POTHOLES

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EXISTING POTHOLE

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FIGURE V.7
3RD STREET ZONE EXISTING POTHOLES

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B. Sidewalks

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

Sidewalks are important in areas with significant automobile and pedestrian traffic to provide safe pedestrian travel, as well as to provide safe routes for disabled pedestrians. The City of Oakland maintains a database on sidewalks throughout the City (See Figures V.8 and V.9 for sidewalks in the study areas).

ii. Mandela Parkway Commercial Industrial Zone - Analysis

The Mandela Parkway Zone is very non-uniform in terms of sidewalk layout. Sidewalks in this zone vary in width, ranging between 4 feet and 20 feet. Along many streets, sidewalk widths, sidewalk quality, and landscaping may vary from block to block. Also along many streets, the presence of sidewalks varies block to block. For example, Campbell Street has six blocks within the Mandela Parkway Commercial Industrial zone but has no sidewalk on the north side between 17th Street and 18th Street, new sidewalk on the north side between 18th Street and 20th Street, and no sidewalk for only half the block between 20th Street and W Grand Ave. Figure V.8 highlights where we observed sidewalks and where sidewalks are absent.

Figure V.8 displays the City's data about where there is no sidewalk. In comparison to Figures VI.4 and VI.5, BKF's observed sidewalk locations, several differences can be seen. There are a couple reasons why discrepancies occur. The first is that in some areas, new sidewalk has recently been installed where previously there was not. This occurs along the north side of 12th Street between Pine Street and Wood Street and is the result of a new residential development. New sidewalk, curb and gutter has also recently been installed along the south side of 28th Street between Poplar Street and Union Street. A second reason is that in some locations where City data shows record of sidewalk, the observed condition of that sidewalk was so poor that it was either deemed unusable or the sidewalk was not recognized as sidewalk during the field visit. For example, the south side of 18th Street has sidewalk according to City data, but during the field visit it was observed that cars parked alongside the road, obstructing the pedestrian path of travel.

iii. 3rd Street Corridor Commercial Industrial Zone- Analysis

The 3rd Street Corridor has sidewalks that sufficiently direct pedestrians on nearly every street. The sidewalk conditions and dimensions vary from block to block. Throughout the corridor sidewalk widths vary, ranging from 4 feet to 20 feet. For the most part, the existing sidewalks are in good condition with few instances of cracking or root uplift, and a few locations where discontinuous sidewalk causes an interruption to pedestrian

traffic. On collector/side streets, pedestrian access is sometimes limited to one side of the street depending on tenant usage. Truck loading docks and elevated walks needed by some buildings/tenants impede access along some properties.

The north side of 3rd Street is discontinuous sidewalk between Martin Luther King Jr. Way and Brush Street that causes an unexpected interruption for pedestrians. The discontinuous sidewalk causes pedestrians to either walk behind cars parked perpendicularly on the north side of 3rd Street or to cross 3rd Street to the south side, where there is a continuous sidewalk for safe pedestrian travel.

The east side of Linden Street has a sidewalk that terminates approximately 100 feet south of the intersection of Linden Street and 3rd Street, at the entrance to a parking lot. However, the sidewalk along the west side of Linden Street provides an uninterrupted pedestrian path of travel.

Figure V.9 displays the City's data about where there is no sidewalk in the 3rd Street Corridor Commercial Industrial Zone. In comparison to Figure VI.5, BKF's observed sidewalk locations, no differences can be seen.

Accessible curb ramps are located on the majority of the intersections in the 3rd Street Corridor. However, there are a number of intersections that either do not have any curb ramps or have curb ramps that are not compliant with accessible standards. The lack of curb ramps at an intersection presents circulation difficulties to pedestrians. The locations of these curb returns can be found on Figure VI.5.

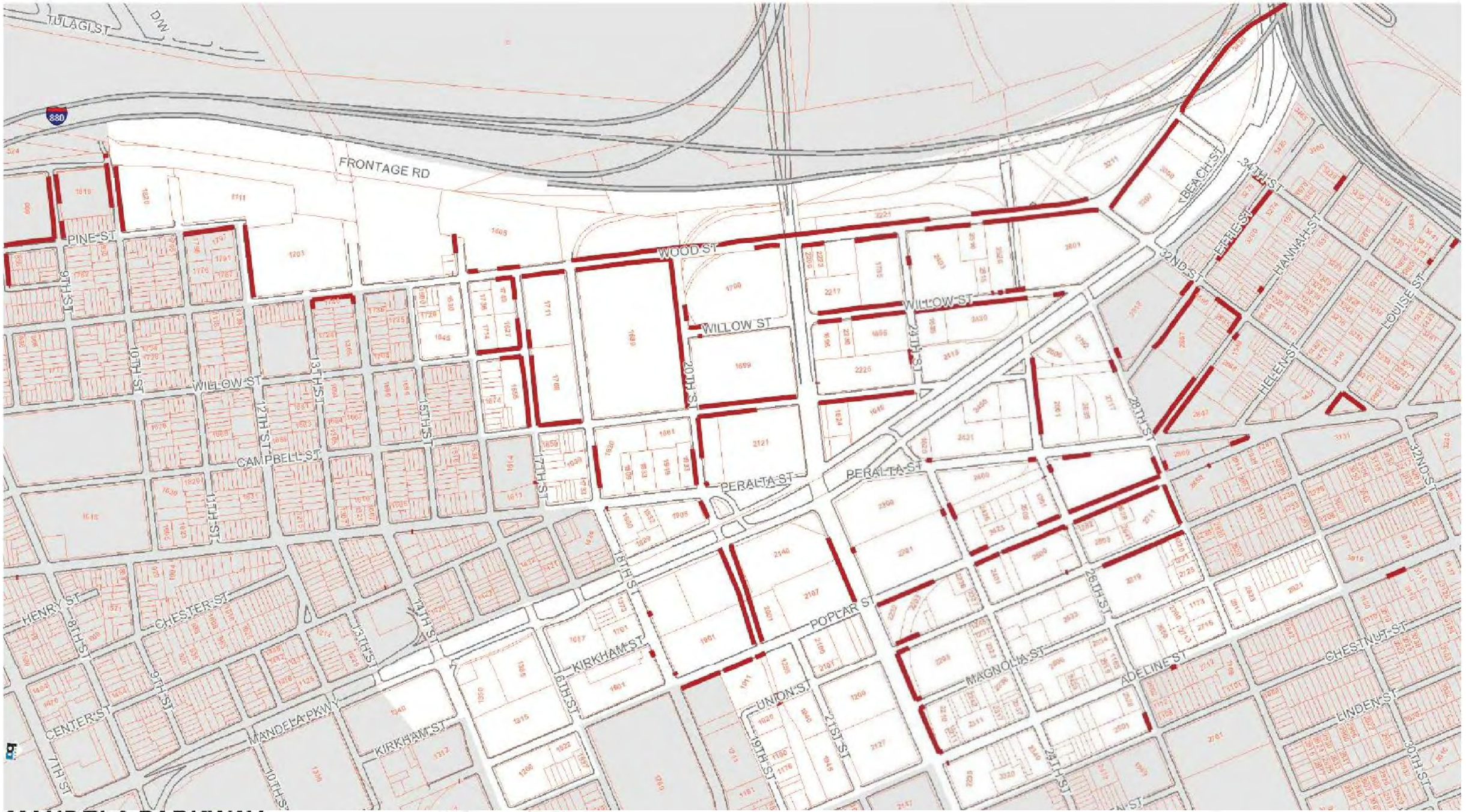
C. Wastewater

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

CEDA's Right-of-Way Management Division recommended improvements to the Commercial Industrial Zone's Wastewater Conveyance Systems. The City estimates that 30% of the existing system is in need of repair/replacement. See Figures V.10 and V.11 for City of Oakland sewer maps.

The Sanitary Sewer Evaluation Survey (SSES) measured average and peak flows from sub-basins throughout the City. These SSES are used as a tool for tracking and allocating capacity of the major sewer trunk main lines (interceptors) that are owned by East Bay Municipal Utility Zone (EBMUD). The interceptor system in the Study Areas consists of a line that runs west in 3rd Street and turns north to run up within Wood Street. It turns into the EBMUD Wastewater Treatment Plant near where Wood Street terminates and becomes Beach Street.

Within these Commercial Industrial Zones, groundwater infiltration and rainfall-dependent inflow (collectively referred to as "I/I") appears to contribute roughly 80% of the total peak wet weather flow. The remaining 20% consists of actual sewage.



MANDELA PARKWAY
INDUSTRIAL ZONE

Legend

- Parcels
- Face of Curb
- No Sidewalk

0 250 500 Feet

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE V.8
MANDELA ZONE SIDEWALK INVENTORY PER CITY DATABASE

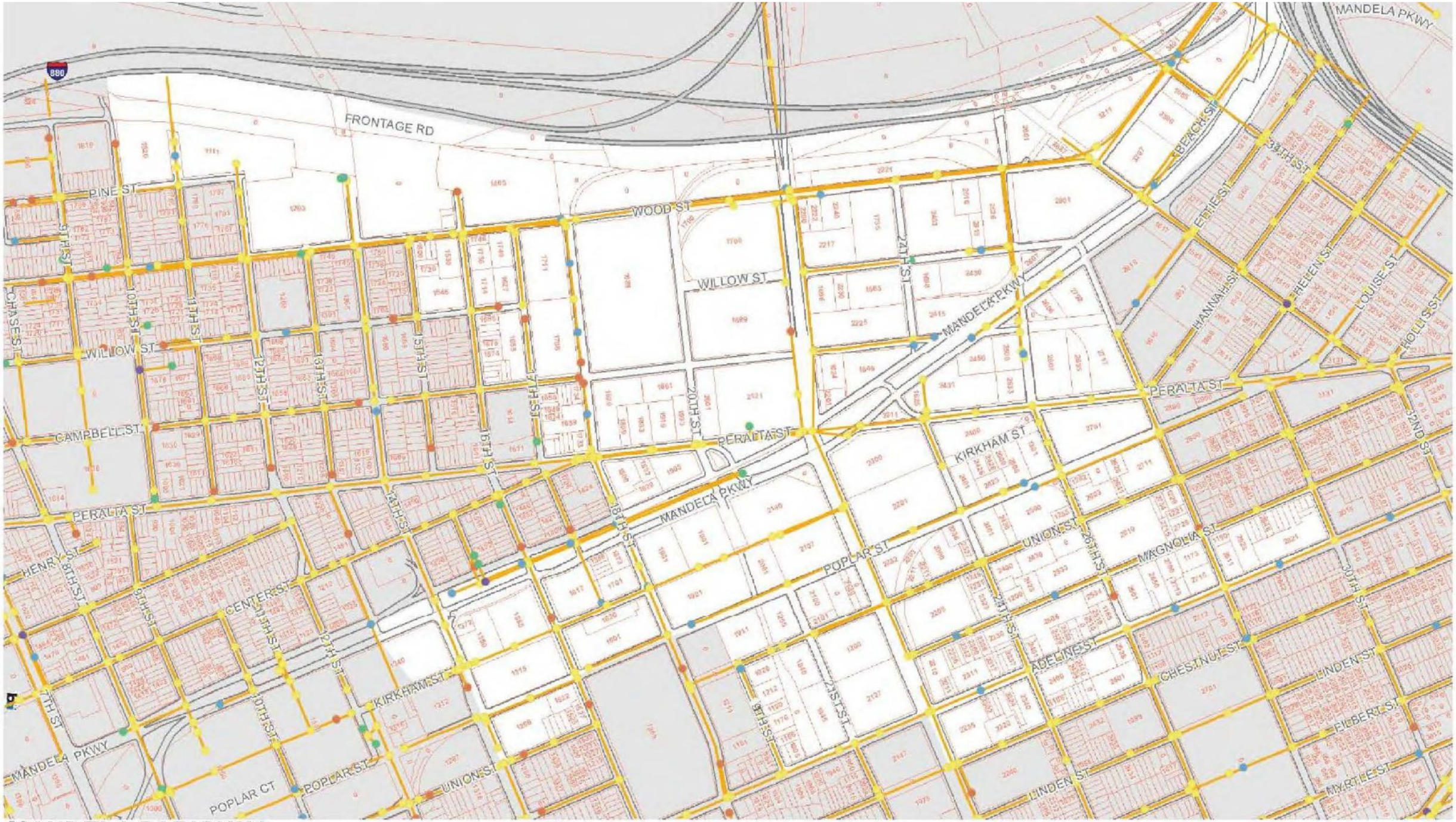
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FIGURE V.9
3RD STREET ZONE SIDEWALK INVENTORY PER CITY DATABASE

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MANDELA PARKWAY INDUSTRIAL ZONE
SANITARY SEWERS

Legend

- Parcels
- Face of Curb
- Sanitary Sewer Pipe
- CLEANING_PORT
- ENDCAP
- JUNCTION
- LAMPHOLE
- MANHOLE_PUB
- PUMPSTATION_PUB

0 250 500 Feet

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ALAMEDA COUNTY

FIGURE V.10
MANDELA PARKWAY ZONE SANITARY SEWER SYSTEM

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3RD STREET COORIDOR INDUSTRIAL ZONE
SANITARY SEWERS

Legend

- Parcels
- Face of Curb
- Sanitary Sewer Pipe
- CLEANING_PORT
- ENDCAP
- JUNCTION
- LAMPHOLE
- MANHOLE_PUB
- PUMPSTATION_PUB

0 300 600 Feet

N

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ALAMEDA COUNTY

FIGURE V.11
3RD STREET ZONE SANITARY SEWER SYSTEM

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Much of this system is antiquated and likely constructed with vitrified clay pipe (VCP), making it susceptible to cracking and vulnerable to failure.

The Right-of-Way Management Division's proposed improvements would reduce I/I in the area since the replacement conduits and structures wouldn't be as susceptible to leakage. Additionally, property redevelopment and/or reuse should abandon the existing sewer lateral and install new laterals and verify that there are no cross-connections from the downspouts to the sewer lateral. This would result in much lower I/I flows into the main lines.

ii. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Analysis

Because there are several blocks between West Grand, 18th Street, Wood Street and Peralta Street that contained very large parcels, public sewer lines were not installed in Campbell Street, 20th Street or Willow Street in this area. The large parcels are adequately served by the lines that are there, as only one service is generally required per parcel. Development within these blocks will trigger the need for new public sewers in this small area.

With respect to assigning priority to sewer and storm improvements, underground utility improvements should be installed prior to final streetscape improvements are made to prevent damage and the need for patching such improvements during trenching operations.

Once the wastewater conduits are replaced, we would not expect a significant impact to the conveyance system with increased sewage-generation associated with potential new Commercial industrial zoned land uses due to the offset in reduced I/I. However, we would expect an increase in average day sewer flows, and in the concentration of sewage versus other wastewater flows (I/I). Ultimately, the higher sewage concentration levels for the greater region might require a higher level of treatment at the EBMUD wastewater treatment plant, near the entrance of the San Francisco-Oakland Bay Bridge. Projects within the area that proposes significant increases in sewer generation would likely, in order to comply with the California Environmental Quality Act (CEQA), be required to analyze the affects of increased demand on the treatment plant, and mitigate its impacts.

D. Storm Drains

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

The City of Oakland Storm Drainage Master Plan (completed by CH2MHILL in 2006) identifies improvements needed in these Commercial Industrial Zones. The City estimates that 30% of the existing storm drainage conduits and 100% of the storm drainage structures are in need of rehabilitation.

The Master Plan indicated that system capacity upgrades are also needed in these Commercial Industrial Zones.

These Commercial Industrial Zone areas are part of a drainage basin that flows to a pump station located at the intersection of Ettie and 34th Streets. While the piping network is a City facility, the pump station is owned and operated by Alameda County Flood Control and Water Conservation District (Zone 7), which is a part of the Alameda County Public Works Agency.

The station was installed by the City of Oakland in 1954 and was taken over by the Alameda County Flood Control and Water Conservation District in 1997. It includes 6 working pumps capable of pumping just over 500,000 gallons per minute (gpm). There is an additional "jockey" pump that is used to dewater the system for maintenance and to clear summer irrigation run-off. The station is equipped with a back-up generator system, an automatic trash conveyance system to keep debris from affecting the pump propellers, and a supervisory control and data acquisition (SCADA) system through which Alameda County Public Works Agency personnel are immediately contacted in the event that the pump experiences a problem.

The station is inspected annually, and all of the pumps within the station have been overhauled within the last 10-years. There has never been flooding in the area as a result of the pump failing.

The area is mapped by the Federal Emergency Management Agency (FEMA) to be in Flood Zone B, which indicates an area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100-year flooding. See Appendix F for FEMA Flood Insurance Rate Maps of the project area.

New development that impacts an area greater than 10,000 SF would be subject to provision C.3 of the City of Oakland's National Pollutant Discharge Elimination System (NPDES) permit with the State of California and would therefore need to implement storm water treatment measures under the building permit of any such development. This will, in the aggregate, serve to lower the overall run-off coefficient in the area, which could over time serve to make the Storm Drainage Master Plan inherently conservative.

ii. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Analysis

The streets within the zone are fairly flat and likely experience extensive ponding of stormwater runoff. With potential surface improvements and higher levels of industrial and, potentially, residential uses in the area, the ponding areas could become more problematic. Also, the existing storm drainage system networks (shown in Figures V.12 and V.13) leave many individual street sections without a dedicated line. Most of these



3RD STREET COORIDOR INDUSTRIAL ZONE
SANITARY SEWERS

Legend

- Parcels
- Face of Curb
- Sanitary Sewer Pipe
- CLEANING_PORT
- ENDCAP
- JUNCTION
- LAMPHOLE
- MANHOLE_PUB
- PUMPSTATION_PUB

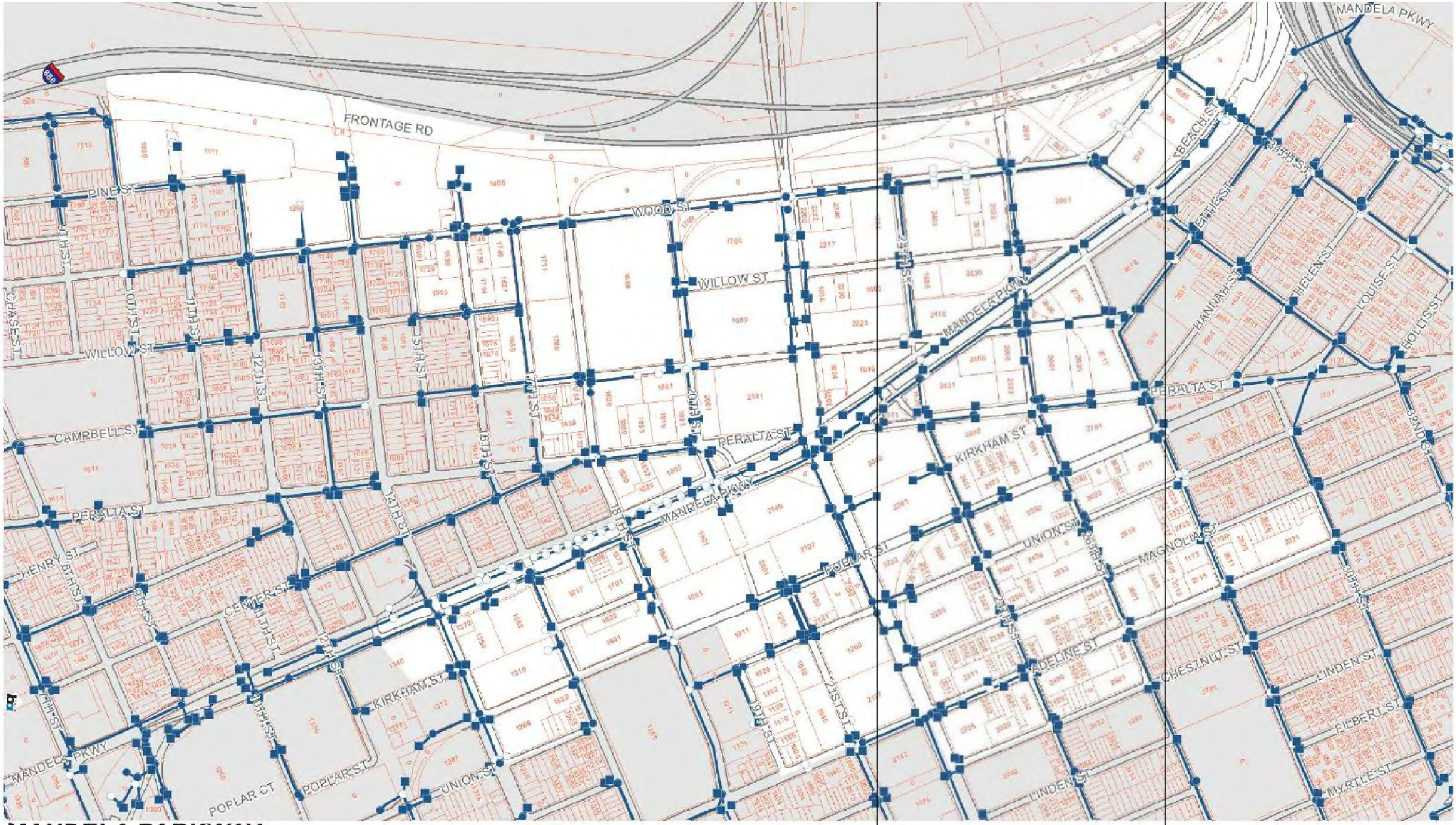
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FIGURE V.11
3RD STREET ZONE SANITARY SEWER SYSTEM

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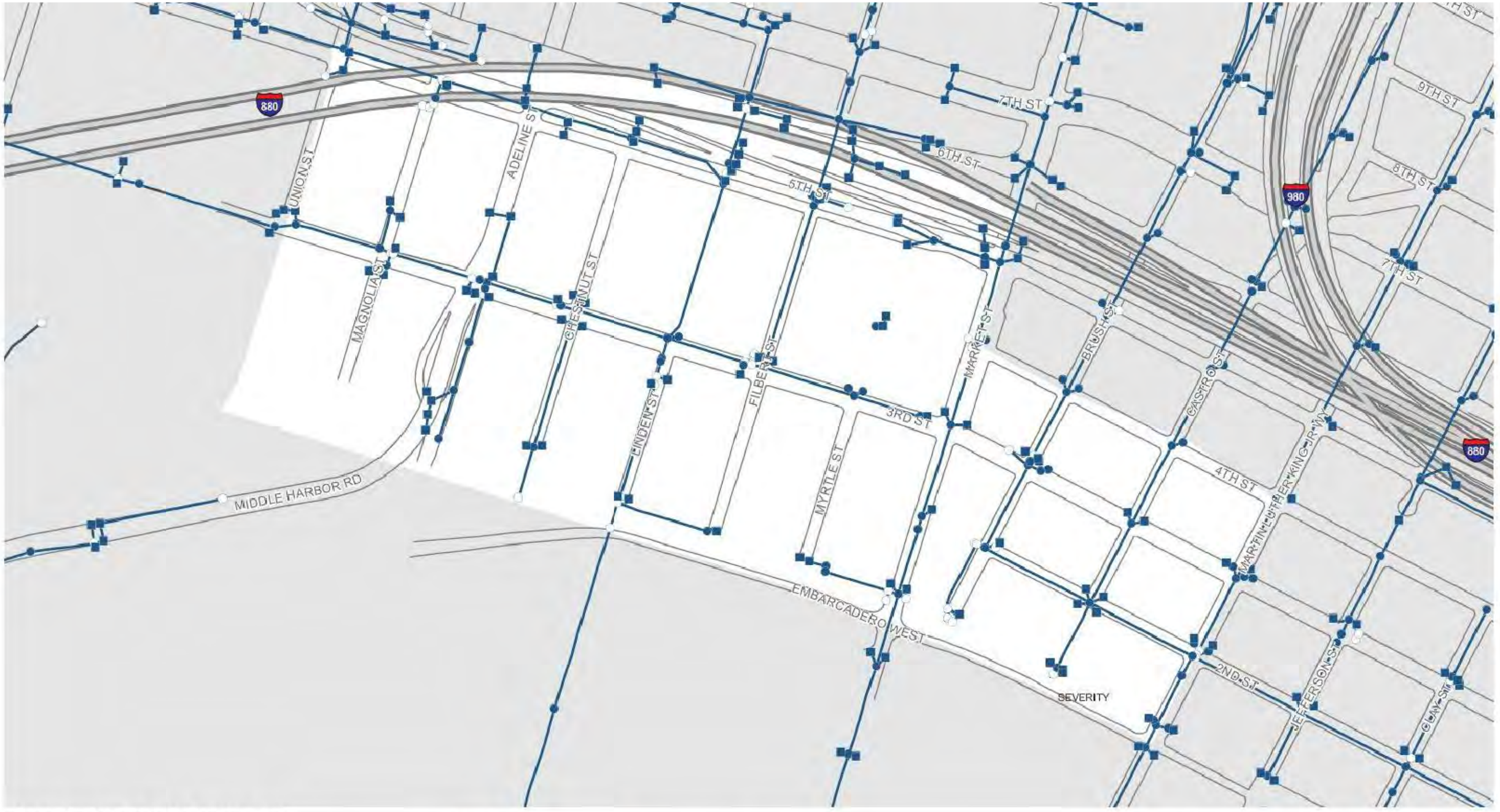


MANDELA PARKWAY INDUSTRIAL ZONE
STORM DRAINS

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FIGURE V.12
MANDELA PARKWAY ZONE STORM DRAIN SYSTEM

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3RD STREET COORIDOR
INDUSTRIAL ZONE
STORM DRAINS

Legend

- Parcels
- Face of Curb
- Storm Drain Pipe
- Storm Drain Inlet
- Storm Drain Manhole
- Storm Drain Junction

0 300 600 Feet

N

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FIGURE V.13
3RD STREET ZONE STORM DRAIN SYSTEM

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sections are far too long and flat for run-off to reasonably be conveyed to either end of the street.

As the area improves, underground storm drain lines should be added to several of these street sections. Additional storm drainage structures, including conduit, would be a way to mitigate both of these issues.

E. Domestic Water

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

Domestic water is provided to both Commercial Industrial Zone areas by the East Bay Municipal Utilities District (EBMUD). Water is primarily delivered to the Mandela Parkway area through transmission mains Adeline Street, 18th Street, Campbell/Ettie Street and 34th Street. Water is primarily delivered to the 3rd Street Corridor area through transmission mains in 4th Street.

Within each area, there are smaller (4-inch – 8-inch) conveyance lines that carry water beneath the streets. These smaller lines are interconnected to form multiple redundant loops, and they additionally have services that deliver metered flow to each parcel. Because many of the parcels within the District are very large, and in some cases encompass entire city blocks, there are several streets that have no public water main.

ii. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Analysis

For projects that creates a parcel that fronts a street that does not have a water main, a new public water main, constructed at the developers expense, will be required.

Additionally, most of the conveyance lines are not large enough to meet current fire flow requirements. New developments within parcels that are not fronted by a water line that is at least 8-inches in diameter will likely trigger upsizing of water mains, at developers' expense, to meet current codes.

EBMUD block maps indicate that many of the lines in the area are cast iron and were installed in the 30's. These pipes have likely experienced significant corrosion and should be replaced.

F. Street Lighting

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

Lighting is another important factor in improving the existing Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone areas. Proper lighting provides the following benefits:

- Promotes and supports safe operation of vehicles at night

- Promotes nighttime operation of businesses and industries
- Enables pedestrians to identify persons and activities at a safe distance
- Deters unlawful activity
- Enhances the neighborhood

On January 5th, 2010, BKF Engineers evaluated the public street lighting in the Mandela Parkway Commercial Industrial Zone and 3rd Street Commercial Industrial Zone. The existing lights all have unique pole spacing some on one side only and others on both sides of the street with non-uniform spacing. During the time of the site visit, there were 10 lights that were not in operation and found some areas poorly lit. An exhibit displaying the locations of the non-operational lights on January 5th, 2010 can be found in Figures V.14 and V.15. During this site visit, there were numerous situations where lights from private properties (such as building lights on warehouses) may have provided the perception of adequate lighting. If private lights were removed in the future, the lighting of the street would be much darker.

The City of Oakland has set standards for street lighting, differentiated by roadway category and street classification. These standards regulate the luminance of a street and the surrounding sidewalks, as well as setting a standard uniformity-ratio requirement. As the areas in question are all zoned as "industrial", the required minimum maintained average luminance is 1.4 foot-candles and 3:1 for the uniformity ratio. For the purposes of this study, street classifications were not considered. This standard is set by the 1999 Amended City of Oakland Street Lighting Warrants, which can be view in Appendix D. The existing lighting arrangements have been assessed for each zone.

Disregarding the lighting from privately owned buildings, a photometric analysis was completed for each zone in order to determine the appropriate streetlight spacing required to meet the "Street Lighting Guidelines" minimum illuminance standards set by the City of Oakland and evaluate the need for additional lighting. Using these criteria multiple streets failed to meet the minimum street lighting standard set by the City. A lighting assessment was performed on lights alternating in staggered formation, lights only on one side of the road, and lights on both sides of the street. For West Grand Avenue (East of Cambpell Street) and Market Street (North of 3rd Street) double cobra lights centered in the median were also evaluated. All scenarios were analyzed using the AutoLUX Program. For the assessment, the following values were assumed:

LEGEND

- AREA WELL LIT DUE TO PRIVATE/BUILDING LIGHTING
- AREA POORLY LIT
- BUILDING LIGHTS NOT IN OPERATION
- ⌀ LIGHT OUT OF OPERATION
- ○ NEW LIGHT OBSERVED DURING SITE VISIT
- × LIGHT NOT LOCATED DURING SITE VISIT

KEYNOTES

1. TREE IS OBSTRUCTING RANGE OF THIS LIGHT
2. OPERATIONAL PRIVATE LIGHT OBSERVED

Legend: City Facilities; City Projects; Storm Drain; Street Lights; Street Trees; Tree Wells; No Sidewalk; Sanitary Sewer Pipe Diameter (N/A; 0.000001 - 12.000000; 12.000001 - 21.000000; 21.000001 - 39.000000; 39.000001 - 80.000000); Sewer Sheet Grid

0 250 500 Feet

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE V.14
MANDELA ZONE EXISTING LIGHTING CONDITIONS

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LEGEND

- AREA WELL LIT DUE TO PRIVATE/BUILDING LIGHTING
- AREA POORLY LIT
- BUILDING LIGHTS NOT IN OPERATION
- LIGHT OUT OF OPERATION
- NEW LIGHT OBSERVED DURING SITE VISIT

KEYNOTES

1. TREE IS OBSTRUCTING RANGE OF THIS LIGHT
2. OPERATIONAL PRIVATE LIGHT OBSERVED

Legend

- City Facilities
- City Projects
- Storm Drain
- Street Lights
- Street Trees
- Tree Wells
- No Sidewalk

Sanitary Sewer Pipe Diameter

- N/A
- 0.000001 - 12.000000
- 12.000001 - 21.000000
- 21.000001 - 39.000000
- 39.000001 - 80.000000

Sewer Sheet Grid

0 150 300 Feet

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE V.15
3RD STREET ZONE EXISTING LIGHTING CONDITIONS

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i) Mandela Parkway Commercial Industrial Zone

- Height of street light: 30-feet
- Average wattage of each light: 250 w
- Light loss factor: 0.8
- Average Street Width: 59-feet
- Mandela Parkway Width: 150-feet
- West Grand Avenue (West of Campbell): 105-feet
- West Grand Avenue (East of Campbell): 95-feet

j) 3rd Street Corridor Commercial Industrial Zone

- Height of street light: 30-feet
- Average wattage of each light: 50 w
- Light loss factor: 0.8
- Average Street Width: 45-feet
- 3rd Street Width: 60-feet
- Market Street (North of 3rd Street): 88-feet

ii. Mandela Parkway Commercial Industrial Zone – Analysis

The Cypress Freeway Replacement Project that created Mandela Parkway in 1998 provided decorative lighting along both sides of the median that consists of single acorn fixtures of Washington-style poles and tri-arm fixtures on Washington-style poles to punctuate the beginning and end of each pathway at median intersections.

BKF visited the Mandela Parkway Corridor Commercial Industrial Zone during a field visit on January 5, 2010 to observe the existing lighting conditions. The zone has many blocks that provide opportunity for improvement. Several lights were observed to be non-operational at the time of the visit and several blocks were observed to in need of additional lighting. Figure V.14 displays what was observed during the visit.

During the interim period, street lights should be maintained and fixtures replaced to increase public safety. Ultimately, street lights should be replaced with intersection and streetscape improvements utilizing appropriate industrial lighting standards.

iii. 3rd Street Corridor Commercial Industrial Zone – Analysis

BKF visited the 3rd Street Corridor Commercial Industrial Zone during a field visit on January 5, 2010 to observe the existing lighting conditions. Figure V.15 displays what was observed during the visit. The zone appeared to be generally well lit with noted areas of exception. Several lights were observed to be non-operational at the time of the visit.

In general, most street lights were Cobra Head luminaires fixed to either a utility pole or round tapered pole. Market Street and Middle Harbor Road were observed to have Cobra Head duplex luminaires on round tapered poles.

As an interim measure, street lights should be maintained and fixtures replaced to increase lighting and therefore public safety. Ultimately, street lights should be replaced with intersection and streetscape improvements utilizing appropriate industrial lighting standards and fixtures.

G. Electricity and Telecommunications

i. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Background

Both industrial districts contain overhead facilities placed on utility poles jointly owned by Pacific Gas and Electric (PG&E), Comcast, and AT&T to delivery electrical cable television and telephone service. Electricity is delivered to and throughout the Districts by PG&E through a system of 12-Kilovolt supply lines. The supply lines feed most, but not all of the street segments within the Districts, and are carried on aerial poles that are often times also carrying telecommunication and cable television facilities (i.e. joint poles).

a. Power and Undergrounding of Aerial Wires and Structures

For those poles located in the public right of way, there are three options to relocate the facilities underground. The options most appropriate for the industrial districts are known as a "Rule 20A" and "Rule 20B" as defined by the California Public Utility Commission. The main difference between the options is whose responsibility it is to fund the work.

In a Rule 20A scenario, the public utilities pay for the work. However, the amount of work that can be completed is limited by a local jurisdiction's available balance of undergrounding credits. Undergrounding credits are issued by PG&E each year to jurisdictions in its service area. If not used, the balance continues to increase. In order for a project to qualify under a Rule 20, it must be in the public interest and meet one or more of the following requirements:

- Undergrounding will avoid or eliminate an unusually heavy concentration of overhead electric facilities; and/or
- The right of way is extensively used by the general public and carries a heavy volume of traffic; and/or
- The right of way adjoins or passes through a civic are or public recreation area.

In a Rule 20B, the applicant is responsible for all costs related to the installation of conduits, substructures, and boxes. Furthermore, the applicant must pay the cost for design and installation of the conductors less a credit for an equivalent overhead system. Average installed costs for undergrounding currently range from $250 to $800 per lineal foot.

In addition to removing the overhead facilities in the public right of way, modifications known as service conversions must be made on private property. At each property, the underground service is routed to the utility service point. For electrical service, this occurs at the meter. In older neighborhoods, additional work is typically required to upgrade the electrical panel or distribution system to meet current building codes.

The following procedures are required to commence undergrounding under a Rule 20A:

1. The local jurisdiction develops a map, which defines the precise limits in the public right of way and parcels where overhead conductors will be placed underground.

2. The map is used to form an undergrounding district, which is approval by the City Council.

3. The local jurisdiction decides whether it or PG&E will lead the undergrounding effort. The lead is known as the trenching agent. If the local jurisdiction leads, the process can typically be completed more quickly and is better coordinated with related improvements.

4. The trenching agent requests intents to participate in the undergrounding effort from all public utilities located in the project area.

5. The trenching agent compiles the information in a joint trench composite drawing and completes a “Form B”, which allocates design, materials, and installation costs between the participants.

6. A survey is completed at each property to determine the work necessary to complete the service conversion.

7. When the plans and Form B are approved by all participants, the installation of underground conduits, substructures, and boxes can commence.

8. When all underground infrastructure is approved, the utility companies will install conductors and related equipment.

9. Upon final testing, the public utility companies energize the system and the properties are converted. The utility companies remove the overhead poles and conductors.

To accomplish an undergrounding project, significant coordination is necessary. Given the complexities present, an undergrounding project which involves 50 or more properties could require 3 years to complete.

b. Broadband Network

Access to high-speed broadband networks offering data rates higher than 1 Gb/s are critical to many modern businesses. Both AT&T and Comcast provide broadband network services throughout Oakland. In addition, numerous competitive local exchange carriers (CLEC) including Qwest, XO Communications, Level 3, AboveNET, and MCI operate broadband fiber optic based networks whose backbone facilities for transmission were constructed through Oakland in the late 1990's, and in many cases bisect the Study Areas. The networks can provide access to advanced voice, video, and data transmission on a local, regional, or worldwide basis. Many of the CLECs also maintain data centers in Oakland or the surrounding cities allowing subscribers to collocate or peer with other network providers.

The extent of broadband services available to end users in any specific location requires integrated distribution systems that are fed from the larger backbone facilities, and is typically dependent upon demand. Given current activities and land uses, the integrated distribution facilities do not exist within the study areas, and bandwidth offered within the districts is likely limited.

ii. Mandela Parkway and 3rd Street Corridor Commercial Industrial Zone – Analysis

a. Power and Undergrounding of Aerial Wires and Structures

As use in the District(s) intensifies, the demands for electricity may exceed the capacity of the existing infrastructure. PG&E will need to evaluate, both on a case by case basis, and from a macro perspective, how and where they will need to expand capacity for both delivery of electrical power to the Districts, and then how to distribute that power within each District.

b. Broadband Network

Because of the backbone infrastructure in the area, there is potential for extensive broadband connectivity. If and when work occurs to improve streets within the districts, coordination with network operators should occur to encourage them to install network facilities, however CLEC's often will not risk the investment associated with installation of the integrated distribution networks required to serve end users without committed subscribers. In the event that CLEC's are unwilling to install distribution facilities, an option is for the City to fund the construction telecommunications infrastructure to facilitate the network operators' ability to provide service.

If the City installs network infrastructure, it should develop a strategy to reimburse the cost of deployment. One example option that has been implemented by the Cities of Palo Alto and Pasadena is for the City to install conduit, pull boxes and related equipment for lease on an annual basis to CLEC's. A second option is for the City to install conduits and pull boxes for sale to network operators. Given the limited area of the industrial districts, the sale option would likely be preferable.

In general, costs to install conduit and pull boxes, that could later be used by CLEC's, is approximately $20 per lineal foot if done with a roadway reconstruction project, and $50 per lineal foot if done independently.

H. Parking

This section addresses the existing parking configurations and how they function within the context of the existing elements within and adjacent to the public right-way. A detailed account of spaces provided for each parcel and/or use within each parcel, or regionally how many spaces are or should be provided by the City of Oakland is not within the scope of this report, but may be a useful study in a future phase.

i. Mandela Parkway Commercial Industrial Zone – Background

The Mandela Parkway Commercial Industrial Zone accommodates parallel parking on nearly every street.

ii. Mandela Parkway Commercial Industrial Zone – Analysis

In many cases, lengths of road absent of curb, gutter and sidewalk encourage disorganized parking off the edge of pavement. Streets where there is a clear lack of designated, striped parking include Wood Street, Willow Street, Campbell Street, 17th Street, 18th Street, and Poplar Street.

iii. 3rd Street Corridor Commercial Industrial Zone – Background

3rd Street accommodates parallel parking between Union Street and Brush Street. East of Brush Street the south side of 3rd Street has angled parking stalls while the north side is a combination of perpendicular parking and parallel parking. The parallel parking does not appear to create an unsafe condition along 3rd Street.

iv. 3rd Street Corridor Commercial Industrial Zone – Analysis

The streets south of 3rd Street that stop at the railroad right-of-way typically accommodate parallel parking on their west side and perpendicular or angled parking on their east side. This arrangement leaves drive aisles with widths that vary between 10-feet (on Linden Street) and 20-feet (on Filbert and Myrtle Streets). These widths do not meet the City's published code requiring 24-feet in parking drive aisles, to allow vehicles parked perpendicular to back out and turn either direction without colliding with the car

parked across the street. Additionally, the parking arrangement on Linden Street (roughly 10-feet drive aisle) does not likely meet the fire code requirement of 20-feet clear width.

The parking spaces are typically fully utilized on Linden Street, as there is office space on both sides of the street.

The remaining side streets in the study area accommodate parallel parking on both sides.

Strategy E – Infrastructure.

While the transportation network provides an excellent framework, most of the infrastructure components are at or beyond their useful design life. Except for the new Mandela Parkway, the surrounding industrial areas are in critical need of repair and rehabilitation. Significant infrastructure investment is immediately needed both to serve the existing community and to attract new businesses.

E.1 Roadways. Based on the Metropolitan Transportation Commission pavement management system methodology, the roadways are generally in poor condition based on the Pavement Condition Index (PCI) and in dire need of immediate repair and long-term rehabilitation.

E.2 Sidewalks. Based on field review and as indicated in Strategy D, many streets have many gaps in sidewalks and inaccessible paths of travel. Many intersection are either lacking accessible curb ramps or have ramps that do not meet current accessibility standards.

E.3 Wastewater. An overall wastewater system study is needed to determine the condition of the system, recommend immediate repairs, and long-term upgrades to the system. Additionally underground utility infrastructure improvements should be coordinated with and installed prior to intersection and streetscape improvements.

E.4 Storm Drains. An overall drainage system study is needed to determine the condition of the system, suitability for reuse, recommend immediate repairs, and long-term upgrades to the system. As the area improves, storm drain lines and structures should be added and or replaced to serve the Industrial Zones.

E.5 Domestic Water. As many of the conveyance lines appear undersized to meet current fire flow requirements, an overall water system model and study is needed to determine interim and ultimate replacement, upgrades, and main line extensions.

E.6 Street Lighting. As an interim measure, street lights should be maintained and fixtures replaced to increase lighting and therefore increase public safety. Ultimately, street lights should be replaced with intersection and streetscape improvements utilizing appropriate industrial lighting standards and fixtures determined through a lighting master plan study.

E.7 Electricity and Telecommunications

a. Power and Undergrounding of Aerial Wires and Structures

As use in the District(s) intensifies, the demands for electricity may exceed the capacity of the existing infrastructure. PG&E will need to evaluate from a macro perspective and a case by case development as to how and where they will need to expand capacity for delivery of electrical power to the Districts, and then how to distribute that power within each District.

b. Broadband Network

Because of the backbone infrastructure in the area, there is potential for extensive broadband connectivity. A Broadband Network master plan should be coordinated with current network operators to program and plan the facilities.

E.8 Parking. With the limited availability for on-street and off-street parking with the Industrial Zones, a comprehensive parking plan will be needed to coordinate development, street enhancements, and the potential for shared parking or other Traffic Demand Management (TDM) resources to reduce parking need.

VI. RECOMMENDATIONS AND IMPROVEMENT STANDARDS

Recommendations for improving infrastructure in the districts have been divided into four categories. First are recommendations that address specific traffic safety issues. Second are recommendations that address "macro" level concerns, such as transportation systems and circulation patterns. Third, recommendations for standards are presented for all elements that comprise the "streetscape" for each street in each district. These elements include roadway surfacing, surface drainage conveyance facilities, sidewalks, landscape strips, and street trees. Fourth, lighting requirements and recommendations are presented.

Recommendations presented, in many cases address specific deficiencies that were discussed in the Infrastructure Inventory and Evaluation section.

A. Safety Concerns

i. Mandela Parkway Commercial Industrial Zone

To mitigate the safety concern at the Campbell Street and West Grand Avenue intersection, we recommend that Campbell Street, between West Grand Avenue and 20th Street be converted into a one-way, southbound street. Automobile traffic would no longer be allowed to make the unsafe left-hand turn to westbound West Grand Avenue.

To mitigate the safety concern at the intersection of Wood Street and 32nd Street, the existing utility pole should be to be moved out of the traveled way or poles should be added to shorten the span (See Figure VI.1). PG&E should be contacted to discuss

potential solutions. Additional self-supported, steel poles may need to be utilized, as there appear to be very few options for guying new poles (See Figure VI.2).

B. Transportation Systems

i. Mandela Parkway Commercial Industrial Zone

a) Street Circulation

In order to optimize the W. Grand Avenue and Mandela Parkway intersection, and to act as a gateway monument for the area, a roundabout should be considered (See Figure VI.3). The roundabout would enable removing the existing traffic signal and allow the intersection to operate in less circuitous, more obvious traffic flow pattern.

We understand that the barricade at 10th Street between Pine Street and the I-880 frontage was installed with the approval of the City of Oakland to restrict truck traffic in the residential neighborhood southwest of the Study Area. The barricade currently isolates the residential neighborhood and forces longer trips to circumvent this blockade. With no other nearby access point, drivers could be encouraged to utilize the private access through the new 14th and Wood Street housing development, setting up potential future conflicts. We recommend that the barricade be removed, and signage be installed restricting through truck traffic.

Campbell Street between 26th and 28th Streets should be improved to current street standards to improve access and public parking within the Study Area.

b) Rail Lines

The City should develop and apply a comprehensive strategy that addresses the disposition and condition of the rail lines and affected streets that share alignments in both the near future (the next 5-years), and the long term (15+ years).

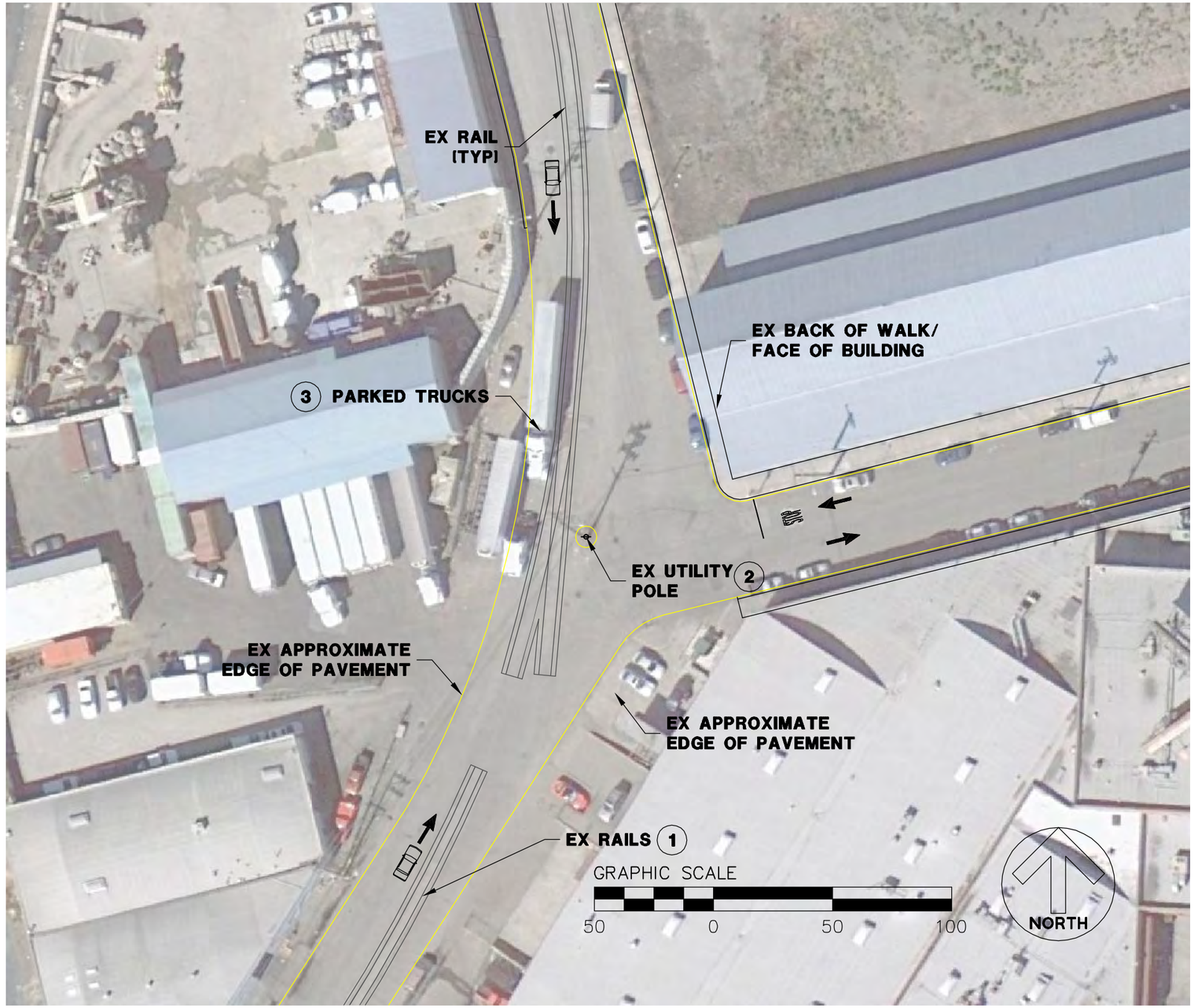
For the long term, decisions need to be made by stakeholders, including the City, the railroads and property owners about which rail lines will remain in perpetuity, in what streets, and to serve which parcels. Those spur lines designated to stay should be brought up to appropriate current standards of construction and safety. The streets that the spurs share an alignment with should be reconstructed with appropriate, modern features such as proper sub-drainage and adequate rail crossing panels throughout their length. The rail lines not identified for reuse should be removed, and the roadways reconstructed in accordance with appropriate construction standards and environmental practices.

KEYNOTES

1. THE RAILS CAUSE SURROUNDING PAVEMENT TO CRACK. THE POOR SURFACE CONDITIONS ENCOURAGE MOTORISTS HEADING NORTHBOUND TO DRIVE IN THE SOUTHBOUND LANE, POSING A SIGNIFICANT TRAFFIC DANGER.

2. EXISTING UTILITY POLE IN THE MIDDLE OF INTERSECTION IS A POTENTIAL SOURCE OF CONFUSION FOR MOTORISTS. NO SIGNAGE WAS OBSERVED THAT WOULD GUIDE TRAFFIC TO THE APPROPRIATE SIDE OF THE UTILITY POLE.

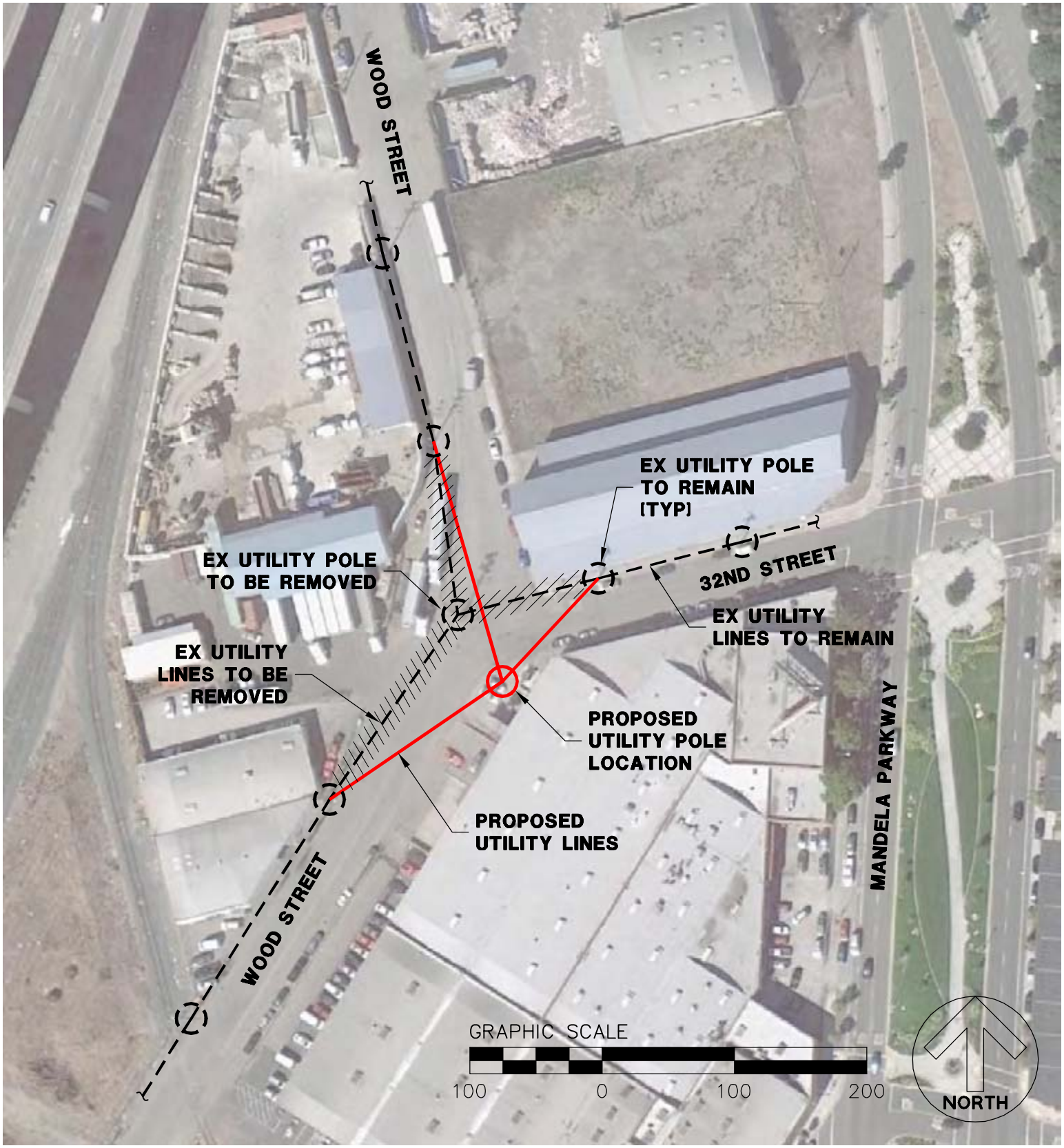
3. TRUCKS PARKED ON OR NEAR EDGE OF APVEMENT OBSTRUCT VIEW OF ONCOMING TRAFFIC FOR BOTH NORTHBOUND AND SOUTHBOUOND VEHICLES. BECAUSE NORTHBOUND AND SOUTHBOUND VEHICLES MAY BE IN SAME LANE, THERE IS POTENTIAL FOR ACCIDENTS.



CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE VI.1
EXISTING INTERSECTION CONDITIONS - WOOD ST & 32ND ST

BKF ENGINEERS / SURVEYORS / PLANNERS
1646 N CALIFORNIA BLVD
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2299 (FAX)



CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE VI.2
UTILITY POLE RELOCATION

BkF ENGINEERS / SURVEYORS / PLANNERS
1646 N CALIFORNIA BLVD
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2299 (FAX)



CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE VI.3
W GRAND AVE AND MANDELA PARKWAY CONCEPTUAL ROUNDABOUT

BKF
ENGINEERS / SURVEYORS / PLANNERS
1646 N CALIFORNIA BLVD
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2299 (FAX)

In general, we recommend that all rail lines east of Mandela Parkway ultimately be removed, as they do not appear to be currently in use, as evidenced by existing paving patterns (i.e., in many cases the rails have been paved over).

For the near future, the roadways that share alignments with rail spurs should be given high priority in the City of Oakland's pavement management program, and should be resurfaced with a temporary improvement to bring them to a serviceable condition until the long term strategy can be implemented. For work within what would typically be the railroads' responsibility for maintenance, the City should explore all possible avenues to either get the railroads to live up their obligations, or perform the work independent from the railroads. In the event that the City improves the area immediately adjacent to and between the rails, the City Public Works Department will need to carefully consider cost effective, temporary improvements that incorporate rail.

As funding options are researched for improvements to rail, it should be recognized that street and rail improvements will be necessarily linked. This nexus may expand the possibilities for funding sources.

c) Bicycle Facilities / Connectivity

Bicycles can circulate through the study area on public streets and can enter the study area via the Bay Trail alignment in Mandela Parkway. Improvements to the street surfaces described below will benefit bicycle circulation.

d) Pedestrian Connections

While the main connection pedestrian connection (the Mandela Parkway connection to the BART Station) is new and in good condition, implementing the lighting and sidewalk improvements recommended in Section VIII would provide safer pedestrian circulation throughout the Study Area.

e) Gateway Elements

In order to signify the entry into each Commercial Industrial Zone, gateway monuments should be installed at strategic locations to help identify and focus on the particular zone as a "place", that is specifically recognized by the City and the public. Gateway monuments could be located along Mandela Parkway north of 32nd Street (Exhibit VI.1), Mandela Parkway south of 12th Street (Exhibit VI.2), West Grand Avenue east of Chestnut Street (Exhibit VI.3), and West Grand Avenue between Frontage Road and Mandela Parkway (Exhibits VI.4).



Exhibit VI.1: Mandela Parkway Gateway Opportunity

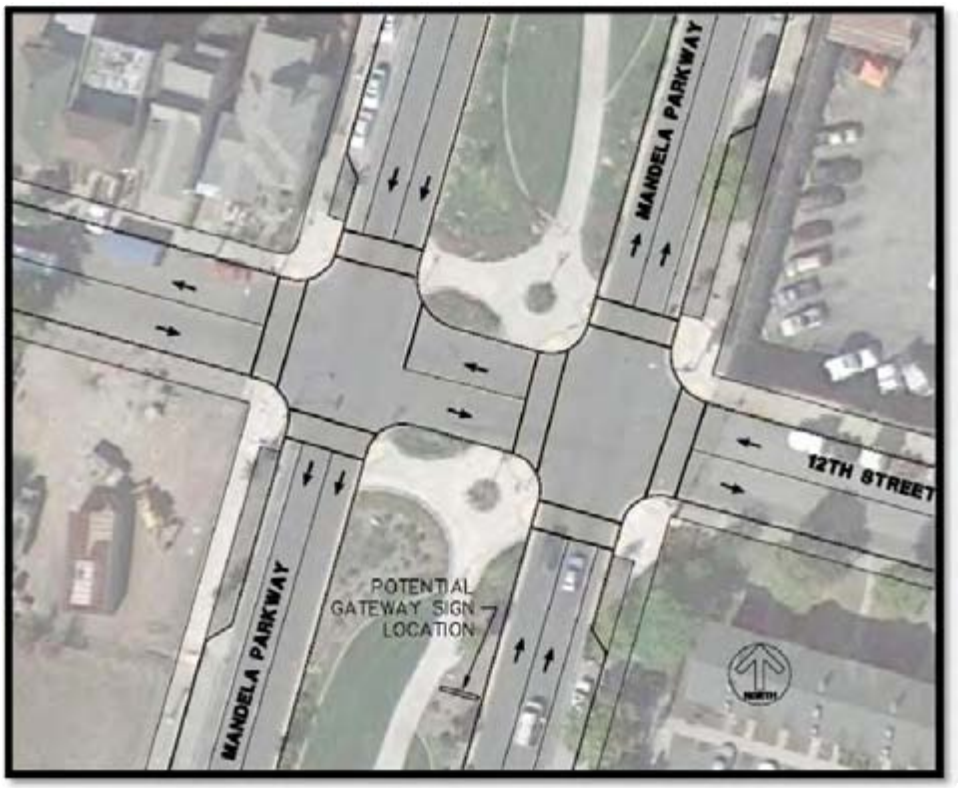


Exhibit VI.2: Mandela Parkway Gateway Opportunity

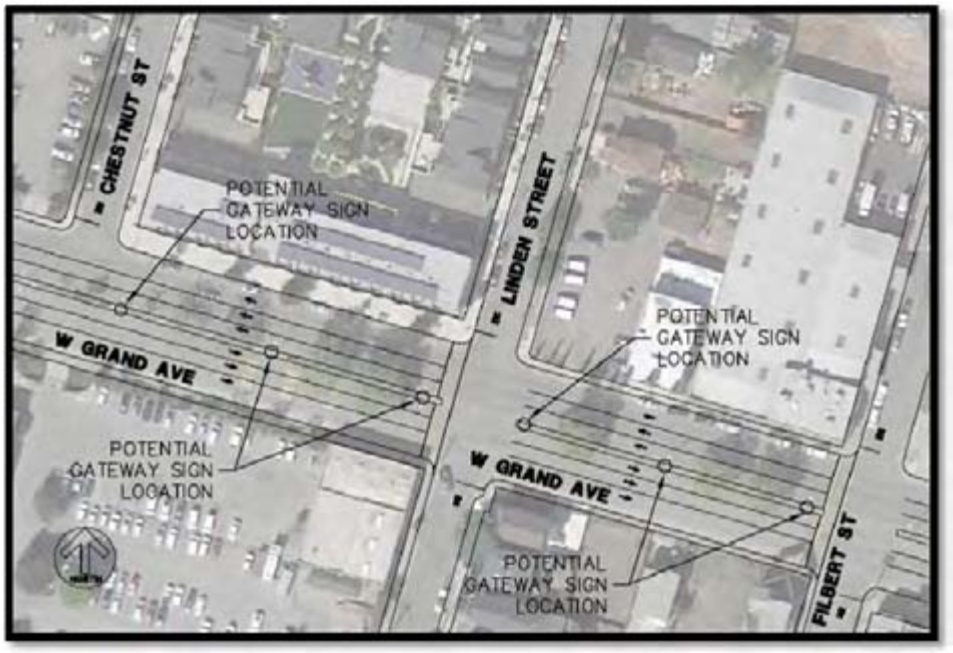


Exhibit VI.3: West Grand Gateway Opportunity

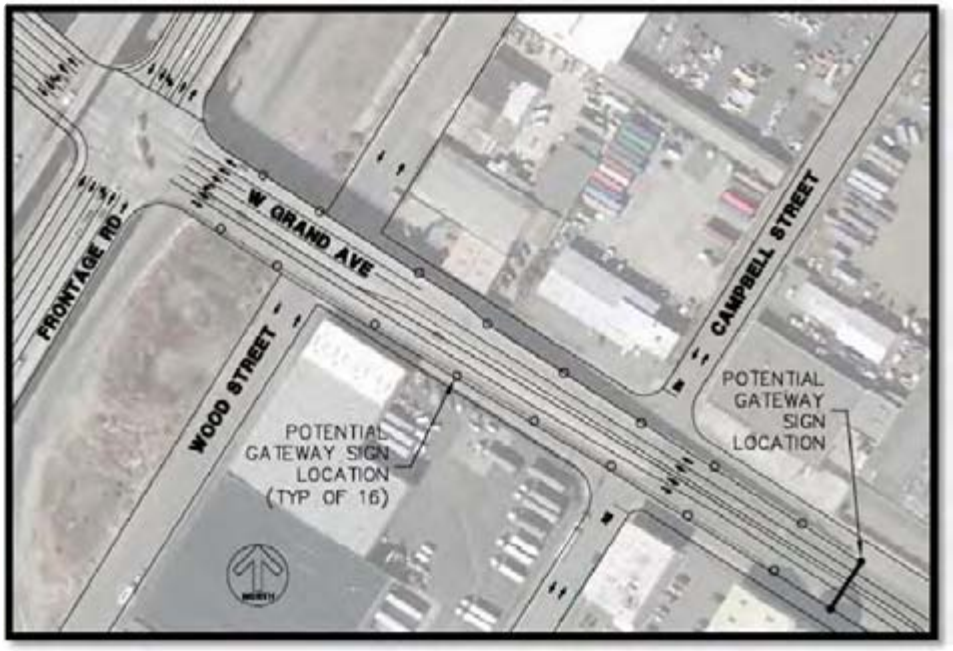


Exhibit VI.4: West Grand Gateway Opportunity

f) Parking

Within the Mandela Parkway Commercial Industrial Zone, the streets that are currently unable accommodate on-street parking stalls should be improved with the street sections recommended in Section VII of this report. The improvements would also improve stormwater runoff mitigation and pedestrian circulation.

General recommendations include installing of curbs and gutters, and striping parallel parking in areas where there are none. For blocks where cars are currently parking perpendicular to the street, and where there is sufficient space to accommodate perpendicular parking, we recommend installing perpendicular parking sections on the edge of the road, separated from the road by rolled curb and gutter. See Exhibit VI.9 for a typical perpendicular parking, rolled curb and gutter layout. The perpendicular parking section permits cars to safely park, maximizes the number of parking stalls, appropriately directs stormwater runoff, and provides pedestrians with a clear path of travel.

ii. 3rd Street Corridor Commercial Industrial Zone

a) Street Circulation

The trucks parking on Adeline Street in the mornings is a signage and police enforcement issue that should be addressed. As there currently appears to be area available outside the gates, but on Port property on the south side of the Middle Harbor Drive bridge, perhaps a truck parking program, with appropriate time limits and enforcement, could be implemented there. The City and Port of Oakland should coordinate to enact a reasonable resolution to this.

b) Bicycle Facilities / Connectivity

Signs should be installed identifying Bay Trail routes, particularly as the Bay Trail is meant to navigate Brush and 2nd Streets, as there are no dedicated bicycle lanes. The planned bicycle routes indicated on the City map should be linked and connected to the bicycle grid.

ABAG's maps should be modified to remove Middle Harbor Drive as a Bay Trail link unless improvements to the bridge are pending. An alternative, much safer bicycle route to Middle Harbor Shoreline Park for bicycles lies on a walkway/path adjacent to the 7th Street entrance to the Port. The 7th Street route is also connected to the Bay Trail at Mandela Parkway. The park is roughly the same distance from the intersection of 3rd and Adeline using either route.

c) *Pedestrian Connections*

ADA ramps between all major transportation hubs and the 3rd Street Corridor Commercial Industrial Zone should be installed as needed to make the area accessible to pedestrians with disabilities.

Lighting levels along these corridors should be reviewed and enhanced, particularly as pedestrians must pass under Interstate 880 to access the 12th Street BART Station downtown.

d) *Gateway Elements*

A Gateway monument could be located at the intersection of Market Street and 5th Street, the intersection of 5th Street and Adeline Street, along 3rd Street as eastbound traffic approaches Union Street, and along 3rd Street as westbound traffic approaches Martin Luther King Jr. Way. Exhibits VI.5 - VI.8 display potential gateway improvements for the 3rd Street Corridor Commercial Industrial Zone.

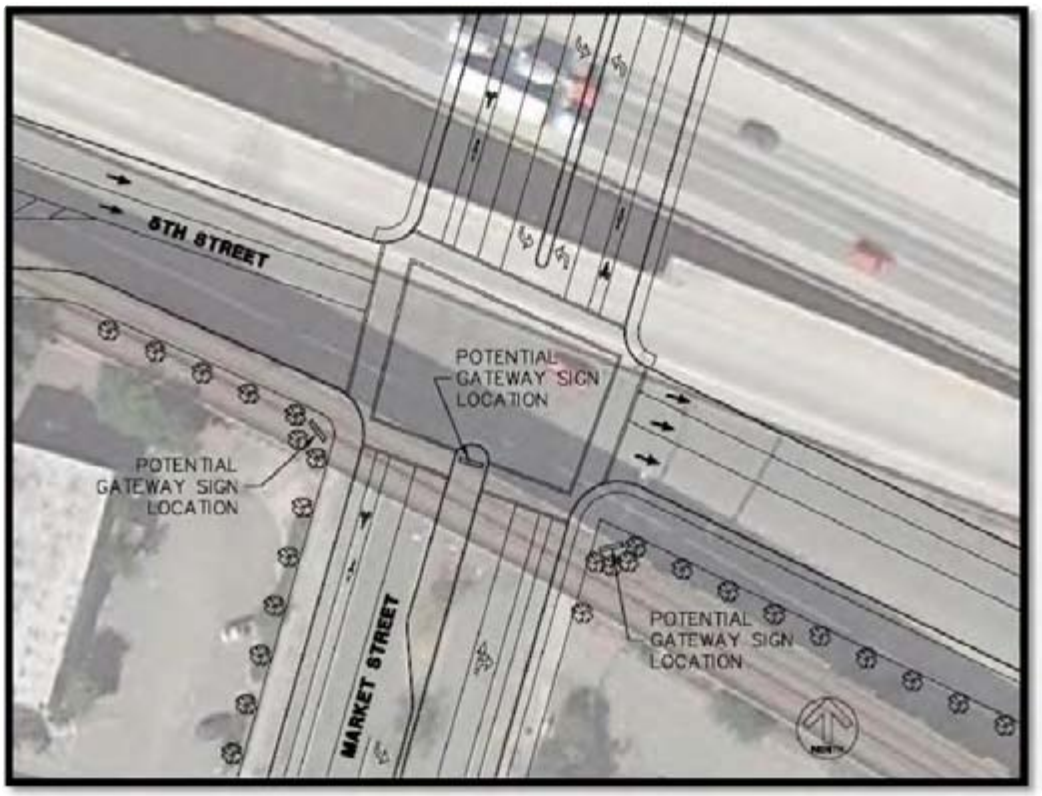


Exhibit VI.5: Market Street Gateway Opportunity

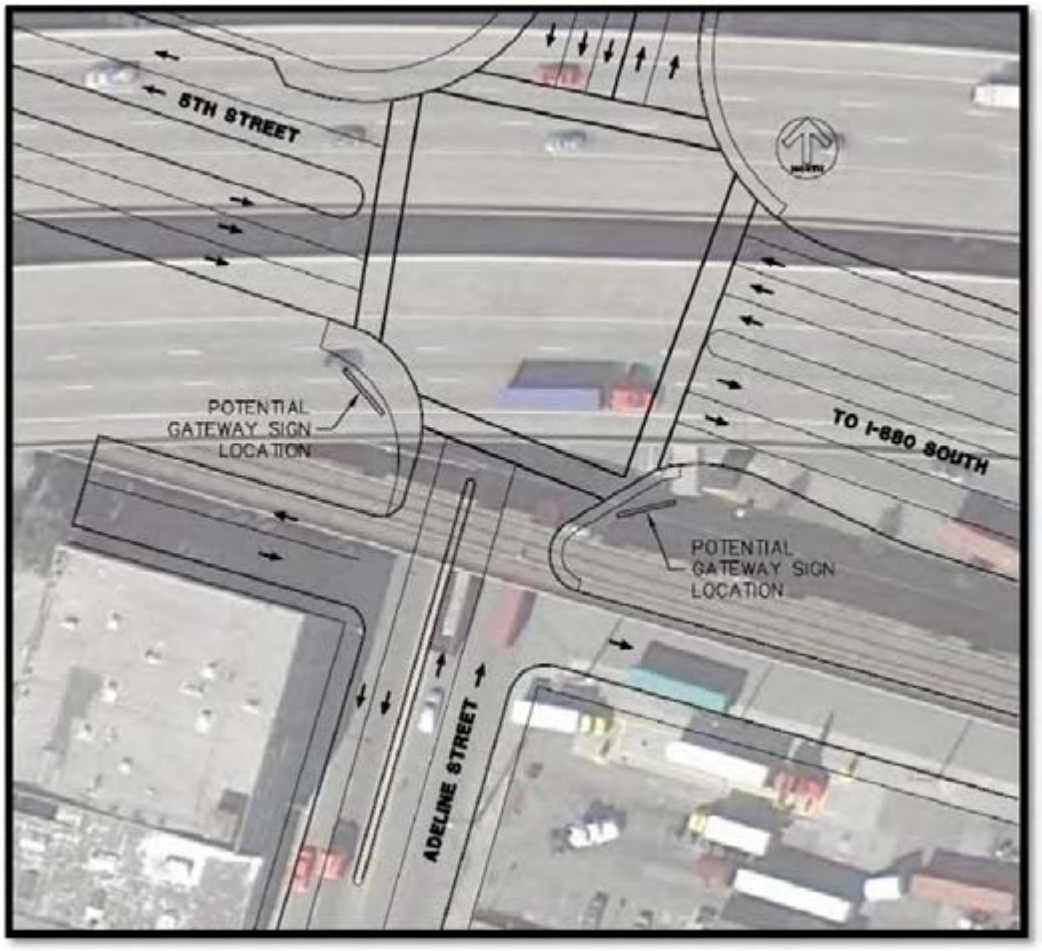


Exhibit VI.6: Adeline Street Gateway Opportunity

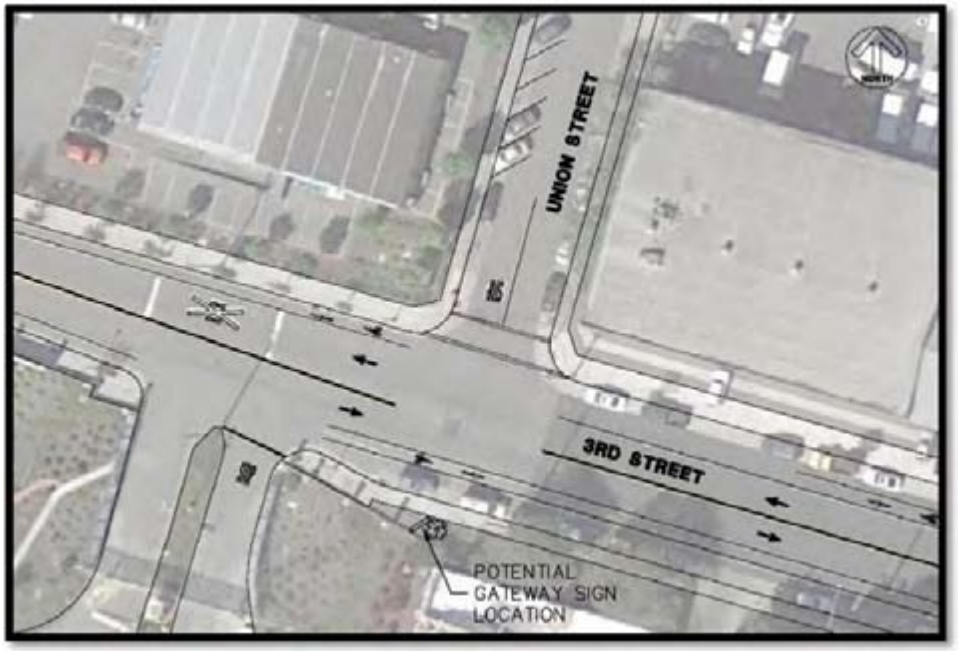


Exhibit VI.7: 3rd Street Gateway Opportunity

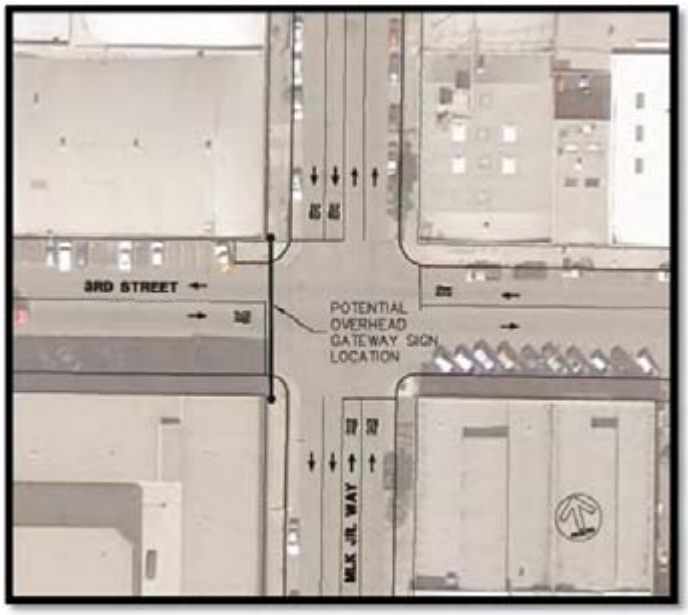


Exhibit VI.8: Martin Luther King Jr. Way Gateway Opportunity

e) Parking

The existing parking layout in the 3rd Street Corridor appears to provide an adequate level of service for the existing demands. However, the current parking stall configuration on Linden Street should be reviewed with the Oakland Fire Department. They may require, upon review, that the curb on the west side of the street be painted red, effectively eliminating roughly 10-parallel parking spaces.

C. Streetscape Improvement Standards

The streetscape is the overall appearance or view of a street. All items within and adjacent to the public street right-of-way will contribute to an overall streetscape, including pavement condition, and type, striping, sidewalks, curbs, streetlights, traffic signals, landscaping, signage, utility poles, street furniture, street trees and gateway monumentation.

Improving streetscapes through a comprehensive and methodical improvement program could substantially enhance the image of the study areas for new business or redevelopment. Care must be taken in developing such programs, as they must adhere to existing right-of-way conditions and accommodate existing traffic and pedestrian circulation and parking uses.

The roadways consist of the paved travel and parking lanes, surface drainage conveyance facilities and sidewalks. How these elements relate to each other, and how much of the right-of-way is dedicated to each element fundamentally forms the framework of

streetscape projects. Typically, these different elements are divided by the drainage facilities.

The standard street sections presented, on streets that have either non-existent or non-functioning surface drainage facilities, establish relationships between automobile, pedestrian and landscaping segments by acknowledging and attempting to strike balances between the existing conditions and historical uses of parcels that are served within the area for streets.

The sections also need to strike a balance with current accepted codes requirements that were not in place when this area was originally developed. For instance, existing street rights-of-way and setbacks to existing buildings are not as wide as what would typically be required for an industrial area that was being planned today to accommodate street parking and commercial truck turning radii; loading docks are typically not allowed to front public right-of-way, due to the disruptions that loading activities can have on through traffic, including pedestrian traffic.

Another goal typical of redevelopment is to "green" the streets, or enhance their ability to treat stormwater run-off by trapping oils and other particulate before it is discharged into the Bay. While most of the street sections in both districts are constrained for space, bioretention areas could be incorporated either into landscape strips between curbs and sidewalks, or could be installed at various locations in lieu of parking to accommodate such treatment.

i. Mandela Parkway Commercial Industrial Zone

Exhibit VI.9 graphically represents areas where new standards are suggested in the Mandela Parkway area as a potential 10th Street section just west of Pine Street. Perpendicular parking on one side and parallel on the other will provide sufficient parking to match existing uses. The sidewalks will improve pedestrian circulation and safety, while the new curb and gutters will alleviate stormwater runoff ponding and help to prevent future damage to the pavement.

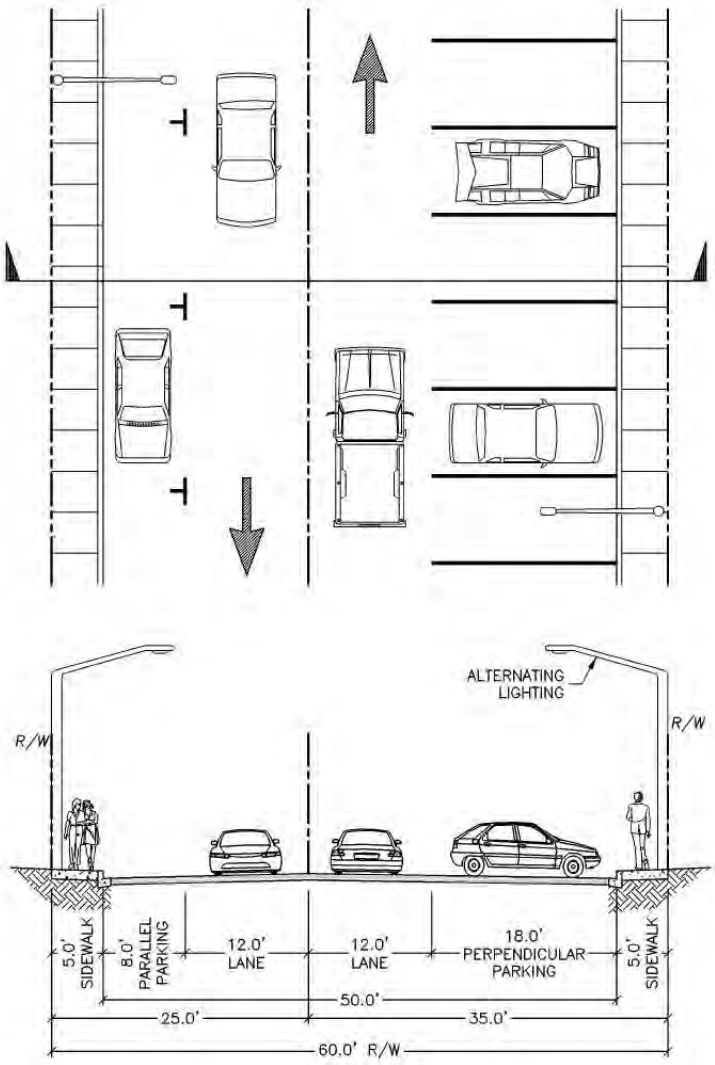


Exhibit VI.9: Potential 10th Street 60’ Plan/Cross-Section

11th Street is similar to 10th Street but has a 59' right-of-way versus 10th Street's 60' right-of-way. The existing building on the north side provides bays for truck loading, so a rolled curb with perpendicular parking is recommended. A 7' compact parallel parking stall should be utilized due to the right-of-way width.

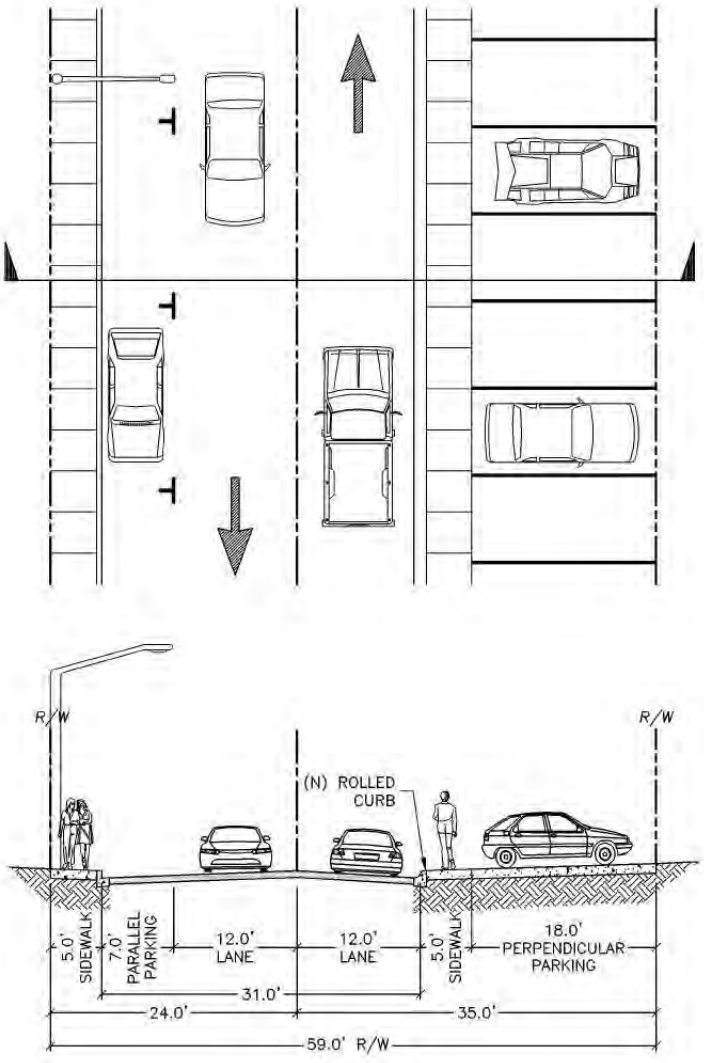


Exhibit VI.10: Potential 11th Street 59' Plan/Cross-Section

Wood Street is a street of particularly irregular sidewalk, curb and gutter configuration and provides many opportunities for improvement. Between 12th Street and 14th Street, new construction on the western side of Wood Street has resulted in a new sidewalk. The remaining stretch of Wood Street has several cases of sidewalks being in very poor condition or no sidewalk at all and curb and gutter not installed to mitigate runoff. Several of these locations occur where cars currently park parallel or perpendicularly, and in some locations loading bays are present at the edge of the road. BKF recommends installing variations of rolled curb and gutter, sidewalk and perpendicular

parking sections. The rolled curb and gutter allows stormwater runoff to be properly directed to stormwater infrastructure, while at the same time allowing vehicle traffic to park and/or load at the edge of the road without causing damage to the curb and gutter. Exhibit VI.11 is a recommended street section where rolled curb is not needed, and Exhibit VI.12 is a recommended section where rolled curb and perpendicular parking would be beneficial.

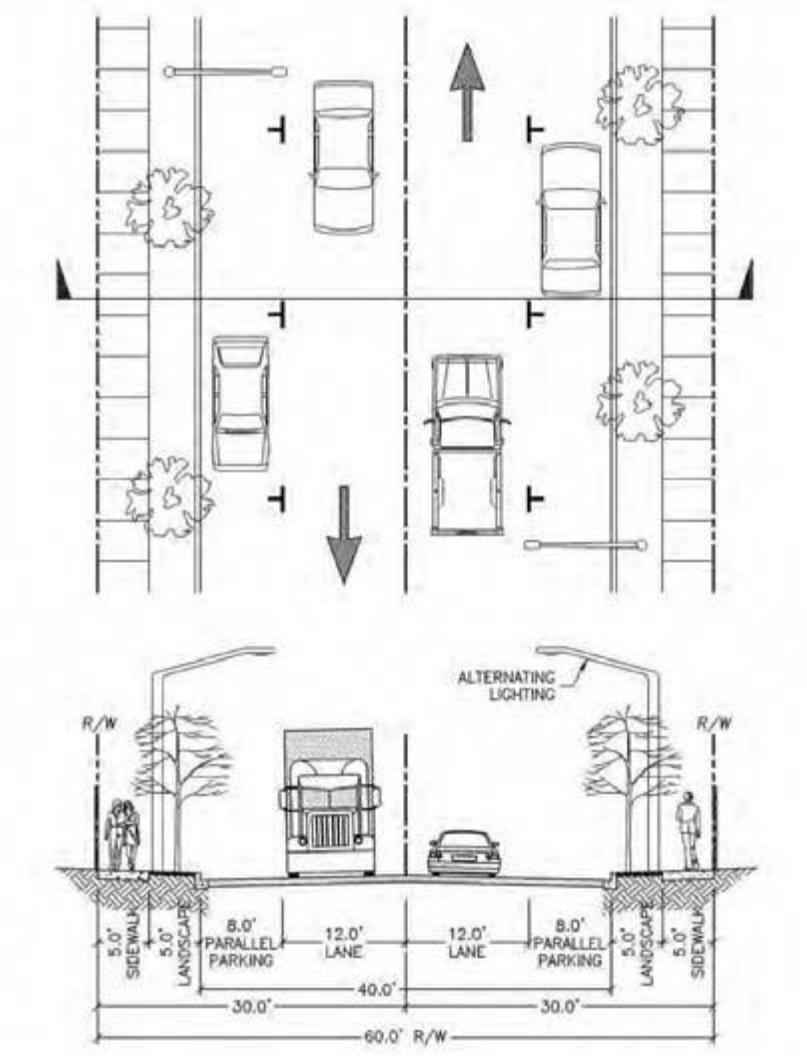


Exhibit VI.11: Typical 60' Right-of-Way Plan/Section

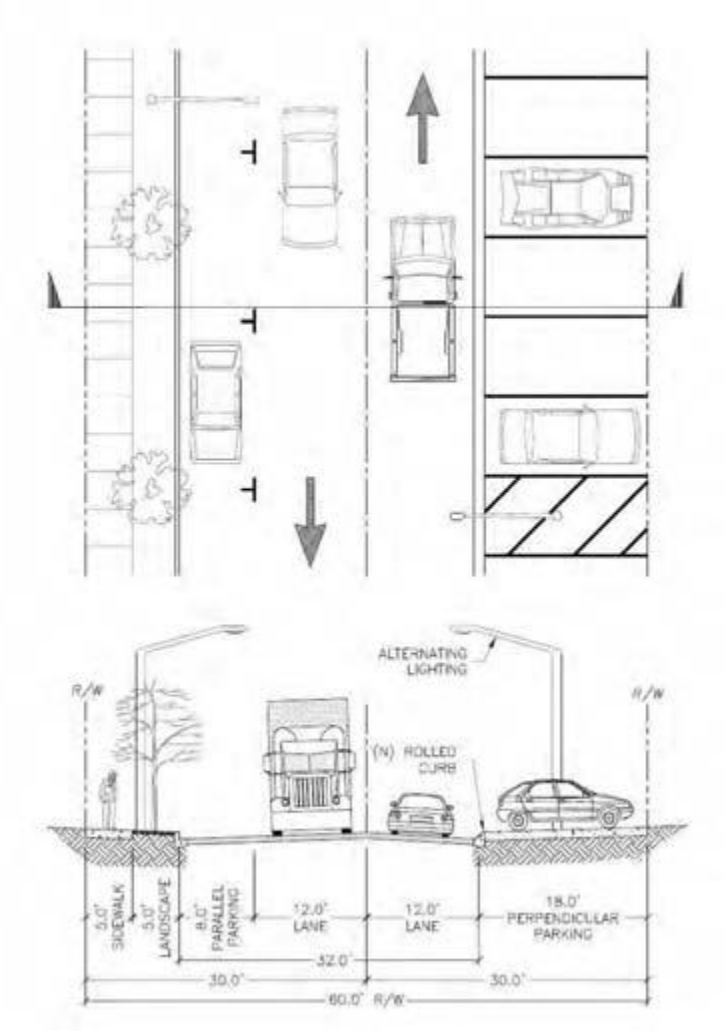


Exhibit VI.12: Typical 60' Right-of-Way Plan/Section with Perpendicular Parking

17th Street is one street where lack of a clear pedestrian path of travel provides an opportunity to improve pedestrian traffic. Between Wood Street and Campbell Street, the north side of 17th has no clear, safe pedestrian path of travel and the south side provides a broken path. BKF recommends installing curb, gutter and sidewalk along the south side between Wood and Willow, and installing signage at the intersections of Wood and 17th and Campbell and 17th indicating to pedestrians on the north side to use crosswalks and continue along the south side of 17th.

18th Street between Wood Street and Campbell Street is a block in which cars park perpendicularly and there is no sidewalk for pedestrian travel. The south side of the street does not provide curb, gutter or sidewalk and cars park on asphalt at the edge of the road. BKF recommends installing a rolled curb, gutter, sidewalk and perpendicular

parking section. This will permit pedestrian travel along the south side, maintains the existing parking arrangement, and allows stormwater runoff to be properly mitigated.

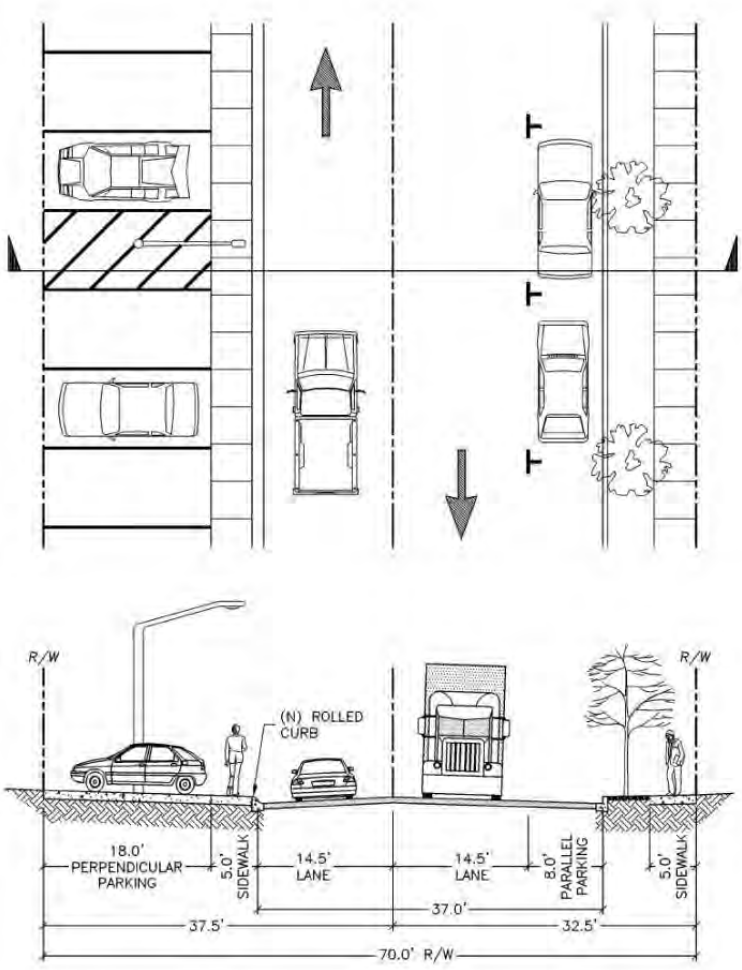


Exhibit VI.13: Potential 18th Street 70' Plan/Cross-Section with Perpendicular Parking

Figure VI.4 shows which intersections provide an opportunity to improve pedestrian circulation regarding curb ramps. There are many intersections in the Mandela Parkway Commercial Industrial Zone that do not have ADA compliant curb ramps or no curb ramp at all. BKF therefore recommends installing curb ramps that comply with current City and ADA design standards. The installation of these curb ramps will allow pedestrians to be aware of when they are approaching a street intersection and will provide a clear path of travel to cross the street.

ii. 3rd Street Corridor Commercial Industrial Zone

The north sidewalk between Brush Street and Castro Street ends halfway through the block, where perpendicular parking stalls begin. We recommend continuing this sidewalk throughout the length of the street and removing the existing perpendicular

stalls. While there will be a net loss in parking spaces along the block, the lengthened sidewalk improves the safety of pedestrian traffic. It will also improve vehicular traffic safety by providing a uniform parking situation throughout the entire block.

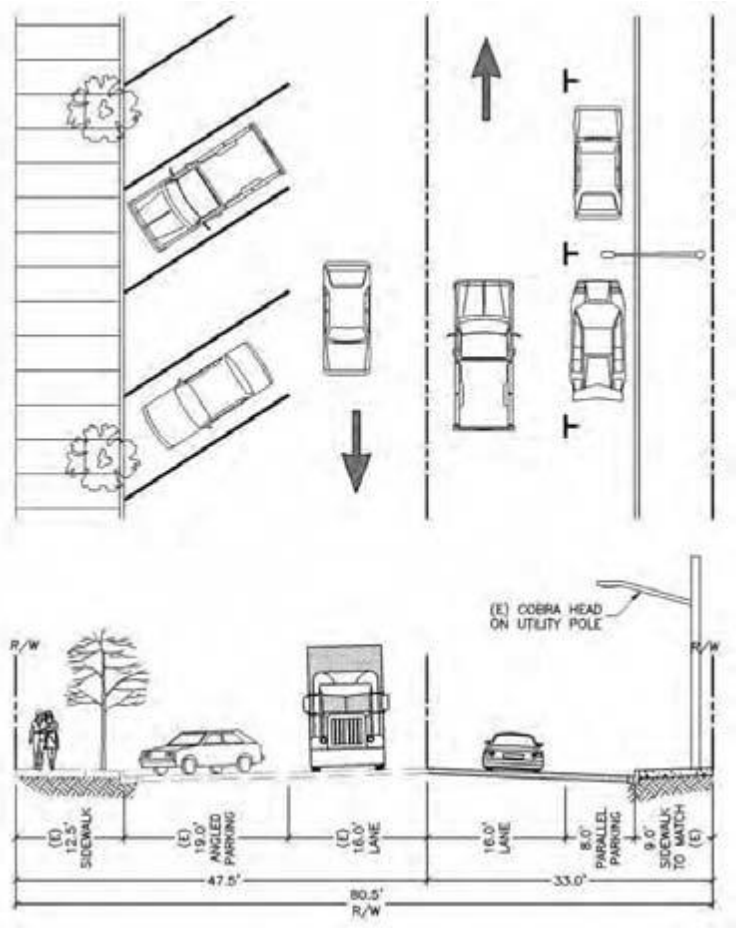


Exhibit VI.14: Potential 3rd Street Sidewalk Improvement

Another opportunity to improve pedestrian circulation exists along 3rd Street between Castro Street and Martin Luther King Jr. Way. The sidewalk along the north side of the 3rd Street is discontinuous for approximately 250 feet. Along the length of discontinuous sidewalk, vehicles currently park perpendicularly, which creates a safety concern for pedestrians that walk behind parked vehicles. We recommend that signage and striping be installed to warn pedestrians that the sidewalk ends and to cross the street and use the adjacent sidewalk. A valley gutter should be installed to match the flowline of the existing gutters so that stormwater can be properly mitigated.

Figure VI.5 shows which intersections provide an opportunity to improve pedestrian circulation regarding curb ramps. There are many curb intersections in the 3rd Street Corridor that do not have ADA compliant curb ramps or have no curb ramp at all. We therefore recommend installing curb ramps that comply with current City and ADA

LEGEND

SIDEWALK - PEDESTRIAN PATH OF TRAVEL

NON-ADA COMPLIANT CURB RAMP

CURB RETURN WITH NO CURB RAMP

ADA COMPLIANT CURB RAMP

MITIGATION RECOMMENDATIONS

1. INSTALL NEW STANDARD CURB, GUTTER AND SIDEWALK
2. INSTALL NEW ROLLED CURB, GUTTER AND SIDEWALK
3. INSTALL NEW ROLLED CURB, GUTTER PERPENDICULAR PARKING SECTION. SEE FIGURES IV.6 AND IV.7.
4. INSTALL NEW VALLEY GUTTER
5. INSTALL NEW SIGNAGE DIRECTING PEDESTRIAN TRAFFIC TO OTHER SIDE OF THE STREET
6. 10TH ST NEW SECTION. SEE FIGURE IV.3.
7. 11TH ST NEW SECTION. SEE FIGURE IV.4.
8. INSTALL/REPLACE CURB AND CUTTER

Legend

Parcels

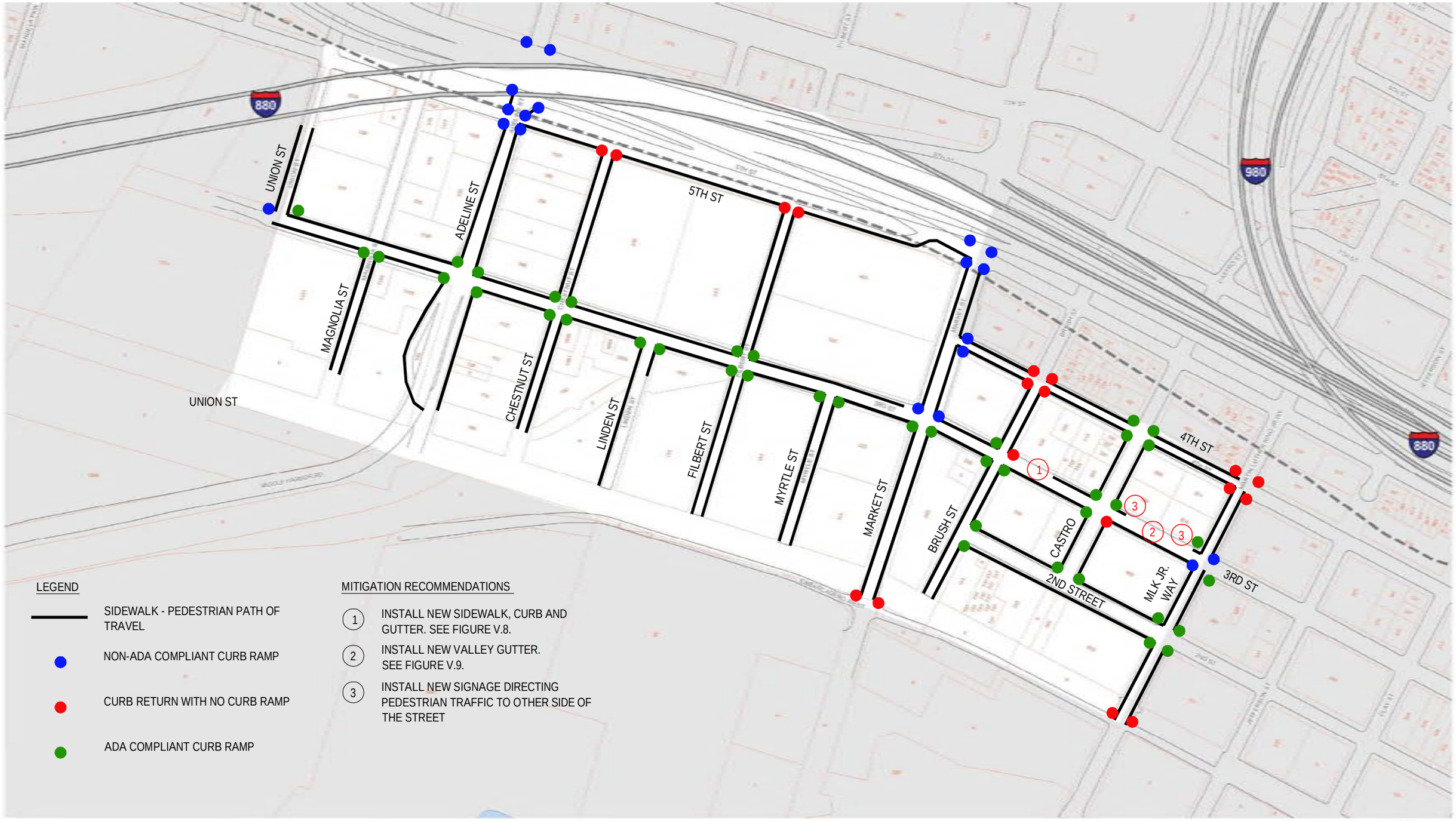
Face of Curb

0 250 500 Feet

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FIGURE VI.4
MANDELA ZONE PEDESTRIAN CIRCULATION

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FIGURE VI.5
3RD STREET ZONE PEDESTRIAN CIRCULATION

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design standards. The installation of these curb ramps will allow pedestrians to be aware of when they are approaching a street intersection and will provide a clear path of travel to cross the street.

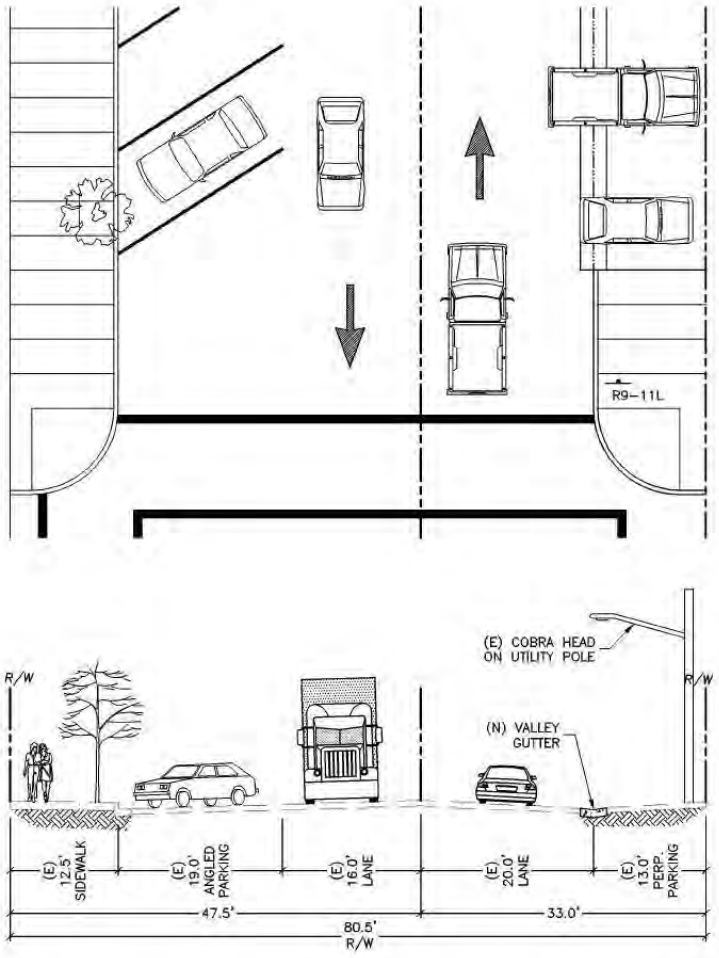


Exhibit VI.15: Potential 3rd Street Valley Pedestrian Improvement

D. Lighting

i. Mandela Parkway Commercial Industrial Zone -

Based on a photometric analysis the minimum referenced in Section V., light spacing was determined using the City's minimum luminance requirements. Results of the analysis can be seen on Appendix C, and recommendations are as follows:

a) Lighting on only one side of the street: the minimum spacing is 70' for 59' wide streets and 80' wide for 47' wide streets.
b) Lighting in a staggered arrangement, alternating between both sides of the road, the minimum light pole spacing is 150' for 105' wide streets.
c) Lighting in the median, the minimum spacing is 75'.

d) For Mandela Parkway, lighting on both sides of the streets taking in consideration the park luminaires the minimum spacing required is 140'.

The following is a list of the streets where additional lighting is recommended, along with the approximate number of light poles recommended:

Mandela Parkway	22 Light Poles
West Grand Avenue	18 Light Poles
Peralta Street	13 Light Poles
Adeline Street	6 Light Poles
12th Street	2 Light Poles
14th Street	2 Light Poles
15th Street	2 Light Poles
16th Street	11 Light Poles
17th Street	8 Light Poles
18th Street	5 Light Poles
19th Street	4 Light Poles
20th Street	6 Light Poles
21st Street	5 Light Poles
24th Street	14 Light Poles
26th Street	17 Light Poles
28th Street	11 Light Poles
30th Street	2 Light Poles
32nd Street	1 Light Poles
34th Street	2 Light Poles
Wood Street	20 Light Poles
Willow Street	14 Light Poles
Campbell Street	9 Light Poles
Kirkham Street	8 Light Poles
Poplar Street	23 Light Poles
Union Street	14 Light Poles
Chestnut Street	6 Light Poles
Magnolia Street	13 Light Pole
	258 Light Poles

It is recommended that a total of approximately two hundred and fifty eight (258) street lights be added to the area, and forty (40) streets lights be replaced/repaired as they were observed to be non-operational. An exhibit displaying the approximate recommended locations for additional light poles can be found in Figure VI.6 these additions should be made in combination with the necessary repairs stated above.

RECOMMENDED ADDITIONAL STREET LIGHTS

STREET NAME	QUANTITY
12th	2
14th	2
15th	2
16th	11
17th	8
18th	5
19th	4
20th	6
21st	5
24th	14
26th	17
28th	10
30th	2
32nd	1
34th	2
WOOD	20
WILLOW	14
CAMPBELL	9
WEST GRAND AVENUE	18
MANDELA PARKWAY	22
PERALTA	13
KIRHAM	8
POPLAR	21
UNION	17
CHESTNUT	6
ADELINE	6
MAGNOLIA	13
TOTAL =	258



LEGEND

- (E) NON-OPERATIONAL STREET LIGHT TOTAL = 40
- PROPOSED SINGLE STREET LIGHT
- PROPOSED DOUBLE ARM STREET LIGHT

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FIGURE VI.6
MANDELA PARKWAY ZONE PROPOSED STREET LIGHTS

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ii. 3rd Street Corridor Commercial Industrial Zone

Based on a photometric analysis referenced in Section V, the minimum light spacing was determined using the City's minimum luminance requirements. Results of the analysis can be seen on Appendix C, and recommendations are as follows:

a) Lighting on only one side of the street, the minimum spacing is 70'.
b) Lighting on both sides of the street, the minimum spacing is 160'.
c) Lighting in a staggered arrangement, alternating between both sides of the road, the minimum light pole spacing is 220't for 60' wide and 230' for 45' wide.
d) Lighting in the median, the minimum spacing is 80'.

The street lighting for the 3rd Street Corridor Commercial Industrial Zone was also evaluated against the minimum street light spacing standards, as set by Oakland guidelines. Again, there were numerous situations where the existing lighting did not meet these requirements. The following is a list of streets within this industrial zone which needs additional lighting, along with the approximate number of lights needed per street:

3rd Street	18 Light Poles
Adeline Street	2 Light Poles
Market Street (North)	3 Light Poles
Market Street (South)	2 Light Poles
Magnolia Street	5 Light Poles
Chestnut Street	7 Light Poles
Filbert Street	5 Light Poles
Myrtle Street	4 Light Poles
Brush Street	4 Light Poles
Castro Street	3 Light Poles
Martin Luther King	6 Light Poles
4th Street	1 Light Pole
2nd Street	1 Light Pole
Linden Street	3 Light Poles
	82 Light Poles

A total of eighty-two (82) street light poles appear to be in need with the 3rd Street Corridor Commercial Industrial Zone to meet the lighting standard. This measure will supply enough additional lighting for the entire Commercial Industrial zone to meet the public street lighting standards. An exhibit displaying the approximate recommended locations for additional light poles can be found in Figure VI.7.

These light pole spacing standards are applicable for all of the industrial zones. See Appendix D for the Oakland Street Lighting Warrants.

Many of the existing street lights are mounted on utility poles. In general, if utility pole relocations were required due to public improvements, PG&E would absorb the cost associated with the relocation. At this time, it is uncertain if there will be a needed to relocate utility poles due to private development land use plans, access, or service.

Streetlights on utility poles are generally an issue because many of the poles are at the end of their useful life. Repairs are inherently more difficult logistically, as they must be coordinated with PG&E, and often telecommunication companies and cable television providers.

Many of the streetlights have been damaged by truck traffic, because the mast arms do not, in many cases, accommodate trucks, from either a height or width perspective. All upgrades to the lighting system should take truck movements into account.

BKF does not recommend replacing the existing lights with Light Emitting Diode (LED) lighting. LED Lighting offers several benefits over conventional, high pressure sodium (HPS) street lighting in some applications, particularly in dense residential developments or park paths where higher concentrations of light and glare control are of paramount importance. In the focus areas, LED lighting is not likely to be practical due to the street widths, the absence of residences and the high concentration of lights that would likely be required to meet the City's foot-candle requirements.

Final implementation of recommended streetlight improvements should account for current street classifications.

VII. PROJECT DEFINITION AND PRIORITIZATION

This section identifies and prioritizes potential project types that advance the goals of the district strategy. Project types have been selected to provide the City of Oakland maximum possible flexibility for implementation with an understanding that timing and levels of funding are impossible to predict. Priority levels are based on which improvements, first, address specific and serious safety concerns and, second; can make the greatest impact while expending the least amount of resources.

Following are the priority levels used for the Mandela Parkway District:

Priority 1 – Projects that address specific dangerous existing conditions

Priority 2 – Pavement repair of entire study area will improve ride for users of the roads and will signify to the public that the City is beginning to recognize and take action in the West Oakland Industrial Districts. Costs are estimated for improvements that would provide a 5-10-year design life.

Priority 3 – Projects to place gateway monuments or signage at strategic locations to advise visitors that they are entering a distinct District within the City of Oakland.

(N) STREET LIGHT (TYP)

(E) STREET LIGHT (TYP)

Adeline Street Bridge Repair

880

980

Jefferson Square

5TH ST

3RD ST

MIDDLE HARBOR RD

RECOMMENDED ADDITIONAL STREET LIGHTS

STREET NAME	QUANTITY
3RD	18
MAGNOLIA	5
ADELINE	2
CHESTNUT	7
LINDEN	3
FILBERT	5
MYRTLE	4
MARKET (NORTH)	3
MARKET (SOUTH)	2
BRUSH	4
CASTRO	3
MARTIN LUTHER KING	6
4TH	1
2ND	1
TOTAL =	64

LEGEND

- (E) NON-OPERATIONAL STREET LIGHT TOTAL = 18
- PROPOSED SINGLE STREET LIGHT
- PROPOSED DOUBLE ARM STREET LIGHT

Legend
City Facilities
City Projects
Storm Drain
Street Lights
Street Trees
Tree Wells
No Sidewalk
Sanitary Sewer Pipe Diameter
N/A
0.000001 - 12.000000
12.000001 - 21.000000
21.000001 - 39.000000
39.000001 - 80.000000
Sewer Sheet Grid

0 150 300 Feet

N

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FIGURE VI.7
3RD STREET ZONE PROPOSED STREET LIGHTS

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Priority 4 – Improvements to street intersections including curbs, gutters, sidewalks, accessible curb ramps, pavement rehabilitation, striping, signage and gateway monuments. Each intersection, by definition, serves as a gateway to as many as 4-street segments. Final determination of how many or which intersections to improve with any one project will ultimately be a function of funding availability. Projects in this group are split into groups "A" and "B" to signify costs associated with reconstructing intersections with and without upgrade and replacement of the existing rail systems. Costs are estimated for improvements that would provide a 20-year plus design life.

Priority 5 – Full street improvements including curbs, gutters, sidewalks, pavement rehabilitation, striping, signage, lighting, underground utilities and landscaping or street trees. Full street improvements are assigned a lower priority level because the costs associated with improvement of any street section are high, and the relatively lower visibility level of any single segment of street, as opposed to intersections, which have a naturally higher visibility level. Projects in this group are split into groups "A" and "B" to signify costs associated with reconstructing streets with and without upgrade and replacement of the existing rail systems. Costs are estimated for improvements that would provide a 20-year plus design life.

Priority 6 – Projects that improve circulation through the area. These projects have been assigned a relatively low priority level, partly due to cost, and partly due to the level of further study that would realistically be required prior to implementation.

Installation of streetlights is not broken out as a specific "project", but rather it is assumed that as streetscapes and intersections are replaced in full, the streetlights would be adjusted as well.

Rough, order of magnitude costs have been estimated, by quadrant, for recommended improvements at each priority level (for the full reconstruction of streets and intersections, the costs have been separated further into categories that include replacing the rail within the streets, and that include removing rail in the streets and replacing with pavement). Costs are presented in Table VII.1. Backup estimates to these summary costs are included in Appendix E.

Table VII.1 Mandela Parkway Commercial Industrial Zone – Rough Order of Magnitude Costs (in millions)

Priority	Northwest Quadrant	Northeast Quadrant	Southwest Quadrant	Southeast Quadrant	Total
Priority Level 1 - Safety	$ 0.1		$ 0.1		$ 0.1
Priority Level 2 – Maintenance and Repair	$ 1.8	$ 4.9	$ 3.5	$ 2.0	$ 12.2
Priority Level 3 – Gateways	$ 0.2	$ 0.1	$ 0.1		$ 0.4
Priority Level 4 (Either 4A or 4B or combination)					$ -
4A – Intersection Improvements without Rail	$ 2.0	$ 5.0	$ 4.5	$ 3.4	$ 14.9
4B – Intersection with Rail Replacement	$ 1.6	$ 4.2	$ 3.9	$ 2.8	$ 12.5
Priority Level 5 (Either 5A or 5B or combination)					$ -
5A – Streetscape without Rail	$ 11.0	$ 29.0	$ 22.0	$ 13.0	$ 75.0
5B – Streetscape with Rail Replacement	$ 14.0	$ 33.0	$ 26.0	$ 18.0	$ 91.0
Priority Level 6 – Traffic Circulation	$ 4.7				$ 4.7
Total (without Rail Replacement)	$ 19.8	$ 39.0	$ 30.2	$ 18.4	$ 107.3
Total (with Rail Replacement)	$ 22.4	$ 42.2	$ 33.6	$ 22.8	$ 120.9

In the 3rd Street Corridor, because full streetscape replacements are not necessary, the priority levels are changed. Priority levels 1-2 are the same, and priority level 3 includes upgrades to the sewer and storm drain systems, as well as upgrades to the water delivery systems. Priority level #4 includes upgrades to streetlights. Priority level #5 includes miscellaneous projects to improve circulation in the area, as described in Section VI.C, including updating curb ramps throughout the district, and making improvements described near Martin Luther King Jr. Way, and Castro Street.

Rough, order of magnitude costs have been estimated for recommended improvements at each priority level for the 3rd Street Corridor. Costs are presented in Table VII.1 with backup estimates to these summary costs in Appendix E.

Table VII.2 3rd Street Corridor Commercial Industrial Zone – Rough Order of Magnitude Costs (in millions)

Priority	Total
Priority Level 1 – Maintenance and Repair	$ 2.6
Priority Level 2 – Gateways	$ 0.4
Priority Level 3 – Utility Upgrades	$ 7.4
Priority Level 4 – Streetlight Improvements	$ 1.4
Priority Level 5 – Traffic Circulation	$ 0.7
Total	$ 12.5

VIII. IMPLEMENTATION

This section discusses of the issues and processes that will need to be addressed in order to obtain permitting, and potentially funding for potential future projects.

A. Federal and/or State Funding

For any projects that seek state or federal capital funding assistance, an application will need to be made to The California Department of Transportation's (CalTrans), Local Assistance Division or applicable State (if not CalTrans related) or Federal Agency (if not administered by the Federal Highway Transportation Authority).

Caltrans' Local Assistance Program oversees more than one billion dollars annually available to over 600 cities, counties and regional agencies for the purpose of improving their transportation infrastructure or providing transportation services. This funding comes from various Federal and State programs specifically designed to assist the transportation needs of local agencies. Annually, over 1,200 new projects are authorized through the Local Assistance Program of which approximately 700 are construction projects.

The Local Assistance Program, made up of the Division of Local Assistance in Headquarters and 12 District Local Assistance Offices, assist Local and Regional Agencies by ensuring specific program requirements are met, project applications are processed, and projects are delivered in accordance with Federal and State requirements.

From an environmental documentation standpoint, all projects that are performed in California are required to comply with the California Environmental Quality Act (CEQA), and any project that receives federal funding is required to comply with the National Environmental Policy Act of 1969 (NEPA).

A flowchart developed by the City of Ceres summarizing the CEQA process is included as Appendix G and describes the process and series of decisions that the City of Oakland, as the likely “lead agency” for any potential project recommended in this document, would employ.

The NEPA process, if applicable, is similar and in many ways overlaps the CEQA process. CalTrans’ Division of Local Assistance has developed a Local Assistance Procedures Manual, of which Chapter 6 is devoted entirely to Environmental Procedures. Chapter 6 can be found in Appendix H.

B. Brownfields

The Environmental Protection Agency defines a "brownfield site" as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” Brownfield sites in industrial areas may require clean up depending on the level of risk and future use/reuse. California’s Environmental Protection Agency (Cal/EPA) works with communities and developers to develop brownfield remediation programs that address the main landowner/developer and agency concerns including the legal ramifications, regulatory compliance, and the cost to investigate and remediate sites.

Based on the historic use of these industrial zones, the levels of contamination could vary across the areas. Pollutants and contamination may be in the soil and in the groundwater. Additionally within the public right-of-way, hazardous substances may be contained within utility systems, transformers, railroad spurs, and base soil. Pollutants from adjacent industrial sites may also have migrated into the public right of way.

A Phase I Environmental Site Assessment study will indicate areas of potential or existing site contaminates. This study should be prepared early in the infrastructure planning or development planning stages to determine an overall process and timeline for action. If a site(s) is considered contaminated, a Phase II Environmental Site Assessment is required. Depending on the hazard, soil, ground water, and surface sampling is conducted in suspect areas. The Phase II Environmental Site Assessment will then evaluate the suspect areas identified on the subject property. Additional risk assessment and environmental action plan will determine remediation measures.

Appendix A

Site Photographs



3RD STREET COORIDOR INDUSTRIAL ZONE

TRANSPORTATION, PAVEMENT, PROPERTY OWNERS

Legend

- City Facilities
- Selected Property Owners
- Streets on 5-Year Paving Plan
- Traffic Signals
- Stop Signs
- AC Transit Stop
- AC Transit Line
- BART Line
- BART Line
- Pavement Condition: Worst ↓ Best

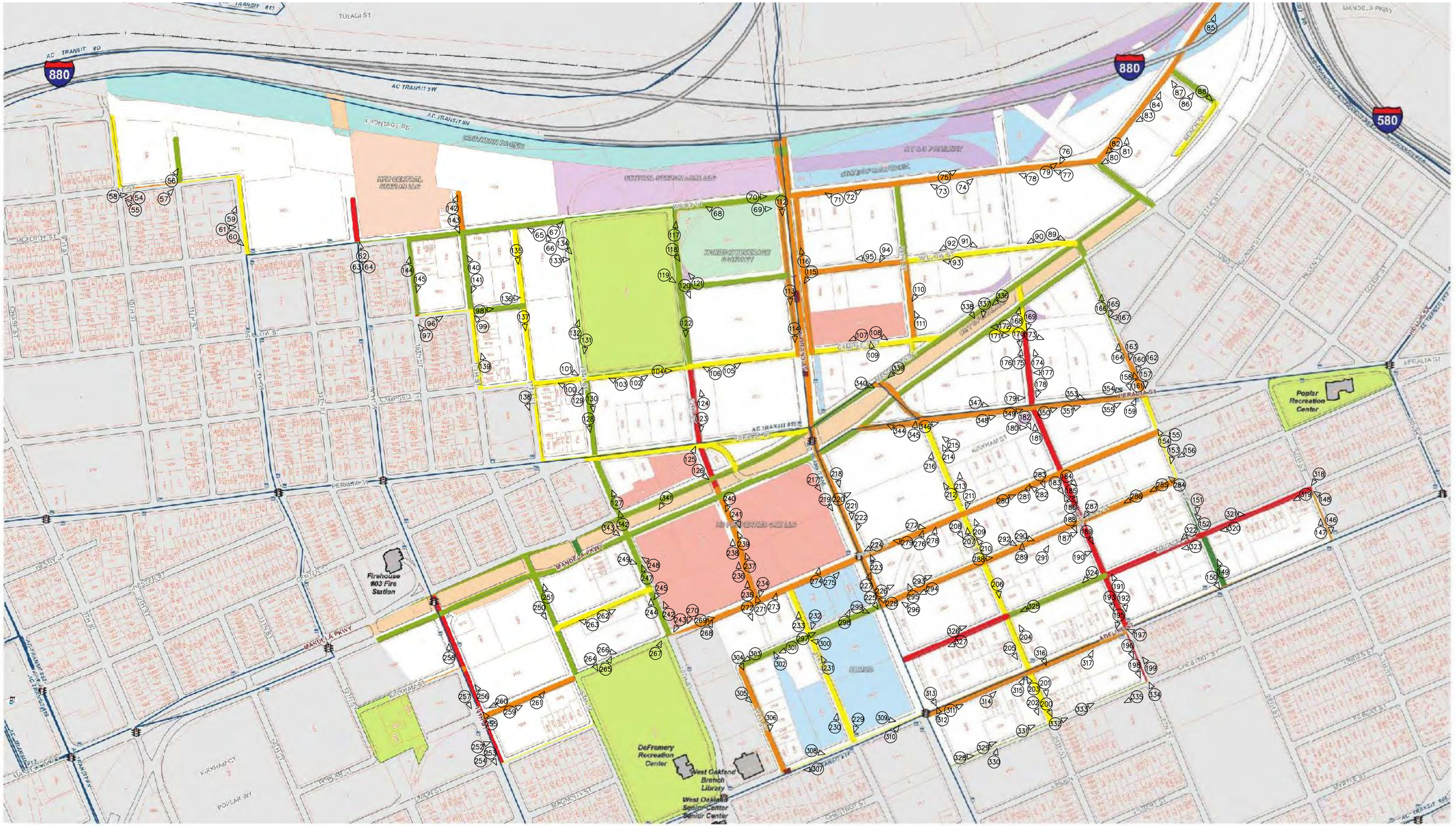
0 150 300 Feet

N

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FIGURE A.1
3RD STREET ZONE PHOTO INDEX

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MANDELA PARKWAY INDUSTRIAL ZONE

TRANSPORTATION, PAVEMENT, PROPERTY OWNERS

Legend

City Facilities

Selected Property Owners

Streets on 5-Year Paving Plan

Traffic Signals

Stop Signs

AC Transit Stop

AC Transit Line

BART Line

BART Line

Pavement Condition

Worst

Best

0 250 500

Feet

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FIGURE A.2
MANDELA PARKWAY ZONE PHOTO INDEX

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1 UNION ST NORTH



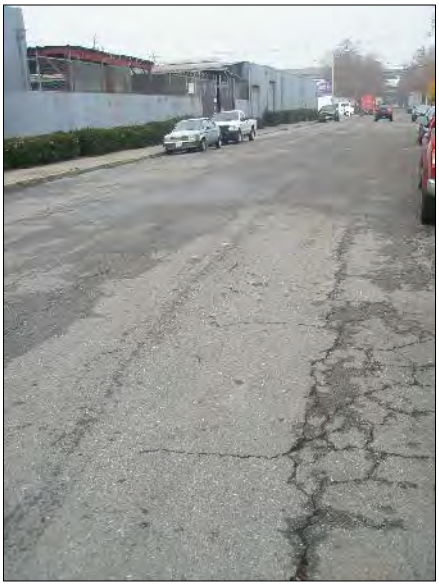
2 UNION ST SOUTH



3 UNION ST SOUTH



4 MAGNOLIA ST SOUTH



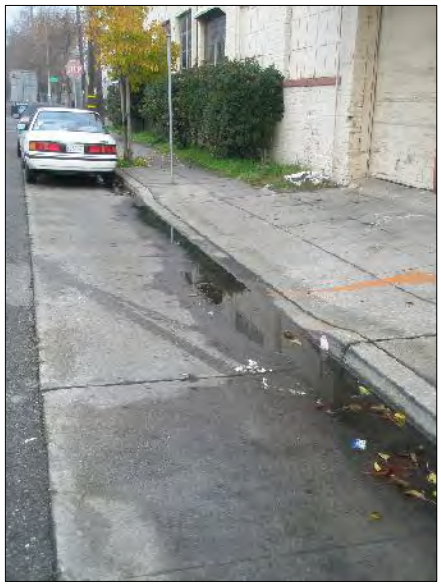
5 MAGNOLIA ST NORTH



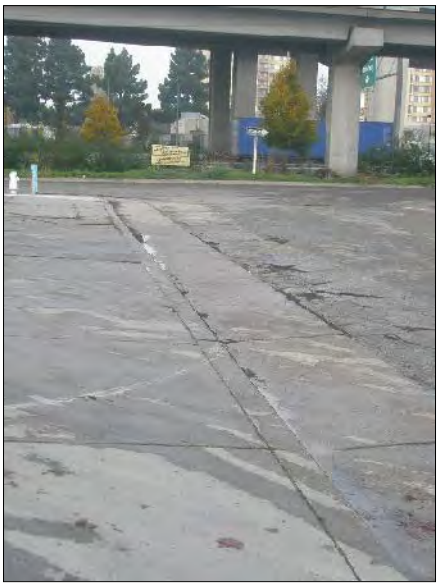
6 MAGNOLIA ST NORTHWEST



7 MAGNOLIA ST
NORTH



8 MAGNOLIA ST
NORTHEAST



9 CHESTNUT ST
NORTH



10 CHESTNUT ST
SOUTH



11 CHESTNUT ST & 3RD ST
WEST



12 LINDEN ST
SOUTH



13 LINDEN ST SOUTH



14 LINDEN ST WEST



15 LINDEN ST NORTH



16 LINDEN ST EAST



17 FILBERT ST NORTH



18 FILBERT ST NORTH



19 FILBERT ST
EAST



20 FILBERT ST
NORTH



21 MARKET ST
SOUTHWEST



22 MARKET ST
NORTHWEST



23 BRUSH ST
NORTH



25 BRUSH ST
WEST



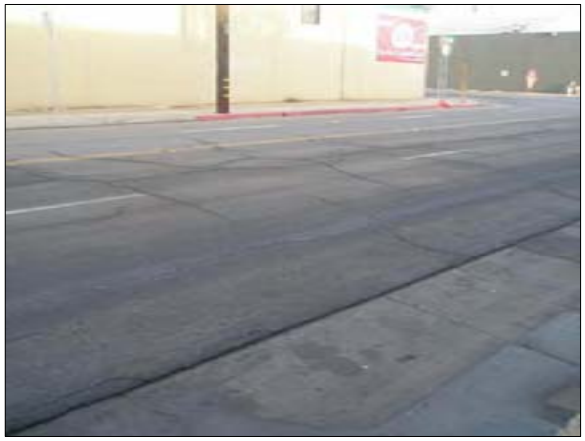
26 2ND ST
EAST



27 2ND ST
NORTH



28 MARTIN LUTHER KING JR WY
WEST



29 MARTIN LUTHER KING JR WY
NORTHWEST



30 MARTIN LUTHER KING JR WY
SOUTHEAST



31 4TH ST SOUTH



32 4TH ST WEST



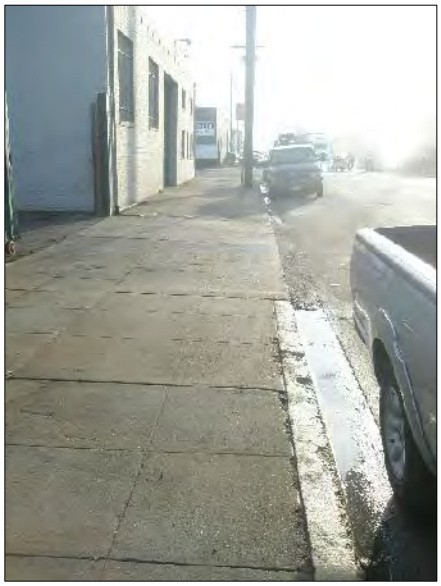
33 4TH ST WEST



34 4TH ST SOUTHEAST



35 3RD ST WEST



36 3RD ST EAST



37 3RD ST WEST



38 3RD ST SOUTHEAST



39 3RD ST NORTH



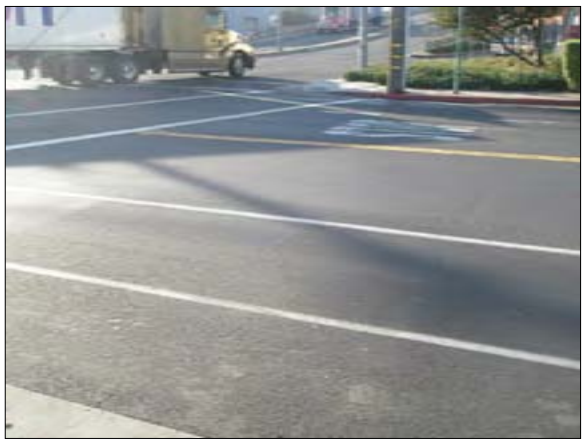
40 3RD ST WEST



41 3RD ST & LINDEN ST SOUTH



42 3RD ST WEST



43 3RD ST & ADELINE ST
SOUTH



44 ADELINE ST
SOUTHWEST



45 ADELINE ST
NORTH



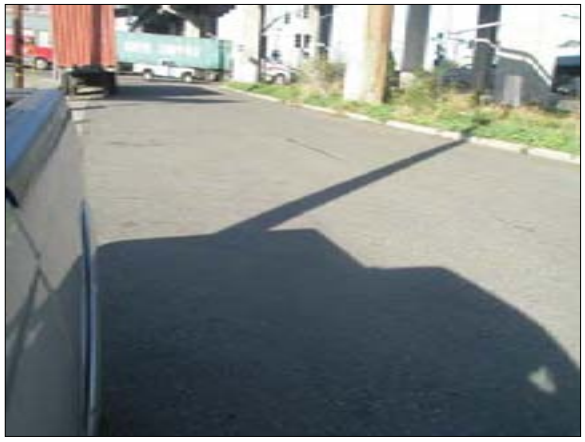
46 3RD ST & ADELINE ST
SOUTHWEST



47 ADLINE ST
NORTHEAST



48 5TH ST
EAST



49 5TH ST NORTHWEST



50 5TH ST EAST



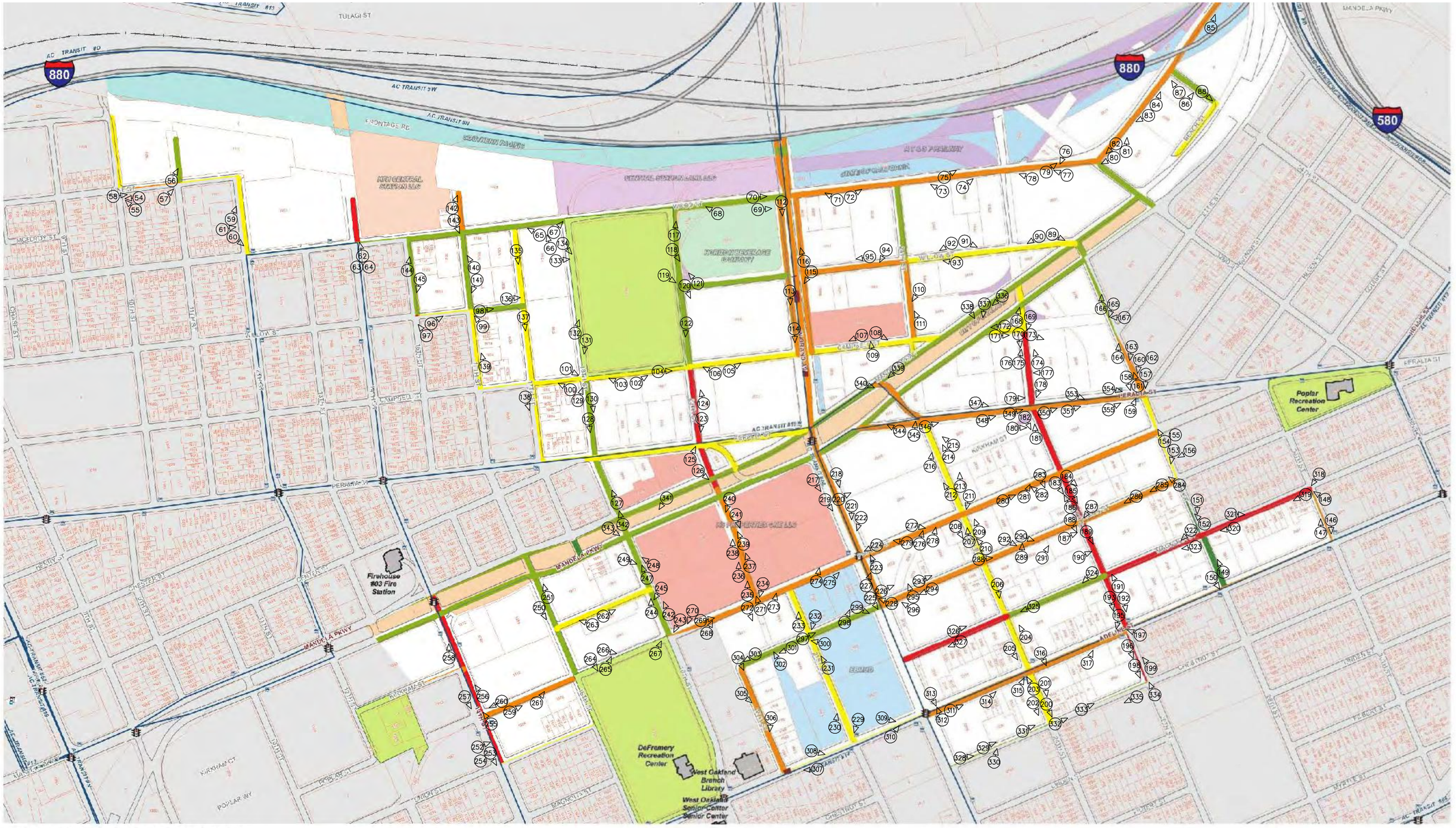
51 MARKET ST NORTHEAST



52 MARKET ST SOUTHEAST



53 MARKET ST SOUTHEAST



MANDELA PARKWAY INDUSTRIAL ZONE

TRANSPORTATION, PAVEMENT, PROPERTY OWNERS

Legend

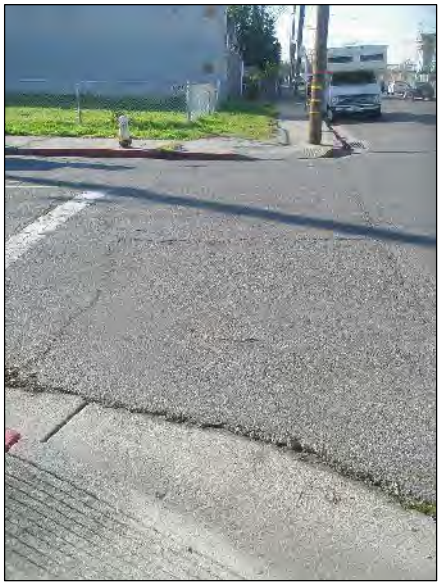
- City Facilities
- Selected Property Owners
- Streets on 5-Year Paving Plan (COLISEUM WY)
- Traffic Signals
- Stop Signs
- AC Transit Stop
- AC Transit Line
- BART Line
- BART Line
- Pavement Condition: Worst ▼ Best

0 250 500 Feet

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE C.7
MANDELA PARKWAY ZONE PHOTO INDEX

BKF ENGINEERS / SURVEYORS / PLANNERS
1646 N CALIFORNIA BLVD
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2299 (FAX)



54 PINE ST & 10TH ST
SOUTH



55 PINE ST & 10TH ST
WEST



56 PINE ST & 11TH ST
NORTHWEST



57 PINE ST & 11TH ST
NORTH



58 PINE ST
NORTH



59 12TH ST
NORTHWEST



60 12TH ST
EAST



61 12TH ST
NORTH



62 WOOD ST & 14TH ST
NORTHWEST



63 WOOD ST & 14TH ST
NORTHWEST



64 WOOD ST & 14TH ST
WEST



65 WOOD ST
SOUTHWEST



66 WOOD ST NORTHWEST



67 WOOD ST NORTH



68 WOOD ST SOUTHWEST



69 WOOD ST NORTH



70 WOOD ST NORTH



71 WOOD ST WEST



72 WOOD ST NORTH



73 WOOD ST WEST



74 WOOD ST NORTH



75 WOOD ST NORTH



76 WOOD ST SOUTH



77 WOOD ST WEST



78 WOOD ST
WEST



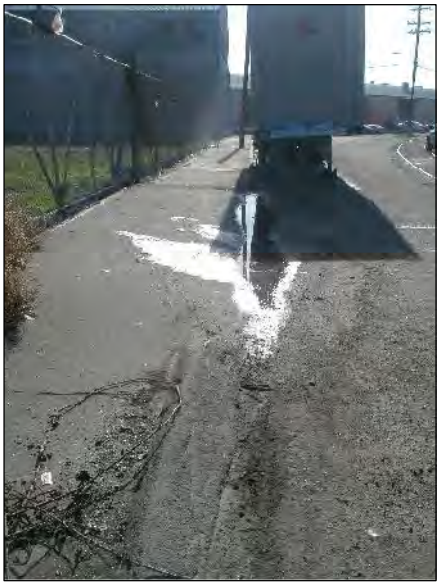
79 WOOD ST
NORTH



80 WOOD ST
SOUTH



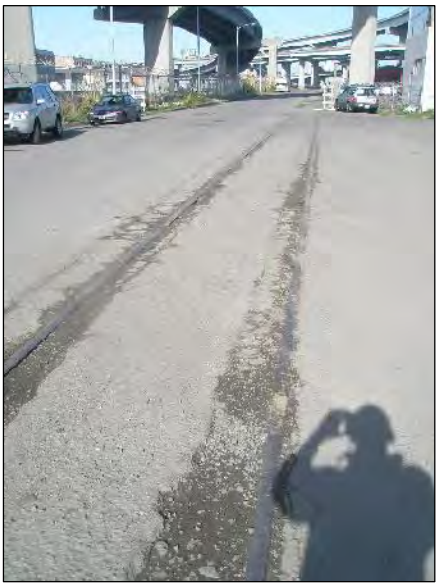
81 WOOD ST
NORTH



82 WOOD ST
SOUTH



83 WOOD ST
SOUTH



84 WOOD ST
NORTH



85 WOOD ST
NORTH



86 34TH ST
NORTH



87 34TH ST
WEST



88 34TH ST
EAST



89 WILLOW ST
NORTHEAST



90 WILLOW ST
SOUTHWEST



91 WILLOW ST
NORTHEAST



92 WILLOW ST
SOUTHWEST



93 WILLOW ST
SOUTHWEST



94 WILLOW ST
SOUTH



95 WILLOW ST
SOUTHWEST



96 WILLOW ST
NORTHEAST



97 WILLOW ST & 15TH ST
NORTHWEST



98 WILLOW ST
NORTHEAST



99 WILLOW ST & 16TH ST
NORTHWEST



100 CAMPBELL ST
SOUTHWEST



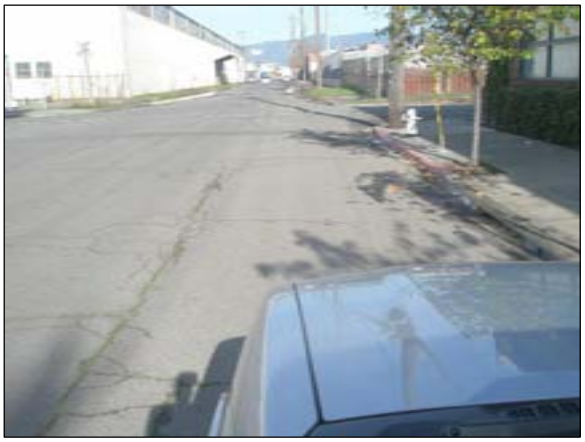
101 CAMBELL ST & 18TH ST
NORTHWEST



102 CAMBELL ST
NORTHEAST



103 CAMBELL ST
SOUTHWEST



104 WILLOW ST
NORTHEAST



105 CAMBELL ST & 20TH ST
NORTHWEST



106 CAMPBELL ST
SOUTHWEST



107 CAMBELL ST
SOUTHWEST



108 CAMBELL ST EAST



109 CAMBELL ST WEST



110 24TH ST SOUTH



111 24TH ST NORTHWEST



112 W GRAND AVE SOUTHEAST



113 W GRAND AVE SOUTHEAST



114 W GRAND AVE
SOUTHEAST



115 W GRAND AVE & WILLOW ST
SOUTH



116 W GRAND AVE
NORTHWEST



117 20TH ST
NORTHWEST



118 20TH ST
SOUTHEAST



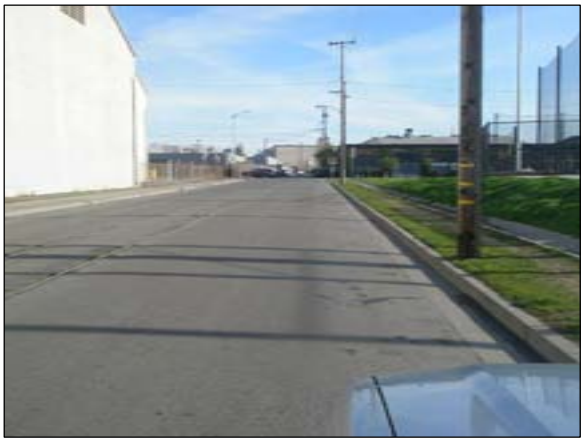
119 20TH ST & WILLOW ST
WEST



120 20TH ST & WILLOW ST
EAST



121 20TH ST & WILLOW ST
WEST



122 20TH ST
SOUTHEAST



123 20TH ST
SOUTHEAST



124 20TH ST
NORTHWEST



125 20TH ST & PERALTA ST
NORTH



126 20TH ST & MANDELA PWKY
EAST



127 18TH ST
NORTHWEST



128 18TH ST
SOUTHEAST



129 18TH ST & CAMPBELL ST
NORTH



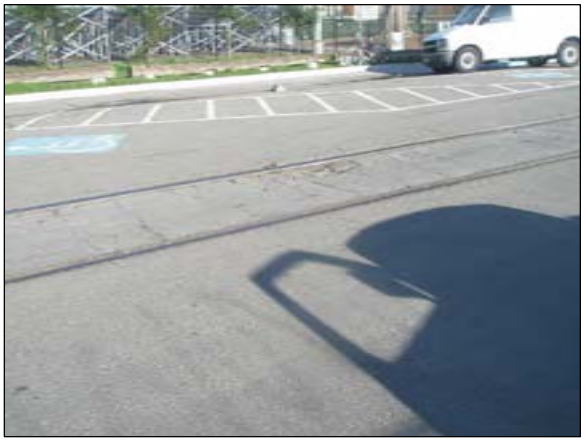
130 18TH ST
SOUTHEAST



131 18TH ST
SOUTHEAST



132 18TH ST NORTHWEST



133 18TH ST EAST



134 18TH ST EAST



135 17TH ST SOUTHEAST



136 17TH ST EAST



137 17TH ST SOUTHEAST



138 17TH ST SOUTHEAST



139 16TH ST NORTHWEST



140 16TH ST NORTHWEST



141 16TH ST SOUTH



142 16TH ST NORTH



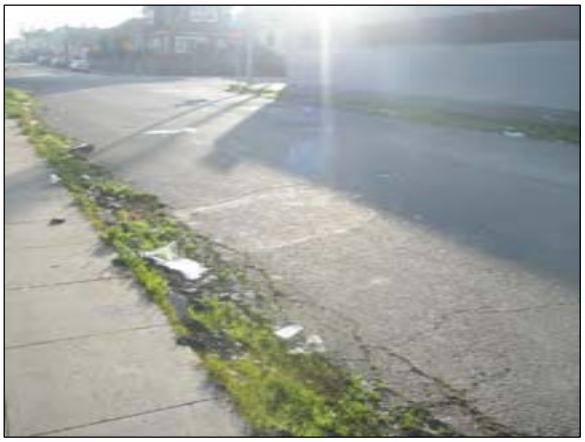
143 16TH ST SOUTHEAST



144 15TH ST NORTHWEST



145 15TH ST SOUTH



146 30TH ST SOUTHEAST



147 30TH ST WEST



148 30TH ST & MANGOLIA ST WEST



149 28TH ST WEST



150 28TH ST EAST



151 28TH ST EAST



152 28TH ST WEST



153 28TH ST SOUTHEAST



154 28TH ST WEST



155 28TH ST & POPLAR ST WEST



156 28TH ST
EAST



157 28TH ST & PERALTA ST
EAST



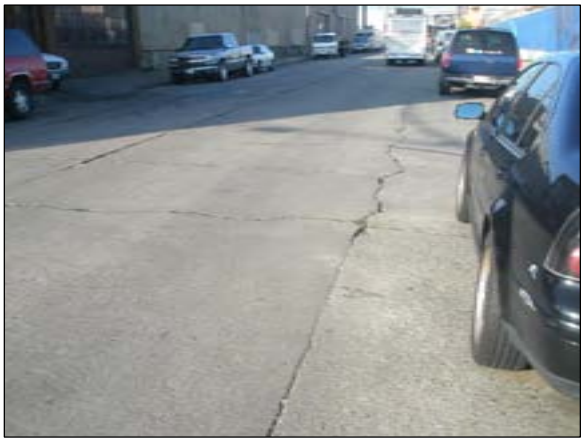
158 28TH ST & PERALTA ST
EAST



159 28TH ST & PERALTA ST
NORTH



160 28TH ST & PERALTA ST
SOUTH



161 28TH ST
NORTHWEST



162 28TH ST & PERALTA ST
SOUTH



163 28TH ST
SOUTH



164 28TH ST
NORTH



165 28TH ST & ETTIE ST
SOUTH



166 28TH ST & ETTIE ST
WEST



167 28TH ST & ETTIE ST
SOUTHWEST



168 26TH ST & MANDELA PKWY
NORTHWEST



169 26TH ST & CAMPBELL ST
SOUTHEAST



170 26TH ST & CAMPBELL ST
SOUTHEAST



171 CAMPBELL ST
NORTH



172 CAMPBELL ST & MANDELA PKWY
WEST



173 26TH ST & CAMPBELL ST
NORTH



174 26TH ST NORTHWEST



175 26TH ST NORTHWEST



176 26TH ST NORTH



177 26TH ST SOUTHWEST



178 26TH ST SOUTH



179 26TH ST & PERALTA ST NORTHEAST



180 26TH ST
NORTHEAST



181 26TH ST & PERALTA ST
NORTHWEST



182 26TH ST & CAMPBELL ST
SOUTHEAST



183 26TH ST
EAST



184 26TH ST
EAST



185 26TH ST
SOUTHEAST



186 26TH ST
NORTHWEST



187 26TH ST & UNION ST
NORTHEAST



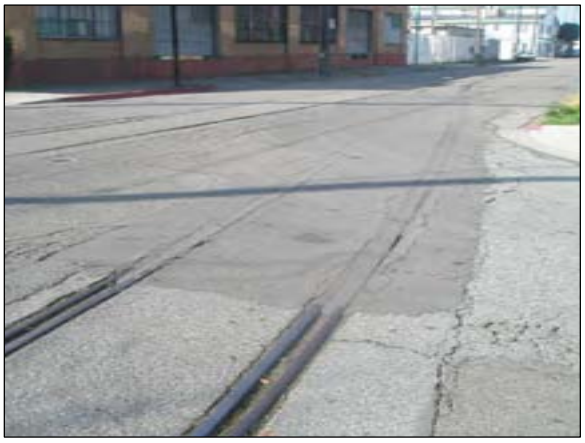
188 26TH ST & UNION ST
SOUTHEAST



189 26TH ST
SOUTHEAST



190 26TH ST
NORTHEAST



191 26TH ST & MAGNOLIA ST
NORTHWEST



192 26TH ST SOUTHEAST



193 26TH ST SOUTHEAST



194 26TH ST NORTHWEST



195 26TH ST WEST



196 26TH ST SOUTHEAST



197 26TH ST & ADELINE ST WEST



198 26TH ST SOUTHEAST



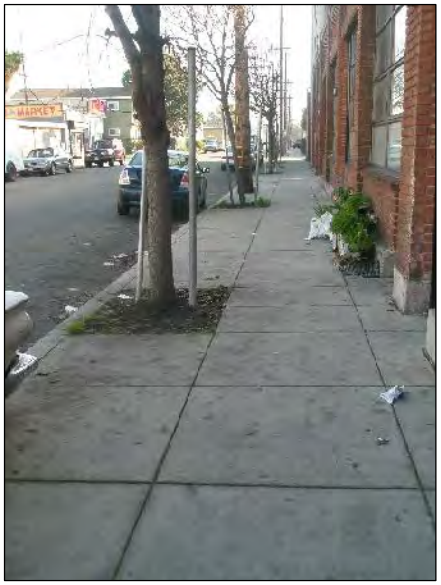
199 26TH ST NORTHWEST



200 24TH ST SOUTHEAST



201 24TH ST SOUTHEAST



202 24TH ST SOUTHEAST



203 24TH ST & ADELINE ST SOUTHEAST



204 24TH ST
NORTHWEST



205 26TH ST
SOUTHEAST



206 26TH ST
SOUTHEAST



207 26TH ST & POPLAR ST
NORTHWEST



208 26TH ST
SOUTHEAST



209 26TH ST & POPLAR ST
WEST



210 24TH ST WEST



211 24TH ST & POPLAR ST SOUTHEAST



212 24TH ST NORTHWEST



213 24TH ST NORTHWEST



214 24TH ST NORTHWEST



215 24TH ST WEST



216 24TH ST NORTHWEST



217 W GRAND AVE SOUTHEAST



218 W GRAND AVE SOUTHEAST



219 W GRAND AVE SOUTHEAST



220 W GRAND AVE NORTH



221 W GRAND AVE SOUTHEAST



222 W GRAND AVE
SOUTHEAST



223 W GRAND AVE & POPLAR ST
WEST



224 W GRAND AVE & POPLAR ST
SOUTH



225 W GRAND AVE & POPLAR ST
SOUTHEAST



226 W GRAND AVE
NORTH



227 W GRAND AVE
NORTHWEST



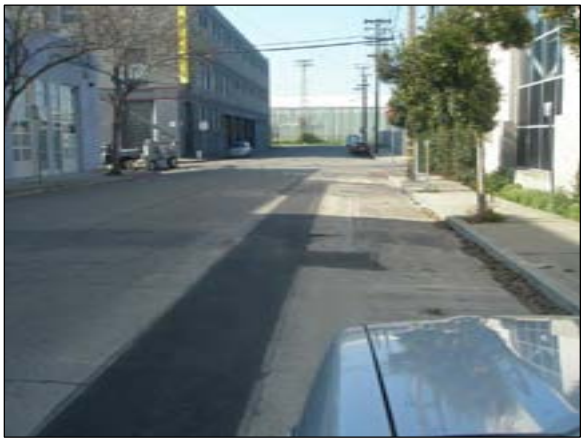
228 W GRAND AVE
SOUTHWEST



229 21ST ST & ADELINE ST
SOUTHEAST



230 21ST ST
NORTHWEST



231 21ST ST
NORTHWEST



232 21ST ST & UNION ST
SOUTHEAST



233 21ST ST
NORTHWEST



234 POPLAR ST & 20TH ST
SOUTHWEST



235 20TH ST
NORTHWEST



236 20TH ST
NORTHWEST



237 20TH ST
NORTHWEST



238 20TH ST
NORTHWEST



239 20TH ST
NORTHWEST



240 20TH ST
SOUTH



241 20TH ST
SOUTHEAST



242 18TH ST
NORTHWEST



243 18TH ST & POPLAR ST
SOUTH



244 18TH ST & KIRKHAM ST
NORTH



245 18TH ST
SOUTHWEST



246 18TH ST EAST



247 18TH ST NORTHWEST



248 18TH ST WEST



249 18TH ST NORTHEAST



250 16TH ST SOUTHEAST



251 18TH ST NORTHWEST



252 14TH ST & POPLAR ST
NORTH



253 14TH ST
EAST



254 14TH ST
SOUTHEAST



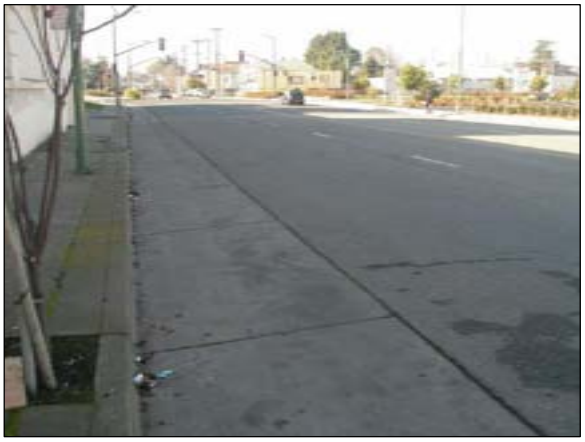
255 14TH ST & POPLAR ST
WEST



256 14TH ST
WEST



257 14TH ST
SOUTHEAST



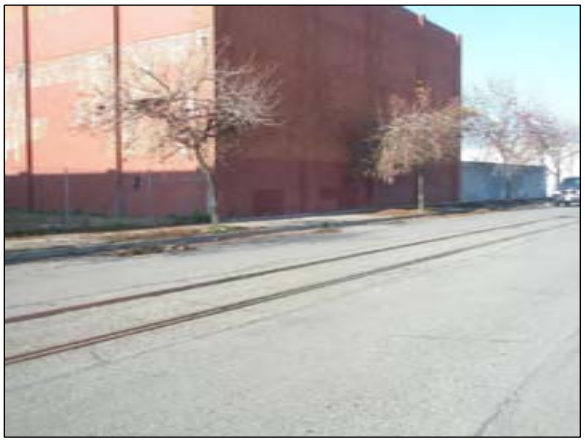
258 14TH ST NORTHWEST



259 POPLAR ST NORTH



260 POPLAR ST SOUTHWEST



261 POPLAR ST NORTH



262 POPLAR ST NORTH



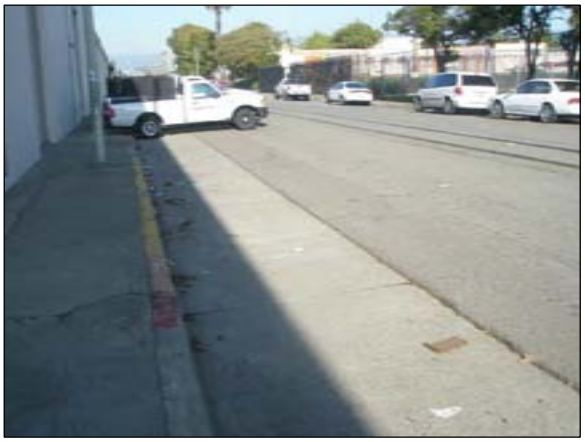
263 KIRKHAM ST SOUTHWEST



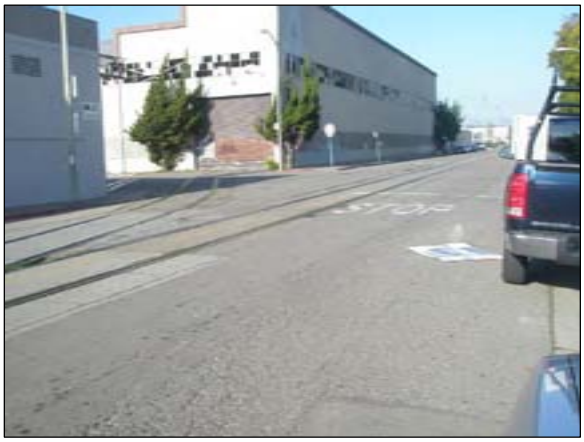
264 POPLAR ST
EAST



265 POPLAR ST
NORTH



266 POPLAR ST
NORTHEAST



267 POPLAR ST
NORTH



268 POPLAR ST
NORTH



269 POPLAR ST
NORTH



270 POPLAR ST
SOUTH



271 POPLAR ST & 20TH ST
NORTHWEST



272 POPLAR ST
SOUTHEAST



273 POPLAR ST
NORTH



274 POPLAR ST
NORTHWEST



275 POPLAR ST
NORTH



276 POPLAR ST NORTH



277 POPLAR ST NORTHEAST



278 POPLAR ST NORTH



279 POPLAR ST SOUTHWEST



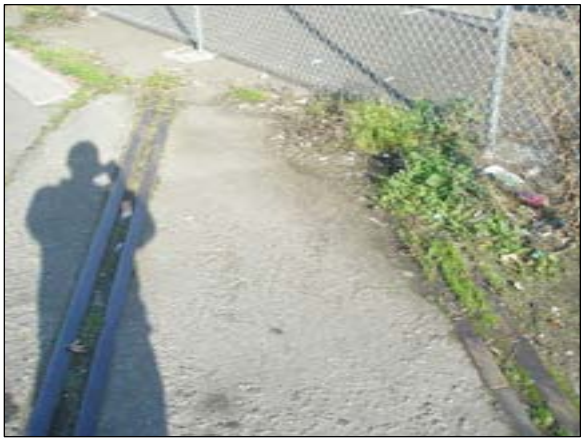
280 POPLAR ST NORTHEAST



281 POPLAR ST NORTH



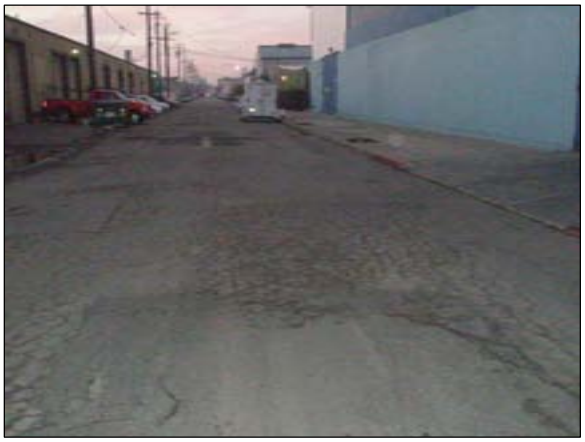
282 POPLAR ST
WEST



283 POPLAR ST
SOUTHEAST



284 UNION ST
WEST



285 UNION ST
SOUTHWEST



286 UNION ST
SOUTHWEST



287 UNION ST
SOUTH



288 UNION ST & 24TH ST
NORTH



289 UNION ST
NORTHWEST



290 UNION ST
NORTHEAST



291 UNION ST
NORTH



292 UNION ST
EAST



293 UNION ST
NORTHEAST



294 UNION ST
SOUTHWEST



295 UNION ST
NORTHEAST



296 UNION ST
WEST



297 UNION ST & 21ST ST
NORTHEAST



298 UNION ST
NORTH



299 UNION ST
NORTHEAST



300 21ST ST SOUTHWEST



301 UNION ST SOUTHWEST



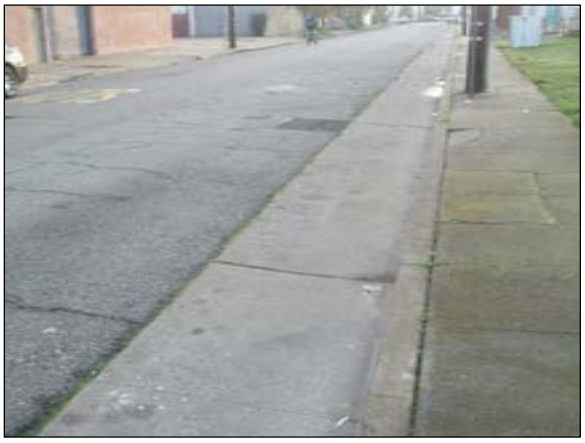
302 UNION ST WEST



303 UNION ST SOUTH



304 19TH ST SOUTHEAST



305 19TH ST EAST



306 21ST ST SOUTHEAST



307 ADELINE ST SOUTHWEST



308 ADELINE ST NORTHEAST



309 ADELINE ST NORTHEAST



310 ADELINE ST NORTH



311 ADELINE ST NORTHEAST



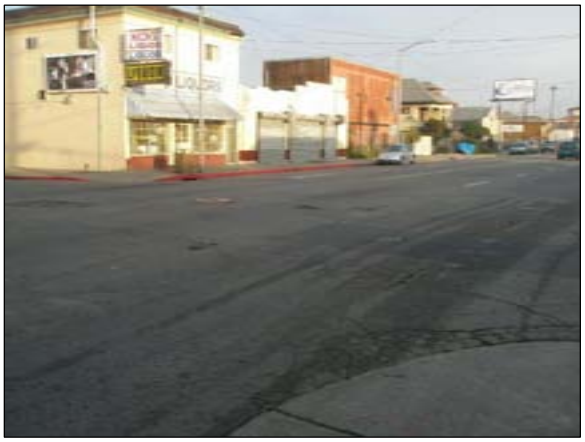
312 ADELINE ST & W GRAND AVE
NORTHWEST



313 ADELINE ST
SOUTHEAST



314 ADELINE ST
NORTH



315 ADELINE ST & 24TH ST
NORTH



316 ADELINE ST
SOUTHEAST



317 ADELINE ST
NORTH



318 MAGNOLIA ST & 30TH ST
SOUTH



319 MAGNOLIA ST
SOUTHWEST



320 MAGNOLIA ST
SOUTHWEST



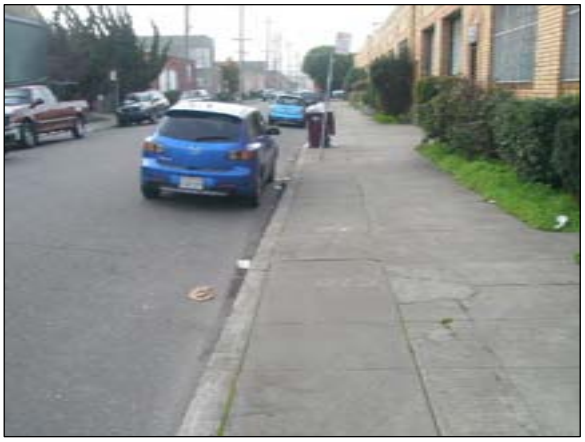
321 MAGNOLIA ST
NORTHEAST



322 MAGNOLIA ST
SOUTHWEST



323 MAGNOLIA ST
SOUTHWEST



324 MAGNOLIA ST SOUTHWEST



325 MAGNOLIA ST SOUTHWEST



326 MAGNOLIA ST NORTHEAST



327 MAGNOLIA ST SOUTHWEST



328 CHESTNUT ST NORTHEAST



329 CHESTNUT ST NORTHEAST



330 CHESTNUT ST
NORTHWEST



331 CHESTNUT ST
NORTHEAST



332 CHESTNUT ST
NORTHEAST



333 CHESTNUT ST
NORTHEAST



334 CHESTNUT ST & 26TH ST
NORTHWEST



335 CHESTNUT ST
SOUTHWEST



336 MANDELA PKWY
SOUTHWEST



337 MANDELA PKWY
SOUTH



338 MANDELA PKWY
SOUTHEAST



339 MANDELA PKWY
SOUTH



340 MANDELA PKWY
EAST



341 MANDELA PKWY
SOUTH



342 MANDELA PKWY & 18TH ST
NORTHWEST



343 MANDELA PKWY & 18TH ST
EAST



344 PERALTA ST
WEST



345 PERALTA ST & 24TH ST
NORTHWEST



346 PERALTA ST & 24TH ST
NORTHEAST



347 PERALTA ST
NORTHEAST



348 PERALTA ST NORTHEAST



349 PERALTA ST NORTHEAST



350 PERALTA ST NORTHEAST



351 PERALTA ST NORTHEAST



353 PERALTA ST NORTHEAST



354 PERALTA ST
NORTHEAST



355 PERALTA ST
NORTHEAST

Appendix B

Reduced Field Notes

3rd Street Corridor (SubArea 17)

Union Street

- Curb, gutter, sidewalk good condition
- SW 4' wide, 5' wide gutter, 6" curb
- Transverse cracking half way through and until 3rd st
- SW block cracking
- SW on east side near 3rd street heavily cracked
- *Recommendation*
    - *Slurry seal*

3rd St, between Union and Magnolia

- Longitudinal cracking in center of south lane
- Road generally good shape
- SW on north side 10-12' wide
- Gutter 5' wide, 6" curb
- South SW 5' wide, 6" curb, 5' gutter
- Longitudinal cracking on center of 3rd St.
- *Recommendation*
    - *Slurry seal*

South Block of Magnolia St

- Asphalt generally good condition
- SW on both sides 4-5' wide, 6" curb, 5' gutter
- SWs are in generally good condition
- Tree on south end, roots causing SW to uplift on eastern side
- 2 entrances to industrial facilities
- Road is worn; little. Light longitudinal cracking.
- 2 SD inlets on west side of magnolia
- East side, gutter is flat; just rained, no water movement.
- *Recommendation*
    - *Regrade to drain*
    - *Grind and overlay*
    - *Remove tree and replace section of sidewalk damaged from root uplift*

North Block of Magnolia St

- Fenced off; no access

South Block of Chestnut St

- Asphalt pretty worn; lots of block cracking whole length
- SW 5' wide both sides, 5' gutter, 6" curb
- Curb along west side is beaten up. Along east side of road, lots of standing water…not water movement
- Center of road has substantial alligator cracking. Away from center of road, significant block cracking.
- *Recommendation*

    - *Remove AC where alligator cracking is present, replace AC section*
    - *Grind and overlay remainder of street*
    - *Replace damaged curb and gutter*
    - *Regrade AC and gutter flowlines to drain*

North Block of Chestnut St

- Asphalt in relatively poor condition
- Truck scale station on corner of Chestnut and upper road (5th st side road)
    - Significant potholing along entrance to station from Chestnut
    - Lots of block cracking
- SW on west side of chestnut is 8' wide, gutter 5', 6" curb
- SW on both sides in pretty good shape. East side SW 5' wide, 6" curb, 5' gutter.
- Corner of Chestnut and 3rd st, concrete is significantly cracked, lots of potholes, corrugated asphalt, block cracking.
- *Recommendation*
    - *Full section replacement around entrance to truck scale facility*
    - *Grind and overlay rest of street*

South Block of Linden St

- 2/3 of way from 3rd St, road becomes one way with angled parking on east side, unstriped parallel parking on west side.
- Asphalt is very corrugated; probably resulting from lack of maneuverability in this parking area
- Several depressions, lots of standing water
- Alligator cracking along entire length of Linden. 2 runs cracking offset from centerline
- Lots of local depressions, ponding water, few instances of square cracking, lots of patches.
- SW along west side 5' wide, 6" curb, 5' gutter. Gutter and asphalt are relatively flush
- East side, SW 5', 5' gutter, 6" curb
- SW runs 40', transitions to be flush w/ asphalt in front of entrance to office parking.
- *Recommendation*
    - *Regrade to drain*
    - *Implement structural sections at loading facilities*
    - *Remove and replace AC section*
    - *Grind and overlay*

South Block of Filbert St

- Transverse cracking and potholes at south end; few depressions
- Road is generally in pretty good shape
- Along centerline of whole road there is longitudinal cracking
- SW on both sides 5' wide, 5' gutter, 6" curb
- SW generally good condition on both sides.
- *Recommendation*
    - *Grind and overlay*

North Block of Filbert St

- Substantial alligator cracking along CL of road
- SW 5' wide, 6" curb, 5' gutter
- Lots of transverse and longitudinal cracks.

- 3 trees on east side, roots are causing significant uplift in the gutters and asphalt.
- *Recommendation*
    - *Replace Ac section along centerline where alligator cracking occurs*
    - *Grind and overlay remainder of road*
    - *Remove trees*
    - *Replace sidewalk, curb and gutter sections affected by root uplift*

Myrtle Street

- Occasional transverse and longitudinal cracks
- Corrugated asphalt 1/3 of way down from 3rd strong along myrtle
- *Recommendation*
    - *Replace AC in areas with corrugated asphalt*
    - *Slurry seal remainder of street*

South Block of Market St

- Significantly damaged
- Potholes, corrugated asphalt, longitudinal and transverse cracking
- SW 5-6' wide, 6" curb, 1.5' gutter
- This block acts as a queuing line for trucks to enter port facility
- *Recommendation*
    - *Full section replacement, with thicker base section*

South Block of Brush St

- Relatively good condition
- SW 6' wide on both sides, 6" curb, 1.5' gutter
- Longitudinal cracking on south end, few transverse cracks; no alligator cracking
- 60-70' from 3rd street, SW width now 15' wide along east side, 10-15' along west side
- 60' from 3rd st, alligator cracking, more structural damage. 20' before stop sign, massive pothole.
- *Recommendation*
    - *Replace AC section where alligator cracking observed, grind and overlay remaining road*
    - *Patch pothole*

North Block of Brush St

- Lots of patches where SD/sewer lines installed
- East side has 15' SW, 6" curb, 1.5' gutter
- West side has 4' SW, 6" curb, 1.5' gutter
- *Recommendation*
    - *Grind and overlay*

Martin Luther King Jr Wy

- Between Embarcadero West and 2nd St
    - Corner, there is stop for rail crossing
    - Heavily corrugated asphalt
    - Lots of block cracking, and patches
    - Gutter 5' wide, 6" curb, 10' SW
    - Overall condition poor…lots of transverse and longitudinal cracks
    - *Recommendation*

        - *Replace AC section*
- Between 2nd St and 3rd St
    - Substantial transverse cracks
    - SW on west side 6' wide, east side 15' wide
    - Northbound lanes lots of transverse cracking
    - Southbound lane, long longitudinal cracks
    - East side, most SW is asphalt w/ exception of two loading zones and trash area of concrete
    - *Recommendation*
        - *Replace AC section*
- Between 3rd and 4th St
    - More damage, substantial block cracks
    - Cracks along entire lengths, longitudinal
    - Gutter 5' wide, SW 4' on east side, 10' on west side
    - *Recommendation*
        - *Replace AC Section*

<u>4th Street</u>

- Between MLK and Castro
    - Asphalt is severely cracked
    - Sw on north side and south side 20' wide
    - 1' gutter, 6" curb
    - *Recommendation*
        - *Full section replacement with thicker AB section*
        - *Regrade to provide adequate drainage*
- Castro and Brush St
    - More damaged than previous
    - Significant potholes
    - SW on south side 15-20' wide, north side 15' wide
    - 6" curb both sides, 1' gutter on both sides
    - *Recommendation*
        - *Full section replacement with thicker AB section*
        - *Regrade to provide adequate drainage*
- Brush and market
    - Road in better condition than previous
    - Few longitudinal cracks
    - Along north side of street, 6' from curb, road looks resurfaced; different asphalt layer
    - Both sides 6" curb, 1' gutter, 5' SW both sides w/ 6' of planter area in between curb and SW
    - *Recommendation*
        - *Grind and overlay*

<u>3rd Street</u>

- Striping for bike lanes on both sides
- Between MLK and Brush
    - No substantial cracking
    - Currently, lots of road construction
    - South of st has angled parking, north side is perpendicular til Castro
    - North side has few curb spots, 3" tall, 1' gutter. Only between MLK and Castro
    - South side 6" curb, 1' gutter, SW 15' wide
    - *Recommendation*

        - *Grind and overlay*
        - *Install rolled curb, gutter, and parallel parking section along northern side to accommodate existing parking use*
        - *Grade to drain*
        - *Replace damaged curb and gutter along north side*
- Brush and Market
    - Both sides have 5' gutter, 6" curb, 5' SW
    - *Recommendation*
        - *Grind and overlay*
- Market and Filbert
    - Road generally good shape
    - No cracks
    - Both sides have 5' SW, 5' gutter, 6" curb
    - Striping for parallel parking both sides
    - *Recommendation*
        - *Slurry seal*
- Filbert and Linden
    - Equivalent in shape to market and filbert block
    - *Recommendation*
        - *Slurry seal*
- From Linden to Chestnut
    - Road more damaged
    - Depressions
    - Alligator cracking on Linden and 3rd
    - Transverse and Longitudinal cracks
    - 10' Sw, 5' gutter, 6" curb
    - Road has mild damage; cracking, block cracking
    - 5' Sw on north side, south side same. 5' gutter, 6" curb.
    - *Recommendation*
        - *Grind and overlay*
        - *Remove AC, recompact base where alligator cracking observed*
- Chestnut and Adeline
    - Longitudinal cracking along entire CL, and outer limit of both lanes
    - North side has 10' Sw, 5' gutter, 6" curb
    - South side has 5' SW
    - Alligator cracking in center of block
    - *Recommendation*
        - *Grind and overlay*
        - *Remove AC, recompact base where alligator cracking observed*
- Adeline and Magnolia
    - Road in good shape
    - Few transverse cracks
    - SW on north side 10' wide, 6" curb, 5' gutter
    - South side has 5' SW
    - *Recommendation*
        - *Slurry seal*
- Magnolia and Union

- Generally good shape, few cracks
- Same SW as previous block
- *Recommendation*
  - *Slurry seal*

Loop At End of Adeline, Under Middle Harbor Rd Ramp

- Road in fair condition, not good, long patch along whole eastern part from utility trenching
- Inner part of loop 6" curb, 1' gutter
- Everything looks to drain to outside of loop
- Outside of loop has Sw 10-20', no gutter
- *Recommendation*
  - *Grind and overlay*

Adeline St

- East side, no gutter
  - 8' SW, 6" curb
  - Curb is messed up, chipped, exposed rebar
- West side, 6' SW, 6" curb, 1.5 gutter
  - Curb is 12" wide
- Overall condition of road is not too bad, few transverse and longitudinal cracks
- *Recommendation*
  - *Grind and overlay*

5th Street (South of BART track)

- Between Adeline and Market
  - Generally good shape
  - Longitudinal crack along centerline
  - North side of st has curb, 6", with 6" gutter. Curb is beat up in front of weigh station
    - Entrances are cracked
  - South side has 5' gutter, 6" curb, 6' SW. All in generally good shape between chestnut and filbert st
  - *Recommendation*
    - *Slurry seal asphalt*
    - *Replace cracked curb and gutter and driveway with structural sections*

5th Street (North of BART track)

- 2 lane, left lane to I-880, right towards Market St
- Road is in pretty good shape
- No significant cracking or potholing
- Both sides of street have 6" curb, no gutter, no SW. Curb is asphalt.
- As you turn onto Market St, there is significant corrugated concrete w/ alligator cracking.
- *Recommendation*
  - *Remove AC, recompact base where alligator cracking observed*
  - *Slurry seal remainder*

Market St

- Between 5th St and 4th St

    - Road in generally good shape
    - Few long longitudinal cracks
    - Few points of alligator cracking
    - Bike lanes on both sides of street
    - Gutter is 1.5', 6" curb both sides.
    - 3' planning area on both sides, then 4' SW
    - *Recommendation*
        - *Grind and overlay*
- Between 4th St and 3rd St
    - Road in generally good shape
    - Appears to be appropriately graded
    - Halfway between 4th and 3rd, southbound direction has large rut with alligator cracking with cracks larger than half an inch
    - *Recommendation*
        - *Replace full section where alligator cracking/rutting is observed*
        - *Grind and overlay remainder of street*

3rd Street Corridor Lighting Notes

Union Street

- No public light poles
- Well lit due to private lights from adjacent property
- Washington Luminaire on NW corner of intersection not shown on existing light exhibit
- Street lights not on joint poles

Magnolia Street

- 1 street light is on joint pole
- 6 street lights total; all operational
- Street lights are spaced
- Lights are spaced approx. every 250' on west side, 400' on east side
- Street lights not on joint poles

Adeline Street

- Lights staggered, spaced every 75'-100'
- Light on SE corner of Adeline and 5th St intersection not operational
- Lights are not on joint poles
- Building lights located on NW corner of Adeline and 3rd St.

Chestnut St

- Street lights spaced every 150' and staggered
- 1 street light not operational
- North of 3rd St, trees obstruct street light
- Street lights not on joint poles

Linden St

- Road is generally well lit

- Street lights spaced on western side every approx. 125'
- 1 light not operational
- A bright building light is located in property between Chestnut St and Linden St
- Bright building lights located on building on eastern side of Linden St
- Street lights not on joint poles

Filbert St

- South of 3rd St is well lit
  - Street lights are staggered and spaced every 150'-175'
- North of 3rd St is not well lit
  - Street lights located on east side spaced every 250'
- Street lights not on joint poles

Myrtle St

- Street is generally well lit
- Street lights staggered, spacing varies 100' to 200'
- Street lights not on joint poles

Market St

- South of 3rd St, street lights are staggered and spaced every 100' approx.
  - 2 out of 6 lights were not operational
- North of 3rd St is generally well lit
  - Street lights are double cobra
- Sidewalks north of 3rd St are not well lit

Brush St

- Generally well lit with exception of south of 2nd St
  - 2 street lights south of 2nd St are not operational
- Street lights not on joint poles

Castro St

- Street is poorly lit south of 3rd St, well lit north of 3rd St
- Lights spaced 100' apart, on east side of Castro
- 2 out of 4 lights are not operational
- 1 light is located on joint pole

Martin Luther King, Jr. Way

- Generally well lit
- Street lights located on west side of street
- Spaced every 150'

5th St

- Street is generally well lit
- One light located on joint pole
- Lights are spaced approx. every 150'

4th St

- Street is generally well lit
- Lights are located on both sides of street, not staggered uniformly
- Lights are spaced approx. 125'

3rd St

- Lights are not staggered, spaced approx. 100'
- Road is generally well lit, with exception of south side between Castro St and Martin Luther King, Jr. Way
- 8 lights are not operational
- 2 lights located on joint pole
- 3 light poles that were not on existing light exhibit
    - NW and NE corners of Adeline and 3rd St intersection
    - NE corner of Market St and 3rd St
- Building lights keep the following areas well lit:
    - Between Filbert St and Myrtle St
    - Between Market St and Brush St
    - Between Brush St and Castro St
- Building lights on north side between Castro and MLK Jr. were not operational

2nd St

- Well lit between Brush St and Castro St
- Poorly lit between Castro St and MLK Jr.
- 1 street light not operational

Mandela Parkway Industrial Zone – Northwest (SubArea 15)

Wood Street

- W Grand and 24th
    - West side has no SW, no gutter on east side
        - West side has valley gutter 6' wide, no SW (between W Grand and 26th)
    - Road in poor condition
    - Block cracking, longitudinal cracks
    - 2 rail lines; along easternmost line, lots of alligator cracking
        - In between the two lines there's a lot of block cracking
        - Westernmost line is in pretty good shape
    - Road seems to slope towards center of two rail lines
        - Catch basin in between two lines, there is still standing water
    - Concrete between the rail ties has consistent transverse cracks.
    - *Recommendation*
        - *Remove valley gutter along west side, install curb and gutter*
        - *Remove existing rail*
        - *Replace road section where rails are removed*
        - *Install rolled curb, gutter, and sidewalk along eastern side*
            - *Stripe as necessary to accommodate existing parking demands*
            - *Buildings along eastern side have truck loading bays; structural sections and striping shall reflect loading needs*

        - *Grind and overlay*
        - *Regrade to drain*
- 26th and 32nd
    - Road is in bad shape; tons of cracking, potholes
    - Can see where street has been overlayed but not consistently
    - East side until crossing, SW 8', 6" curb, 1.5' gutter
    - West side no SW, no gutter
    - Cars currently parking parallel, angled, and perpendicular to buildings along street
    - *Recommendation*
        - *Remove existing rails*
        - *Regrade street to drain*
        - *Install rolled curb and gutter*
        - *Install sidewalk to continue pedestrian path of travel*
        - *Install signs and barriers to route traffic around joint pole in the intersection of Wood and 32nd.*
        - *Install driveways at entrances to existing buildings*
        - *Grind and overlay*
        - *Replace road section where rail has been removed*
- Past 32nd
    - 6" curb along western side
    - Eastern side has SW in front of first LOT 3207 5' gutter, 6" curb, 1.5' gutter on Western part, 6" curb, no SW, lots of wild vegetation
    - Western half of road, road has no cracks but looks old
        - Along rail, can see 1" of added asphalt, transverse cracks.
    - eastern half of street, worse shape; block cracking
    - *Recommendation*
        - *Remove existing rails*
        - *Replace road section where rail has been removed*
        - *Install sidewalk to continue pedestrian path of travel*
        - *Install curb and gutter along east side*
        - *Regrade the road to drain*
        - *Install driveways and curb returns at existing facility entrances*
- Past Beach St
    - 6" asphalt curb along Western side, eastern side has rail running through it but covered up in dirt
    - Road is not in terrible shape; faded striping
    - No significant, visual cracks past Beach St.
    - *Recommendation*
        - *Remove existing rails*
        - *Replace road section where rail has been removed*
        - *Install sidewalk to continue pedestrian path of travel*
        - *Install curb and gutter along east side*
        - *Regrade the road to drain*
        - *Install driveways and curb returns at existing facility entrances*

<u>34th St</u>

- One side of road has 10' SW, gutter 3' wide, 6" curb. Other side has 1.5' gutter, 2-3' SW
- Road condition is moderate

- Few spots of alligator cracking, in center
- *Recommendation*
    - *Grind and overlay*

32nd St

- Between Mandela and Wood
    - Road in good condition up until you get to Wood St
        - Serious block cracking approaching Stop sign.
    - 8' SW both sides, gutter 12", 6" curb
- *Recommendation*
    - *Grind and overlay*
    - *Grind and overlay length of road with block cracks*

26th Street

- Between Wood and Mandela Parkway
    - Road shares right-of-way with active rail siding, which is along northern edge
    - Significant alligator cracking and potholing, particularly at rail crossings
    - Ill-defined northern edge with no drainage facilities
    - No sidewalk, curb or gutter on either side of street
    - *Recommendation*
        - *Remove and replace AC*
        - *Install new curb and gutter on both sides of street*

Willow St

- Between Mandela and 26th
    - Road has huge block cracks, longitudinal cracking along whole lengths (2 of them)
    - West side has 10' SW, heavily non-ADA sloped, 6" curb
    - Appears there was a gutter, then 1" overlay over gutter
        - Same as other side of street
    - *Recommendation*
        - *Remove and replace AC*
        - *Replace sidewalk as necessary to accommodate ADA requirements*
- Between 26th and 24th
    - Road conditions same as previous block
    - Lots of cracking
    - Short curbs probably due to overlay
    - No gutters
    - SWs are occasional, 10' wide. Lots of vegetation growth
    - *Recommendation*
        - *Protect rail crossing*
        - *Remove and replace AC section*
        - *Reinforce road section around rails*
        - *Install sidewalk on both sides; remove existing*
- Between 24th and W Grand
    - Some potholing at intersection and edges of road
    - Lots of alligator cracking
    - Tons of block cracking
    - Construction currently going on

- No curb, no gutter, no SWs
- Standing water on south side
- Observed lots of parked trucks
- Road is in overall bad shape.
- *Recommendation*
  - *Install concrete curb and gutter and sidewalk*
  - *Full section replacement*
  - *Regrade to drain*
  - *Replace driveways with reinforced driveway sections*

Campbell Street

- Between West Grand and Mandela
  - Longitudnial, alligator cracking
  - West side 10' Sw, 6" curb, no concrete gutter
    - Water drains west
  - Mutual Express has loading driveway with substantial cracking in street in front
  - *Recommendation*
    - *Remove AC, recompact base*
    - *Regrade to drain properly*
    - *Install curb and gutter where necessary to match existing along eastern edge Campbell.*
    - *Replace driveways and facility entrances*
    - *Asphalt in front of facility entrances is severely damaged. Replace full sections in front of entrances.*

24th Street

- Between Campbell and Willow
  - North side has 10-20' SW, 6" curb, 12" gutter
  - South side 6" curb, no SW, 12" gutter
  - Lots of alligator cracking on eastern half and in center
  - Appears to be a few depressions
  - *Recommendation*
    - *In areas of depression and alligator cracking, remove and replace full section*
    - *Regrade to drain*
    - *Install sidewalk along eastern side to match existing pedestrian path of travel*
- Between Willow and Wood
  - Longitudinal cracking whole length
  - Industrial loading
  - Lots of semi-trucks present
  - South side of street 6' SW, curb ~2" (same with East side)
  - Western half, both sides, has metal strips on curbs and 6" curb
  - *Recommendation*
    - *Grind and overlay*
    - *Repair curb/sidewalk sections as necessary*

W Grand Lower Side St, North

- Between Campbell and Wood
  - Road in generally good shape

- 5' gutter, curb that is basically flush w/ gutter, sloping SW that is damaged
  - Gutter and SW basically just form a valley gutter
- *Recommendation*
  - *Regrade to drain*
  - *Install 6" curb and sidewalk*
  - *Grind and overlay*

Mandela Zone Northwest Lighting Notes

24th St

- Street is generally well lit
- Street lights are located on southern side of street
- Lights are spaced approximately every 125'-150'
- Lights are located on joint poles, with the exception of one light on corner of 24th St and Mandela Parkway
- Lights are all operational

26th St

- Not observed west of Mandela Parkway

32nd St

- One street light is not operational; needs repair
- The two lights are one the northern side of the street
- Lights are spaced 110' apart

34th St

- Street is generally well lit
- Two street lights were observed and operational; third street light shown on existing street light exhibit was not located
- Lights located on south side of street
- Lights are spaced approx. 175' apart

Pine St

- Street light on SE corner of 12th and Pine is not operational; needs repair
- Lights are located on eastern side of street
- Lights are located on joint poles
- The lights are spaced approx. 175' apart.

Wood St

- Between 12th and 14th St there are 5 additional lights not shown on existing light exhibit
  - Lights are on both sides of street, not quite staggered
  - Lights are spaced approx. 100' apart
  - Lights are not located on joint poles
- From 14th St going north, lights are on western side of the road, except between 20th St and West Grand Ave
  - Light spacing varies between 100' and 125'

    - The light at the intersection of 32nd and Wood is located on a joint pole in the middle of the street
- Lights are located on joint poles between 14th St and 34th St
- Block between 17th and 18th St is poorly lit
    - Light at SW corner of 18th and Wood St was not operational
- 2 lights not operational between West Grand Ave and 24th St were not operational
- Block between 24th and 26th St is poorly lit
- 3 lights were not operational between 32nd and 34th St
-

Willow St

- Between 15th St and 17th St
    - Street lights are on eastern side of the street
    - Lights are located on joint poles and spaced approx. 125' apart
    - Western side of the street and sidewalk is poorly lit
    - Lights are all operational
- Between 20th St and Mandela Parkway
    - Lights are located on western side of street
    - Light spacing varies between 100' and 175'
    - 1 light between in block between 24th St and 26th St not operational; lighting is poor
    - Block between 20th St and West Grand Ave is well lit, partially due to building lights

Campbell St

- Lights are located on eastern side of the street
- Lights spacing varies between 75' and 175'
- Lights located on joint poles
- 1 light located between 18th and 20th St is not operational

Peralta

- Lights are all operational
- Lights are staggered in no particular pattern
- Light spacing varies 100'-200'

Mandela Parkway Industrial Zone – Northeast (SubArea 15)

30th Street

- Between Adeline and Magnolia
    - Road is in poor shape
    - Southern half has lots of alligator cracking
        - Road has depressions
        - No curb and gutter, on either side
    - South side has SW that is elevated 1'-1.5' from street, but no curb and gutter; just sloped asphalt with grass growing in between
    - SW is 10'
    - North side has similar SW, but not quite has high
    - Longitudinal cracking along whole block

- Western half of block has 2' gutter, 6" curb on both sides.
- *Recommendation*
  - *Remove and replace AC*
  - *Regrade to drain*
  - *Install curb and gutter on both sides of the street*

<u>28th Street</u>

- Between Adeline and Magnolia
  - Road in generally good shape
  - Few cracks, no obvious pattern of cracking
  - Eastern half of block has 6" curb on both sides, 10' SW, no gutter on Eastern half
  - On western half of block, north side has 4' gutter, 6" curb, 10' sw
  - Block doesn't seem to have any industrial entrances, few office driveways
  - No signs of cracking near driveways
  - Large amounts of trash
  - *Recommendation*
    - *Grind and overlay*
    - *Install new curb and gutter on both sides*
- Between Magnolia and Union
  - Road is still in generally good shape; some short longitudinal cracks
  - South side has industrial building entrances, other side is residential
  - 6' SW, 6" curb, 1.5' gutter on the north side.
  - South side has no gutter, 15' SW, some trees in middle of SW (4 trees)
  - *Recommendation*
    - *Grind and overlay*
    - *Install new curb and gutter along south side*
- Between Union and Poplar
  - Road in pretty good shape
  - No real patterns of cracking
  - Patching from utility trench installation
  - North side of street has 1.5' gutter, 6" curb, 15' SW
  - North side has warehouse with 2 entrances, one to a parking lot other to warehouse
  - Sidewalk mostly in decent shape, little cracking
  - South side of street has been excavated so that new SW, Curb and gutter has been installed. So far, doesn't look like asphalt has been installed.
  - *Recommendation*
    - *Grind and overlay*
- Between Peralta and Poplar
  - Block has lots and lots of commercial truck activity
  - Forklifts, delivery trucks constantly crossing from one side of street to other
    - Parking lot on north side, south side contains scrap supply facility
  - North side has no SW, just big entrance concrete, 1.5' gutter.
  - Witnessed a semi-truck driving on that curb and gutter.
  - Asphalt in good shape, no obvious crack patterns
  - North part of street is effectively one large driveway. Dirty from use but structurally sound.
  - *Recommendation*
    - *Grind and overlay*

        - *Install curb, gutter, and sidewalk on south side of street*
- Between Peralta and Ettie St
    - Looks like road might all be concrete
    - Each side of street has 15' SW, 6"curb
    - Block is all industrial, lots of truck activity
        - Lots of trucks going along, parked along
    - One side of street has entrance for Auto Salvage, other has entrance for lumber supply
    - No gutter on either side, road is all concrete
    - As approaching Ettie st, road condition worsens; cracked whole way.
        - Curb on north side transitions down to about 3"
        - Metal stripping placed along curb
        - Curb along south side is shredded, SW is cracked up
        - Start to see asphalt from Ettie to Mandela parkway, south half of 28th is concrete and the north half is asphalt, newly laid.
        - 6 trees on east side between ettie and Mandela in the sidewalk.
    - *Recommendation*
        - *Grind concrete, overlay with AC*
        - *Install new curb and gutter*
        - *Grade to drain*
        - *Remove existing rails, replace AC section*
        - *At south end of intersection of 28th and Ettie St, install and continue sidewalk to match existing pedestrian path of travel.*
- Between Ettie and Mandela
    - Half street is concrete, half asphalt
    - North side has new housing complex along whole block; new sidewalk, landscaping. 1.5' gutter, 6" curb, from there to middle of street is asphalt
    - Southern half hosts forklift storage facility, 6" curb, 10' SW. SW in pretty good shape
    - Entrance into storage yard a little chipped up, overall good shape.
    - *Recommendation*
        - *Grind concrete, overlay with AC*
        - *Overlay entire block and grade to drain.*

<u>Campbell</u>

- Between 26th and Mandela
    - Southern half has new asphalt, Northern half of block has old asphalt with alligator cracking
    - Western half has 6" curb, 1.5' gutter concrete, SW along building
    - Eastern half has asphalt sloping up towards fencing
    - *Recommendation*
        - *Installed valley gutter and parallel parking section on eastern side of Campbell*
        - *Grind the northern half that contains old asphalt, overlay whole street and grade to drain*

<u>26th Street</u>

- Between Mandela and Campbell
    - Rail line running through street
    - Southern side as 10' SW, no curb until 20' before stop sign on Mandela, then there is 6" curb, 1.5' gutter

    - SW looks pretty new, not very even
    - Condition of road is moderate, looks sloped appropriately
    - Some transverse cracking, some block cracks
    - North side of street has 6" curb, entrance to a big empty lot. The entrance is in bad shape. 6" gutter.
    - *Recommendation*
        - *Remove existing rails*
        - *Full section replacement*
        - *Install gutter on south side where no gutter currently exists*
- Between Campbell and Peralta
    - North side has a 5' SW that looks new, 6" curb, 12" gutter
    - South side is all perp parking for facility
    - Road in generally bad shape, mostly along center where there is rail track
    - Rail itself looks to be in bad shape; bent in certain places.
    - South side of street has cars are parked over another rail track. Rail track is damaged.
    - *Recommendation*
        - *Remove existing rails*
        - *Remove and replace AC section*
        - *Regrade to drain*
        - *Stripe parking perpendicular parking stalls on south side of street to accommodate existing parking uses*
        - *Regrading should direct flow to the north sides gutter, or install a valley gutter between parking stalls and edge of road to direct flow on south side*
- Between Poplar and Peralta Street
    - Road in bad shape
    - South side of street has 10' SW that is heavily damaged
    - Both sides have 12" gutter, curb is about 4"
    - Lots of truck activity, likely the cause of poor road conditions
    - Road has all types of cracking and potholes
    - *Recommendation*
        - *Remove existing rails*
        - *Full section replacement along entire block*
        - *Replace sidewalk, curb and gutter between Kirkham Peralta*
- Between Poplar and Union Street
    - Road is cracked
    - Lots of alligator cracking along eastern half, right where tracks begin
    - Rest is mostly longitudinal cracks, block cracking
    - Road is not very even along a path, possibly from Poplar to where tracks now end, may have had asphalt overlayed.
    - Northern side of this block has about 6 trees, other side has 2 that are in landscaping areas.
    - *Recommendation*
        - *Remove existing rails*
        - *Full section replacement along entire block*
        - *Install curb ramps at all four corners of intersection of Poplar and 26th st. This would require relocating one joint pole and one street light.*
        - *Replace existing damaged driveways*
        - *Regrade to drain*

- Between Union St and Magnolia
    - Terrible condition
    - Lots of alligator cracking along entire block
    - Intersection of Union and 26th, road has tons of potholes, severe cracking
    - South side of street has sidewalk that is 10' wide, 6" curb, 12" gutter, all in terrible shape
    - SW overgrown, totally cracked, vegetation growing out of it, standing water
    - Curb and gutter are chipped up from vehicle activity
    - North side of street has loading for warehouse, really no sidewalk, just sloped concrete where perp parking occurs over existing rails
    - Rails look as if they were removed from center of road between intersection of Union and 26th, and then 2/3 of way down, but alligator cracking along wherever those rails would have been.
    - *Recommendation*
        - *Full section replacement along entire block. Remove any existing rails under the asphalt.*
        - *Remove existing rail that parallels 26th along the edge of road*
        - *Install new sidewalk, curb and gutter along entire south side of street*
        - *Install rolled sidewalk, rolled curb and gutter along northern side and perpendicular parking section to meet existing parking use.*
        - *Regrade to drain*
- Between Magnolia and Adeline
    - Road in bad shape, but slopes appropriately unlike previous blocks
    - Lots of transverse cracks along whole road
    - Center of road is cracked, looks to have been patched over
    - Both sides of road have 12" gutter, 6" curb, SW is 10' on both sides.
    - South SW is actually about 6', 2' planter area with trees, roughly 12 trees.
    - *Recommendation*
        - *Remove existing rails running along center of street and in northern sidewalk*
        - *Remove and replace existing sidewalk, curb and gutter on north side*
        - *Grind and overlay*
- Between Adeline and Chestnut
    - Road in similar shape as previous block
    - Lots of alligator tracking, transverse cracks, mostly really rough near rails along center of road
    - North side of street, half has no curb or gutter, 4' concrete SW in moderate shape
        - Between SW and street is really just dirt and vegetation
    - South side of street has curb and gutter, 10' SW
    - There is a chain link fence installed along south side of 26th approaching intersection of Chestnut that appears to encroach on sidewalk and right of way.
    - *Recommendation*
        - *Remove existing rails*
        - *Grind and overlay*
        - *Install new sidewalk, curb and gutter on both sides*
        - *Regrade to drain*
        - *Remove and replace existing driveways*
        - *Verify right-of-way, remove existing chain link fence on south side 26th that encroaches to continue pedestrian path of travel.*

24th Street

- Between Chestnut and Adeline Street
  - Road in generally good shape
  - Pretty well graded
  - Joint cracking
  - Few potholes
  - North side has 10' Sw, 6" curb, no gutter, same for south side
  - None of the facilities seem to be industrial
  - Block has a moderate amount of potholes as well, some patching
  - *Recommendation*
    - *Patch potholes*
    - *Grind and overlay*
    - *Install new curb and gutter*
- Between Adeline and Magnolia
  - South side has no gutter, 6" curb
  - SW on both sides in good condition, little cracking
  - *Recommendation*
    - *Grind and overlay*
    - *Install new curb and gutter on both sides*
    - *Replace existing driveways*
- Between Magnolia and Union
  - Lots of block cracking
  - North side has 6" curb, 1.5' gutter, 10' SW
  - South side has 6" curb, 1.5 gutter, SW varies 4'-10'
  - Sidewalks are cracked, in poor condition
  - *Recommendation*
    - *Grind and overlay*
    - *Remove and replace sidewalk, curb and gutter*
- Between Union and Poplar
  - Road is in same conditions as previous blocks
  - Long crack along center
  - Transverse cracks
  - SW on north side is 10'
  - 6" curb, no gutter
  - North side of street has 3 entrances for tire shop, south side has entrance for gas station with newer concrete SW. Entrance to gas station has gutter
  - Asphalt in street adjacent to gas station entrance is cracked.
    - Likely due to poor drainage, see Photo 209
  - Asphalt has areas of depression
  - *Recommendation*
    - *Grind and overlay*
    - *Regrade to drain*
    - *Install new curb and gutter*
    - *Replace damaged driveways*
- Between Poplar and Kirkham
  - Intersection of Poplar and 24th has a utility vault, near eastern most side, that is probably about ~3" above grade, causing traffic to slow down.

        - Tons of potholes in this intersection
    - Road is in pretty good condition
    - 6" curb, 15' SW on north side in poor, cracked condition, 10' on south side in good condition
    - Loading facility, SW on opposite side of street is cracked up
    - Block has lots of longitudinal cracks and transverse
    - no gutter
    - Only one driveway entrance
    - *Recommendation*
        - *Grind and overlay intersection*
        - *Patch potholes*
        - *Install new curb and gutter*
        - *Replace sidewalk on north side*
- Between Kirkham and Peralta
    - Road is in moderately poor condition
    - Lots of cracks
    - North side has 15' SW, 4" curb, 12" gutter
        - Sidewalk is cracked; beat up
    - On south side of street, SW slopes and hits flush with asphalt; really no curb. Cars are parked along it. Looks like entrances to storage bays.
    - North side has entrance to concrete supply facility
        - Asphalt in front has lots of alligator cracking
        - Driveway of entrance is in pretty good shape
    - *Recommendation*
        - *Grind and overlay*
        - *Replace curbs, gutters, and sidewalks*
        - *Replace asphalt section at entrance to Central Concrete Supply Co.*
        - *Remove existing rails, replace AC*
        - *Grade to drain*
- Peralta and Mandela
    - Asphalt is in decent shape
    - As you approach stop sign on Mandela, severe alligator cracking
        - Truck traffic stopping, drainage likely the cause
    - North side appeared to have new 6" curb, SW is about 10', 1.5' gutter
    - *Recommendation*
        - *Grind and overlay*
        - *Where alligator cracking occurs, replace AC section*
        - *Install new curb and gutter on south side of 24th*
        - *Gutter does not seem to drain properly. New inlets may be required to mitigate runoff.*
        - *Grade to drain*

<u>West Grand Avenue</u>

- Between Poplar and Mandela
    - Intersection of Mandela is in good condition
    - SWs and curb returns have ADA ramps
    - Towards Poplar, SW are 10' wide, 6" curb, 1.5' gutter
    - Road is in moderate condition. Asphalt has cases of alligator cracking

    - North side has 10' SW, 6" curb, 1.5' gutter
    - Halfway between Mandela and Poplar, rail crossing that crosses horizontally across W Grand.
    - Median is 4' wide, has 6" curb, 3' of planter area
    - In this block, there are 7 trees
    - SW does not continue along entire length of south side of W Grand
    - *Recommendation*
        - *Grind and overlay*
        - *Remove existing rails, replace AC section*
- Between Poplar and Union
    - Lots of alligator cracking, potholes
    - Road appears to have some depressions
    - SW on southside has trees (3), all seem to cause root uplifting on SW
    - On South side, between Poplar and Mandela, no concrete SW, 10' wide of dirt sidewalk, but still 6" curb and 1.5' gutter
    - *Recommendation*
        - *Grind and overlay*
        - *Replace AC section where alligator cracking occurs*
        - *Replace sidewalk sections where root uplift occurs*

<u>Poplar</u>

- Between W Grand and 24th
    - Road in bad condition
    - Lots of alligator cracking
    - Does not seem sloped properly
    - Appears that water would drain towards center of tracks
    - 12" gutter, 6" curb, SW varies 4'-6'
    - West side perp parking, striped
    - *Recommendation*
        - *Remove existing rail*
        - *Remove and replace AC section where alligator cracking occurs. Grind and overlay remainder of road*
        - *Grade to drain*
        - *Replace sidewalk on eastern side, grade and size to meet standards*
- Between 24th and 26th
    - Midway through, the track "Y"s off, goes into fence of a trucking facility. Rail is then buried under asphalt of trucking facility.
        - Has parking lot appearing to be 1-2' higher grade than Poplar
    - Road is cracked
    - Sidewalk widths vary
    - *Recommendation*
        - *Remove existing rails*
        - *Replace entire road cross section; sidewalks, curb and gutter, and asphalt section. Sidewalks, curb and gutter to meet city standards*
- Between 26th and 28th
    - Road is cracked
    - Trucks parked on both sides of street
    - Center of street not very damaged, near rail

- 6" curb, SW is 6-8" higher than curb, offset, 12" gutter.
- Road has few transverse cracks, lots of alligator cracking near the rail
- Lots of alligator cracking on both sides where there would be parallel parking
- *Recommendation*
  - *Remove existing rails*
  - *Full section replacement*
  - *Install rolled curb and gutter, sidewalk*
  - *Sidewalk section should be designed to withstand truck loads*

<u>Union Street</u>

- Between 28th and 26th
  - Pavement is alligator cracked
  - Wide sidewalks
  - Two houses halfway down
  - Lighting on one half of street
  - Few street trees as you get down towards 26th
  - Perp parking at end
  - A few loading areas
  - Curb, but no gutter
  - Some ponding water
  - Street tree wells with no street trees
  - Cross slope of sidewalk appears at 2%, other side has multiple loading docks with cracked sidewalk
  - Middle of road has little bit of overlay but mainly alligator cracked
  - Ponding water at 1st loading dock
  - Potholes in middle of street, probably a new section in front of all the water structures at 2680
  - Looks like new SW and street trees closer to 26th
  - Pavement extremely cracked
  - Railroads at 26th are pretty much out of the ground
  - Small curb inlets at the corner
  - Curb ends into asphalt, steep transition in the pavement
  - Curb ramps are deficient; other side of 26th has truncated domes
  - *Recommendation*
    - *Remove and replace AC section*
    - *Install new curb and gutter*
    - *On east side of road, install rolled curb and gutter and parking section for perpendicular parking to match existing use*
    - *Remove existing rails at intersection of Union and 26th*
    - *Replace driveways on eastern side*
- Between 26th and 24th
  - Pavement is generally good
  - Cross slope is steep, probably due to overlay
  - Curb on one side, gutter on the other. Curb has metal lip edge on it, probably for loading
  - Parallel parking
  - Multiple rollup doors along this block
  - Some landscaping

    - Low spot above the curb at the corner of 24th and Union, right before catch basin. Water probably ponds a few inches before entering basin, right by Graphic Reproduction.
    - Curb ramps are relatively old, grooved, truncated domes.
    - Mueller Nicole's Inc building look like it sits 6" up from BW, step into building.
    - Cross slopes of SW don't look too bad
    - Street lights on one half of street, pretty close to edge of curb
    - RWLs pop out to under sidewalk drain, few broken rainwater leaders on other side, numerous undersidewalk drains
    - Cracking is generally by loading zone of brick building
    - Two really close driveways
    - Longitudinal cracking every 4', not too bad
    - SW is pretty new on corner of 26th and Union, curb and gutter new
        - Stops at Newell Factory
    - Baker Marble and Granite on Union has driveway that splits into two levels, sunken driveway.
    - *Recommendation*
        - *Grind and overlay*
        - *Replace curb and gutter*
        - *Grade to drain*
- Between 24th and Grand
    - Middle of road is cracked
    - Curb and gutter both sides
    - Several tree wells
    - Lights on one side of street
    - Multiple driveways towards 24th street
    - 2" pipes under small driveway aprons connect the gutters between driveways
    - *Recommendation*
        - *Grind and overlay*
        - *Replace curb and gutter on both sides*
        - *Replace damaged driveways*
        - *Continue sidewalk along southern half of Union where sidewalk is missing*

<u>Adeline Street</u>

- W Grand and 24th Street
    - Intersection itself is not cracked significantly
        - Some cracking in middle on the east side of intersection
    - Road appears to drain well, no visible low spots
    - South of Adeline and 24th the pavement is the best seen condition so far, worsens north of this intersection
    - Little bits of cracking at edge of 6' gutter pan
    - Street trees on east side
    - Joint poles on the east side
    - West side has cobrahead lights
    - As you approach 24th intersection, southeast curb return is cracked
    - *Recommendation*
        - *Remove existing rail crossing north of Adeline and W Grand Ave intersection, replace AC section*

        - *Slurry seal*
- Between 24th and 26th
    - Pretty cracked around the bus/shuttle yard
    - SW is steep
    - *Recommendation*
        - *Grind and overlay*
        - *Replace sidewalk as necessary to meet ADA requirements*

Magnolia Street

- Between 30th and 28th
    - Intersection looks pretty steep and cracked up
    - 2' gutter pan
    - Residential
    - SW looks 2%
    - Random patches and digouts along whole block
    - Residential parking along both sides
    - Sidewalk on East side 15' wide.
    - Intersection of 28th and Magnolia generally decent condition
    - Curb returns, catch basins are filled with debris
    - Curb ramps are non-standard on all four corners
    - Sidewalk across 28th street is overgrown with plants coming through
    - *Recommendation*
        - *Grind and overlay*
- Between 28th and 26th
    - SW is cracked at corners, 15' to building
    - East side SW ends at fence, but slopes quickly to foundation
    - Street is significantly alligator cracked
    - Parallel parking on both sides
    - Power poles and joint poles on east side
    - Lots of garbage
    - Some street trees on the west side every 100' or so
    - Numerous rollup doors on east side
    - Abandoned lot, lots of cracking near it. Looks like old loading dock.
    - Last part of it is mostly driveways
    - Meets railroad tracks at 26th
    - Railroad tracks in middle are cracked
    - Tracks along sidewalk on 26th
    - *Recommendation*
        - *Remove existing rail tracks near intersection with 26th, replace AC section*
        - *Grind and overlay*
        - *Replace damaged sidewalk, curb and gutter*
        - *Replace AC sections in front of property entrances where asphalt has alligator cracking*
- Between 26th and 24th
    - There are a couple rollup doors
    - SW generally decent condition
    - Pavement not too cracked in this block
    - Does not appear to be a lot of heavy vehicle traffic

- Poles on east side
- Some planting against building on west side
- Alligator cracking noticed at intersection where stop sign is
- 3' gutter pan on east side
- Small loading docks south
- Couple of street trees
- *Recommendation*
  - *Grind and overlay*
  - *Replace curb and gutter along west side*
  - *Replace damaged driveway along west side*

- Between 24th and W Grand
  - Numerous empty lots with wide driveways
  - Street slope is steep
  - Very cracked
  - No gutter on either side
  - Potholes are still on east side
  - SW is in relatively good condition
  - Some landscape strips, but not many, mostly in middle section
  - Alligator cracking in east side parking area
  - Parallel parking on both sides
  - Bulbs out for driveways halfway down middle of street
  - *Recommendation*
    - *Grind and overlay*
    - *Replace curb and gutter*
    - *Replace driveways*

<u>Peralta Street</u>

- Between Mandela and 24th
  - Intersection of Peralta and 24th
    - Curb returns need help, lots of cracking
    - Obvious low spots
  - Turning onto Mandela, pavement is supered to a curb and gutter, 2' wide
    - Next to adjacent parking lot
  - SW not in bad condition, probably exceeds 2%
  - *Recommendation*
    - *Grind and overlay*
    - *Regrade to drain*
    - *Replace sidewalk sections that are not compliant with ADA requirements*
    - *Replace curb and gutter along west side of street where gutter has been overlayed*
- Between 24th and 26th
  - Actual roadway looks as if it's been overlayed and patched, couple spots for utilities
  - After adjacent to mattress center and bay bridge commercial center, road is not that cracked, but is faded
  - Adjacent to concrete plant, the pavement is in better condition that one would expect at one driveway, but is cracked at the other driveway
    - Probably gets more use
    - Structural concrete pad would be beneficial

    - At 26th and Peralta
        - East side is significantly cracked, curb and gutter only 1.5' or 1' apron
        - Wide driveway at edge of concrete plant, which intersects rail, causing a hump in the road
        - New pavement where looks like new utility trenching, from 26th to 28th
        - 26th has lots of tracks
        - Perp parking along 26th, parallel on other side
        - Peralta is parallel parking all along, not utilized north of 26th street
        - *Recommendation*
            - *Grind and overlay*
            - *Remove existing rails at intersection of 26th and Peralta*
            - *Install AC section, sidewalk, curb and gutter, and driveway where rails have been removed*
- Between 26th and 28th
    - Numerous street trees at end of Peralta near 28th
    - Asphalt turnout near end
    - Low points at corners, looks like ponding
    - Driveway aprons on west side are cracked at flowline
    - SW is cracked heavily on west side
    - Warehouses have multiple rollup doors
    - *Recommendation*
        - *Grind and overlay*
        - *Regrade to drain*
        - *Replace sidewalk sections where damaged*
        - *Replace damaged driveways*

<u>Chestnut Street</u>

- Between W Grand and 24th
    - West sidewalk in poor condition, no curb and gutter
    - 2' curb and gutter on east side
        - SW in relatively good shape
    - Pavement looks like 2 different overlays, little cracking, one overlay looks more coarse than the other
    - Street trees on both sides
    - Joint poles on the east side
    - Pavement looks in good condition on east side, couple cracks, mostly for utility connections
        - Probably needs grind and overlay, maybe just slurry seal
    - Intersection of Chestnut and 24th is pretty cracked
    - Compliant curb ramps on one side
    - *Recommendation*
        - *Grind and overlay*
        - *Install curb and gutter along west side*
        - *Replace sections of damaged sidewalk*
        - *Replace damaged driveway at entrance to CarQuest lot*
- Between 24th and 26th
    - Multiple driveways, a couple empty lots

- Pavement looks in generally good condition
- General crown of the roadway is still present
- Overlay or slurry seal would probably be appropriate
- Little cracked at intersection
- SW at chestnut and 26th on the southwest side is all cracked, growth through it
- Other side has nice grass with compliant truncated domes, NW and SE corners.
- Lots of Garbage at 26th intersection
- *Recommendation*
  - *Grind and overlay*
  - *Approximately 40 ft of curb and gutter is missing on west side of first 100' of Chestnut north of 24th*
  - *Regrade to drain*

Mandela Zone Northeast Lighting Notes

<u>24th Street Corridor Lighting Notes</u>

- Adeline Street
  - Four lights located on Adeline Street, east of 24th Street do not show up on city maps.
- Union Street
  - Two street lights on southeastern side of intersection not operational.
  - Northern side of Union Street lit by building.
- Poplar Street
- Mandela Parkway

<u>26th Street Corridor Lighting Notes</u>

- Chestnut Street
  - Two street lights on the western side of 26th street not operational.
- Adeline Street
  - Street generally well lit and conforms to city data.
  - Four lights located on Adeline Street, east of 26th Street do not show up on city maps.
- Magnolia Street
  - Southeastern block of Magnolia Street depicts non-uniform lighting due to street lights on one side.
  - One street light mid way into northwestern block not operational.
  - One street light on southwestern intersection not operational.
- Union Street
  - Two street lights not operational one at intersection of Union Street and 26th Street the other on south side of Union Street.
  - Building light on eastern side of 26th street contributes to street lighting.
- Poplar Street
  - Block east of 26th Street depicts non-uniform lighting.
  - Western block of 26th Street poorly lit.

28th Street Corridor Lighting Notes

- Adeline Street
  - Four lights located on Adeline Street, east of 28th Street do not show up on city maps.
- Chestnut Street
  - Two street lights on the eastern side of 28th Street not operational.
- Magnolia Street
  - One street light on western side of 28th Street light not operational.
- Union Street
  - One street light located at south western intersection of 28th not operational.
- Poplar Street
  - One street light on eastern side of Poplar Street not operational.
- Peralta Street
  - Western side of 28th Street exhibits low lighting due to shade from trees.

30th Street Corridor Lighting Notes

- Magnolia Street
  - Half of northern block of Magnolia street poorly lit.

Mandela Parkway Industrial Zone – Southwest (SubArea 16)

10th St

- Intersection has block cracking on all 4 ways.
- 10th street at high elevation relative to pine st. Heavily sloped from center towards sides.
- North side has angled parking. No curb or gutter, no SW
- Frontage to Pine St, 3 entrances off of 10th for Industrial truck entrances (Recycling).
- SW, curb and gutter on curb return along Frontage. Ends just after turn.
- *Recommendation*
  - *Replace road cross section. Install sidewalk, rolled curb with gutter, and angled parking sections to maintain existing use.*

Pine St

- SW is 5' wide, 1.5' gutter, 6" curb both sides
- Long longitudinal crack and alligator cracking along center, probably some type of joint cracking.
- Between 11th and 12th, road conditions are pretty good.
- *Recommendation*
  - *Slurry seal*

11th St (West of Pine St)

- Asphalt is in decent shape
- Few longitudinal and transverse cracks
- No curb, gutter, or sidewalk on either side
- Currently cars park in front of loading bays with "No Parking" markings on bay doors
- *Recommendation*
  - *Replace road cross section. New section shall have sidewalk, perpendicular parking, rolled curb and gutter on north side and a standard curb and gutter on south side.*

- *Existing building on north side has truck loading bays; the loading needs of the building shall be determined and reflected by parking striping.*
- *The street shall be regraded drain.*

12th St

- Asphalt is in good shape, no visible cracking
- Along south side parallel parking, north side has angled parking.
- SW on both sides, varying 10' and 5'
- 6" curb, 1.5' gutter each side.
- Street lights are copperhead like all in Oakland.
- SW on north side looks brand new, from new housing development. South side has older residential homes and older sidewalk, but overall SW condition is good.
- *Recommendation*
  - *Slurry seal*

14th St

- Road is short entrance to driveways for new housing
- In new and great condition, does not reflect "Worst" per Exhibit
- New condition is likely result of new construction since initial study
- *Recommendation*
  - *No recommendation*

Wood St

- 15th St to 16th St
  - SWs are 8' wide, 1.5' gutter, 6" curb
  - SW on west side is cracked
  - Entrance to construction site
  - Long longitudinal crack running along centerline
  - *Recommendation*
    - *Grind and overlay*
    - *Replace sidewalk with new sidewalk, curb and gutter along west side*
    - *Repair driveway with new structural section*
- 16th to 17th
  - No gutter or sidewalk on west side
  - East side has curb, gutter and sidewalk for only a portion of the block
  - *Recommendation*
    - *Install standard curb and gutter for proper drainage*
    - *Install sidewalk along east side of Wood St for continuous path of pedestrian travel.*
    - *Grind and overlay*
- 17th to 18th
  - 5' gutter, 4' SW on west side, south side has perp parking, no SW, no gutter
  - Lots of standing water on west side in gutter
  - Corner of 18th and wood is built up a lot, high slopes.
    - Utility vault hatch is cause
    - Slopes downwards toward curb from vault
  - *Recommendation*

        - *On east side of Wood St, install rolled curb , gutter sidewalk and angled parking section to meet needs of existing building.*
        - *Northern half of this block shall continue rolled curb, gutter, and sidewalk.*
        - *Regrade to drain*
        - *Clear vegetation along western sidewalk*
        - *Grind and overlay*
- 18th and 20th
    - No SW, no gutter, no curb
    - Lots of vegetation on side of road
    - Road is on mediocre shape
    - Centerline crack
    - *Recommendation*
        - *Install curb, gutter, and sidewalk along eastern side of street*
        - *Install curb and gutter along west side of Wood St*
        - *Redirect pedestrian walkway along western sidewalk from previous blocks to cross and continue along proposed eastern sidewalk .*
        - *Remove existing rail*
        - *Grind and overlay, replace section where rail is removed*
        - *Regrade to drain*
- 20th and W Grand
    - 6' SW, 1.5' gutter, 6" curb
    - No substantial Cracking
    - Street lights all cobrahead, free standing
    - *Recommendation*
        - *Install curb and gutter along western edge*
        - *Remove existing rails*
        - *Replace road section where rails are removed*
        - *Grind and overlay*
        - *Regrade to drain*
        - *Eastern sidewalk shall continue for entire block. Remove existing rail, install curb and gutter. Install driveway in front of building entrance with structural section to accommodate truck traffic.*

<u>Willow Street</u>

- Between 20th and W Grand
    - Road in good shape
    - Few instances of cracking along corner of willow and west grand
    - 10' sidewalk on West side, 4' on south side
    - 5' gutter on both, 6" curb
    - Away from West grand, almost no visual structural damage to the asphalt
    - *Recommendation*
        - *Grind and overlay*
- Between 15th and 16th
    - Road has little cracking; just minor
    - Road looks slightly corrugated
    - Two strips of patching from trenching
    - West side has industrial building
        - SW 20', 6" curb, 1.5' gutter, sidewalk underdrains

    - East side has 8' SW, 6" curb, 1.5' gutter, no SW underdrains
    - *Recommendation*
        - *Grind and overlay*
- 16th and 17th
    - Cracking, longitudinal along half of the block, with alligator cracking
    - Middle of 16th and Willow, road is substantially cracked, especially around manhole lid
        - Road is pretty corrugated
    - West side has no SW, no Curb up until 40' of approach to 17th
    - East side has abandoned residential buildings, 15' SW, 6" curb, 1.5' gutter
    - As approach 17th there is abandoned lot
    - *Recommendation*
        - *Remove AC, recompact base*
        - *Install sidewalk on west side of street*
        - *Install sidewalk on east side of street to continue pedestrian path of travel*
        - *Install driveways at building entrances*

<u>Campbell Street</u>

- Between 16th and 17th
    - Alligator cracking along whole block
    - East side 15' SW, 1.5' gutter
    - West side has 8' SW, 1.5' gutter along half, other half is disorganized concrete; no actual SW, curb or gutter
    - Longitudinal cracking at center along whole block until 17th
    - *Recommendation*
        - *Install sidewalk on west side to match existing*
        - *Remove AC, recompact base*
- Between 17th and 18th
    - Alligator cracking along center of road
    - SW south side 6' wide, 6" curb, 1.5' gutter (residential)
    - West side flat concrete, not SW. Cars parked along what looks like industrial storage complex
    - Whole block is alligator cracking
    - 3 driveways, severely cracked
    - *Recommendation*
        - *Remove AC, recompact base*
        - *Install rolled curb and gutter along west side, with parking section for perpendicular parking*
- Between 18th and 20th
    - 6" curb both sides, 2' planter area, 6' SW south side, 4' SW north side
    - Asphalt in generally good shape
    - No potholes, alligator cracking in middle of northern lane
    - Along eastern side, consisnten transverse cracks
    - 12" gutter both sides
    - East side of street has a lot of loading driveways
    - Closer to 20th street, start to see lots of cracking and a few potholes
    - *Recommendation*
        - *Grind and overlay*
- Between 20th and West Grand

- Road in worse condition
- Not draining properly
- Lots of cracking, longitudinal cracks along whole centerline
- No curbs, gutters or sidewalks until 50' before W Grand
  - On east side 5' SW, 1.5' gutter, 6" curb
- *Recommendation*
  - *Full section replacement*
  - *Regrade to drain*
  - *Install sidewalks, curb and gutter on both sides to match existing path of travel*

W Grand Lower Side St, South

- Between Wood and Willow
  - 5' SW, 6" curb, 5' gutter
  - Gutter not draining properly
  - Lots of transverse cracks on road and gutter
  - Longitudinal cracks
  - *Recommendation*
    - *Regrade to drain*
    - *Grind and overlay*
- Between Willow and Campbell
  - Asphalt in decent shape
  - Northern side of street, 6" curb, 6" gutter
  - Southern side 4' SW, 5' gutter, 6" curb
  - Where asphalt meets gutter, forms lip, does not look to drain towards gutter?
  - Patching in middle from trenching
  - Where gutter meets asphalt, looks like overlay, 1' from gutter
  - *Recommendation*
    - *Regrade to drain*
    - *Grind and overlay*

20th Street

- Between Wood and Willow
  - Lots of rail tracks
  - Aside from rails, asphalt in generally good shape
  - Concrete around, in between rail is damaged
  - Photos in this area show park fence casting shadows onto the asphalt. Shadows may give appearance of transverse cracks or patched cracks.
  - No cracking in asphalt
  - South side has 6" curb, 1.5' gutter
  - Other side 10' SW, 1.5' gutter, 6" curb.
  - *Recommendation*
    - *Remove existing rails, replace AC where rails removed*
    - *Grind and overlay remaining existing AC*
    - *Continue sidewalk where existing SW is interrupted by rails*
- Between Campbell and Willow
  - Asphalt in generally good shape, no visual structural damage
  - North side 6' SW, 6" curb, 1.5' gutter
  - Other side has landscaping, 6" curb, 1.5' gutter

    - Only damage to asphalt is on or near the tracks
    - *Recommendation*
        - *Remove existing rails, replace AC where rails removed*
        - *Grind and overlay remaining existing AC*
        - *Continue sidewalk where existing SW is interrupted by rails*
- Between Campbell and Peralta
    - Road has lots of alligator cracking
    - Asphalt around tracks is torn up
    - Crossing Peralta to Mandela, lots of block cracks, alligator cracks, potholes, terrible shape
    - 6" curb, 1.5' gutter, no SW
    - *Recommendation*
        - *Remove existing rails, replace AC where rails removed*
        - *Full section replacement for remaining*
        - *Install sidewalk, curb and gutter along northern side, and parallel parking stalls*
        - *Replace existing driveways*
        - *Grade to drain*
- Between Peralta and Mandela
    - 6" curb on both sides, 1.5' gutter, no SW
    - Road is in poor shape; lots of cracking, poor drainage
    - *Recommendation*
        - *Remove existing rails, replace AC where rails removed*
        - *Full section replacement for remaining*
        - *Install sidewalk on both sides to match with intersection of 20th and Mandela*
        - *Grade to drain*

<u>18th Street</u>

- Between Mandela and Peralta
    - Asphalt generally good shape
    - Slight alligator cracking
    - South side of street, 6" curb, SW 6', 1.5' gutter
    - North side some curb, no sidewalk, no gutter.
    - *Recommendation*
        - *Remove existing rails, replace AC where rails removed*
        - *Grind and overlay*
        - *Install curb and gutter along north side*
- Between Peralta and Campbell
    - South side SW 4', 6" curb, no gutter
    - Intersection of 18th and Campbell torn up, mostly around the rails
    - North side has no gutter or sidewalk
        - Cars parked perpendicular on
    - Lots of standing water
    - SW are severely cracked
    - *Recommendation*
        - *Remove existing rails, replace AC where rails removed*
        - *Grind and overlay*
        - *Install sidewalk, curb and gutter and parallel parking stalls on north side*
        - *Replace sidewalk, curb and gutter on south side*

- Between Campbell and Wood
    - Northern half in generally good shape
        - Asphalt has no structural damage
        - 6" curb, in poor condition
        - 6' walkway from curb
        - No concrete gutter
    - Southern half has no concrete curb, gutter, SW
        - Sloped parking for perpendicular parking
        - Lots of standing water.
        - *Recommendation*
            - *Remove existing rails, replace AC where rails removed*
            - *Grind and overlay*
            - *Regrade to drain*
            - *Install sidewalk, parking section, rolled curb and gutter on south side*

<u>17th Street</u>

- Between Wood and Willow
    - Generally in good shape
    - Some longitudinal cracking, but mild
    - North side has no curb, gutter, no SW
        - All loading for semi-trucks
    - South side has 30' of SW 10' wide, 6" curb, no gutter
    - Approaching willow, more longitudinal cracking along centerline of street
    - Intersection of willow and 17th, spot of alligator cracking.
    - *Recommendation*
        - *Full section replacement*
        - *Regrade parking along north side of street*
        - *Install sidewalk, rolled curb and gutter along north side of street*
        - *Replace driveways to Roadway truck parking*, install gutter
        - *Continue sidewalks, curb and gutter along both sides of the street*
- Between Willow and Campbell
    - Lots of longitudinal cracking
    - No SW, curb, or gutter on either street side
    - *Recommendation*
        - *Grind and overlay*
        - *Install sidewalk, curb and gutter along both sides*
            - *Remove existing chain link fence*
- Between Campbell and Peralta
    - Generally good shape
    - Spots of alligator and longitudinal cracking. Drainage may be the cause.
    - There is a loading zone, receiving driveway with cracking in street in front of it
    - SW on the North side 5' wide, 6" curb, 1.5' gutter
    - South side has SW 5-10' wide ranging, 6" curb, 1.5' gutter
    - *Recommendation*
        - *Grind and overlay*
        - *Replace AC section where alligator cracking occurs*

16th Street

- Between Campbell and Willow
    - Road is significantly cracked, longitudinal and transverse, patching where trenches were dug out all the way to Willow
    - Occasional potholes
    - Each side of street has 10' SW, uneven and beat up
    - Was a 6" curb…now stands 3-4" high from asphalt overlays
        - Not on south side 4' SW, 1.5' gutter, 6" curb
        - *Recommendation*
            - *Remove and replace AC section*
            - *Install new curb, gutter, and sidewalk*
            - *Replace existing driveways*
- Between Willow St and Wood
    - Road is in same condition as previous
    - 10' SW on north side, curb <6", no concrete gutter
    - South side has 6' SW, gutter 1.5', few inches of curb
    - No particular spots that are damaged structurally
    - *Recommendation*
        - *Remove and replace AC section*
        - *Install new curb, gutter, and sidewalk*
        - *Replace existing driveways*
- End of 16th Street, West of Wood
    - Road slightly cracked
    - SW on business (West) side 8', 6" curb, no concrete gutter
    - Other side no SW, no curb, no gutter.
    - *Recommendation*
        - *Grind and overlay*
        - *Install new curb, gutter, and sidewalk*
        - *Replace existing driveways*

15th Street

- Between Willow and Wood
    - Road generally good condition
    - Minor transverse and longitudinal cracking
    - North side, no concrete gutter, 6" curb, 10' SW
    - Other side of street, 5' SW, 6" curb, 1.5' concrete gutter
    - *Recommendation*
        - *Grind and overlay*
        - *Install new curb and gutter along north side of street*
        - *Replace existing sidewalk on both sides of street*

Mandela Zone (West of Mandela Parkway) Lighting Notes

10th St

- Street lights located along southern side of street
- Lights are spaced approx. 175'
- Northern side of street is poorly lit

- Lights are all operational

11th St
- Street is generally well lit
- 2 lights spaced 175' apart on southern side
- Lights are all operational

12th St
- Street is generally well lit
- 2 lights spaced 200' apart on northern side
- 1 light on southern side that is not shown on existing street light exhibit
- Lights are all operational

14th St
- Street acts as entrance to housing complex; well lit
- 16 street lights operate along 14th St as well as the pedestrian entrance to the housing complex.
- Lights are all operational
- Existing lighting exhibit does not reflect the correct information
- Existing lights are spaced every 40'-50'

16th St
- Street is generally well lit
- Lights are on south side of street south of Wood St and spaced every 100'-200'; staggered and spaced 100' on block north of Wood St
- Lights are all operational

17th St
- Street is generally well lit
- Lights are on north side between Peralta St and Willow St and spaced 100'-150' apart
- Lights are on south side of street north of Willow St and spaced 200' apart
- Lights are all operational

18th St
- Street is generally well lit
- Street lights are all on south side of street, with the exception of one light on the north side between Mandela Parkway and Peralta
- Lights are spaced approximately every 150'-175'
- Lights are all operational

20TH St
- Street is generally well lit
- All but two street lights are attached to joint poles
- Street light locations and spacing are not consistent; they are not necessarily staggered, placed on both sides of the street, and spacing ranges between 75'-300'
- Lights are all operational

West Grand Avenue

- Street is well lit
- Side streets that parallel West Grand Ave between Campbell and Wood contain 9 street lights that are not displayed on existing street light exhibit.
    - On northerly side street, street lights are located on north side of street; on southerly side street, street lights are located along south side of the street
    - Lights are spaced 150'-175' apart
- There are a total of 6 ornamental street lights (Fluted Ornamental poles, Washington luminaire) on the block between Mandela and Campbell; not displayed on existing street light exhibit
    - Ornamental lights are spaced approximately 175' apart
- Between Mandela Parkway and Campbell, lights are duplex fluted ornamental poles with Cobra Head luminaires.
- West Grand Ave, west of Campbell, lights are standard spaced every 100' and not staggered but on both sides of the street.
- Lights are all operational

Mandela Parkway Industrial Zone – Southeast (SubArea 16)

<u>21st Street</u>

- Between Adeline and Union
    - Road in generally good shape, graded appropriately
    - Longitudinal cracking
    - SW 8', 6" curb, 12" gutter
    - Past entrance to EBMUD facility, road condition worsens
        - Alligator cracking along most of centerline of street
        - Patching
    - *Recommendation*
        - *Grind and overlay*
- Between Poplar and Union
    - Road in moderate condition
    - Longitudinal cracking, few transverse cracks
    - SW is 10', 6" curb, 1.5' gutter both sides
    - South side has large loading bays
    - North side of street has entrance to property with a fueling station, construction equipment and large trucks. EBMUD facility.
        - Road conditions at entrance appear okay
    - *Recommendation*
        - *Grind and overlay*

<u>20th St</u>

- Between Poplar and Mandela
    - Road in poor condition
    - Lots of standing water
    - No SW or curbs or gutters. Just asphalt.
    - Halfway through street, traces of where rail is and a little bit of rail under asphalt.
    - Asphalt is really cracked around rails
    - Poor drainage
    - Lots of potholes

- *Recommendation*
  - *Remove existing rails*
  - *Replace AC section*
  - *Along western half of 20th,* install perpendicular parking stalls
  - *Install sidewalk, curb and gutter*
  - *Regrade to drain*
  - *Replace damaged driveways*

18th Street

- Between Mandela and Poplar
  - Road in relatively good condition
  - Occasional transverse cracks
  - Striping has remained in good condition
  - Both sides have 6" curb, 6' gutter, 10' SW
  - *Recommendation*
    - *Remove existing rails, replace full section*
    - *Grind and overlay remainder of road*
    - *Continue sidewalk where existing sidewalk is interrupted by rail tracks*

16th Street

- Between Mandela and Poplar
  - Road in moderate condition
  - Lots of block cracking
  - On south side, SW is 15-20' wide, 6" curb, along a portion of SW there is a 12" gutter that is brick. Once you get to Kirkham, gutter becomes 1.5' concrete.
  - North side of street, 8' SW, 6" curb, 1.5' gutter
  - Road is little uneven, overall though it seems to grade appropriately
  - *Recommendation*
    - *Grind and overlay*
    - *Replace curb and gutter*

14th Street

- Between Union and Poplar
  - Road's in moderately good shape
  - Sidewalks are 8' wide, 6' gutter, 6" curb
  - Road has spots of alligator cracking, a few potholes
  - Big utility vault cover
  - Length of gutter where drainage does not occur
  - Tree that is causing substantial uplift on sidewalk
  - Median ranges from 4'-20' in width
  - *Recommendation*
    - *Grind and overlay*
    - *Regrade to drain, replace curb and gutter as necessary*
    - *Replace damaged sidewalk due to root uplift*
    - *Remove existing rail at intersection of 14th and Poplar, replace full section*
- Between Union and Kirkham
  - Some block cracking
  - 6' gutter, 6" curb, 8' SW on North side

    - North side of whole block adjacent to new commercial building complex, so sidewalk is brand new.
    - This block has another median ranging in width 4'-20'
    - *Recommendation*
        - *Grind and overlay*
        - *Regrade to drain*
- Between Kirkham and Mandela
    - Road condition continues
    - Eastbound lane is depressed, between two lanes there is alligator cracking
    - Curb is 6", gutter 6', SW 6-8', varying
    - *Recommendation*
        - *Grind and overlay*
        - *Regrade to drain*

<u>Poplar</u>

- Between 14th and 16th street
    - West side as new SW 6', 6" curb, 6' gutter, east side is the same but not new, in moderate condition with a little cracking
    - Road has tracks through center
    - Light alligator cracking
    - West side, along northern half, SW becomes old and no longer new
    - *Recommendation*
        - *Remove existing rails, replace removed section with new AC section*
        - *Grind and overlay remainder of street*
        - *Replace sidewalk along northern half of west side of street to match recent improvements*

<u>Kirkham</u>

- Between 16th and 18th Street
    - Road in pretty good shape
    - No visible patterns of cracking
    - Occasional longitudinal cracks
    - 1.5' gutter, 6" curb, SW on east side is 10', in decent condition. On west side, SW is 4-6' wide, varying
    - Back entrance to paramount aluminum co. from Kirkham, driveway to that is cracked up
    - Few trenches along this block that have been patched
    - *Recommendation*
        - *Grind and overlay*
        - *Replace damaged driveways*

<u>Poplar</u>

- Between 16th and 18th street
    - Road is in bad shape
    - Appears to slope towards the center, where the rail tracks are
    - Both sides of street have 6' gutters, 6" curb, 6' SW…might be 4-5' on West side
    - Trees along east side are causing lots of uplift on the sidewalk
    - Eastern half of street sees lots of alligator cracking, few potholes
    - West side looks mostly used for parallel and perp parking

    - Block is very uneven as you drive over it
    - *Recommendation*
        - *Remove existing rails*
        - *Remove and replace AC section*
        - *Grad to drain*
        - *Replace sidewalk on east side and remove existing trees that cause uplift*
        - *Stripe perpendicular or angled parking stalls on western side to match existing use*
- Between 18th Street and 21st
    - East end has lots of cracking where parallel parking occurs
    - 6" curb with metal strips along SW
    - 12" gutter, no sidewalk
    - Rail running through center of street
    - West side has 6" curb, 12" gutter, 15' SW
    - Intersection of Poplar and 21st, Manhole whose lid is about 3" higher that FG of street
    - *Recommendation*
        - *Remove existing rails*
        - *Grind and overlay*
        - *Replace curb and gutter*
        - *Replace sidewalk on western side, grade to ADA requirements*
        - *Install sidewalk along eastern side of Poplar*
        - *Replace existing drop inlets as necessary*
- Between 21st and W Grand
    - 6" curb on both sides, 1.5' gutter, 6' SW
    - Road does not seem graded properly
    - Instances where rail track along center of road is lower than asphalt around it
    - *Recommendation*
        - *Remove existing rails*
        - *Grind and overlay*
        - *Grade to drain*
        - *Remove and replace existing sidewalk along western side*

<u>Union Street</u>

- Between Grand and 19th
    - Pavement is significantly cracked every 10-15'
    - Right next to EBMUD yard
    - Curb and gutter on both sides of street, doesn't look too bad
    - On east side, there are tree wells every 20' for half the street
    - Landscape against the building
    - Other side is all sidewalk at EBMUD yard, appears 2% slope
    - Road crown is a little steep due to overlay
    - Driveways at the end towards 21st street, joint poles on the east side curb return
    - Catch basins at edge of 21st and union
    - "Interesting" curb returns on south side of union at 21st intersection
    - Undersidewalk drains on east side union between 21st and grand
    - Steep driveways on 21st and Union into building which appears to be vacant; doorways with non-compliant landings
    - Other side has two rollup doors

- Railroad tracks halfway down loading docks
- Railroad tracks could probably be removed
- Asphalt between railroad tracks is in terrible condition
- *Recommendation*
  - *Grind and overlay*
  - *Grade to drain*
  - *Remove existing rails that cross in the middle of the block*
    - *Continue sidewalk, curb and gutter, and driveways where tracks are to be removed*

<u>19th Street</u>

- Between Union and Adeline
  - South side has standard 4' gutter pan, 6' SW
  - Pretty flat
  - Lights and joint poles on south side of street
  - Low spot rounding the corner from union to 21st, at Northeast
    - The flowline is significantly cracked, appears rubblized
  - Street trees and some landscaping towards the east as you end 19th
  - Couple rollup doors halfway down
  - Cracking on south side of street, school
  - Separate overlays
  - Halfway down there is lots of grass in the flowline, probably due to ponding water
  - *Recommendation*
    - *Grind and overlay*
    - *Grade to drain*
    - *Replace damaged curb and gutter along northern side of 19th*
    - *Install new curb and gutter along remainder of northern side of 19th*
    - *Install new sidewalk and driveways along eastern half of northern side of 19th*

<u>Adeline Street</u>

- Between 19th and W Grand
  - 6' gutter pan on north side
  - Powerpoles as well
  - EBMUD yard on other side
  - Cross-slope looks good
  - Pavement has little cracking
  - Looks like it drains properly
  - No actual low spots in this block
  - Gutter pan on both sides
  - SW in pretty decent shape, some landscaping on the west side
  - *Recommendation*
    - *Slurry seal*

Mandela Zone Southeast Lighting Notes

<u>14th Street Corridor Lighting Notes</u>

- Union Street
    - Street is generally well lit and conforms to city data of lighting locations
- Poplar Street
    - Building lights on block east of 14th street contribute to street lighting, street is generally well lit.
- Kirkham Street
    - Two lights not operational on west side of 14th Street, one light between Kirkham Street and 14th Street, another at intersection of Kirkham Street and 14th Street.
    - Building lights on the east side of 14th Street contribute to street lighting.

16th Street Corridor Lighting Notes

- Poplar Street
    - Street is generally well lit and conforms to city lighting data.

18th Street Corridor Lighting Notes

- Poplar Street
    - Two lights on northwest corner of Poplar Street and 14th Street are not operational.
    - Half of northwestern block of Poplar Street well lit from building lights.
    - Entire southeast block of Poplar Street poorly lit.
- Kirkham Street
    - Half of northwest city block at Kirkham Street and 16th Street poorly lit.
    - One light located mid-way on western block of Kirkham not operational.
- Mandela Parkway
    - One light located on median of Mandela Parkway not operational.

20th Street Corridor Lighting Notes

- Poplar Street
    - Entire northwest block of Poplar Street and half of 20th Street poorly lit.
    - Building light contributes to half of southwestern block of Poplar Street.
- Mandela Parkway
    - Four lights in the median of Mandela Parkway, east of 20th Street not operational.

21st Street Corridor Lighting Notes

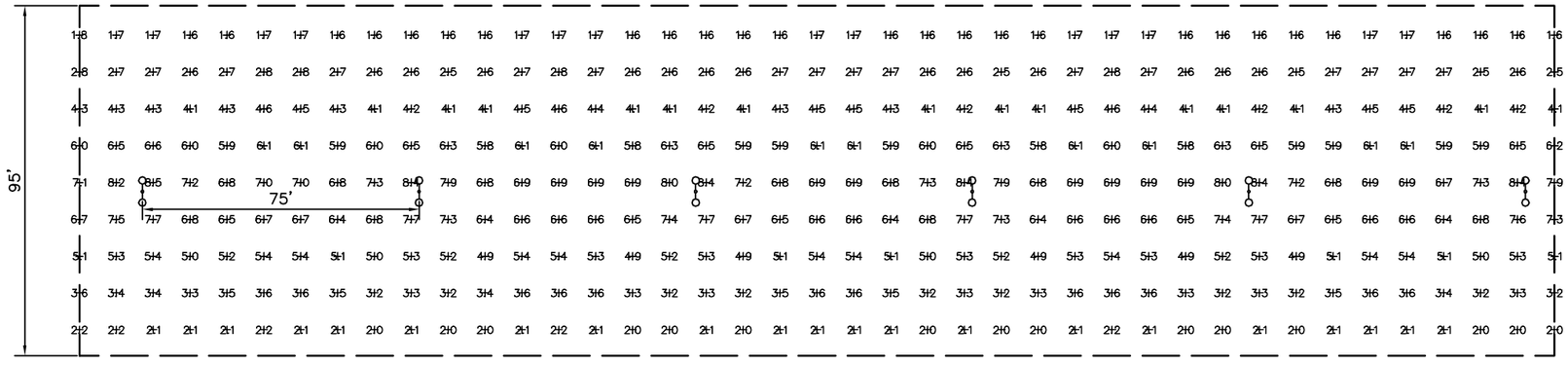
- Adeline Street
    - Street light located on street but not on city maps.
- Union Street
    - Building lights located on southwest corner of Union Street and 21st Street contributes to street lighting.
- Poplar Street
    - North block of Poplar Street poorly lit.
    - One street light east of the Poplar Street and 21st Street intersection not operational.

West Grand Avenue Corridor Lighting Notes

- Adeline Street
    - Two lights located on West Grand Avenue, north of Adeline are not operational.
    - Two lights located on Adeline Street, east of West Grand do not show up on city maps.
- Magnolia Street
    - Street generally well lit and conforms to city light data.
    - One street light on Magnolia east of West Grand shown on city data map at wrong location.
- Union Street
    - Building light from EBMUD located on northwest intersection contributes to street lighting.
    - North side of Union Street east of West Grand Avenue poorly lit.
- Poplar Street
    - Northwestern block of Poplar Street and West Grand Avenue poorly lit.
- Mandela Parkway
    - Two street lights located at the intersection of Mandela Parkway and West Grand Avenue not operational, one at the north corner and one at the East corner.

Appendix C

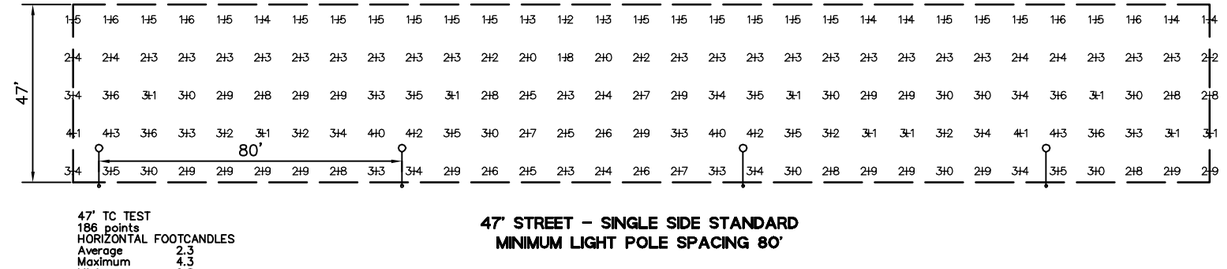
Street Lighting



95' TC TEST
738 points
HORIZONTAL FOOTCANDLES

Average	4.4
Maximum	8.5
Minimum	1.6
Avg: Min	2.74
Max: Min	5.31
Coef Var	0.45

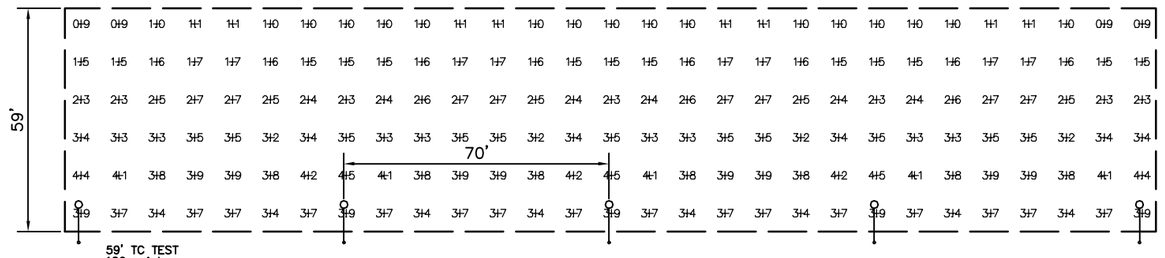
95' STREET – DOUBLE LIGHT TEST
MINIMUM LIGHT POLE SPACING 75'



47' TC TEST
186 points
HORIZONTAL FOOTCANDLES

Average	2.3
Maximum	4.3
Minimum	0.8
Avg: Min	2.93
Max: Min	5.38
Coef Var	0.40

47' STREET – SINGLE SIDE STANDARD
MINIMUM LIGHT POLE SPACING 80'



59' TC TEST
186 points
HORIZONTAL FOOTCANDLES

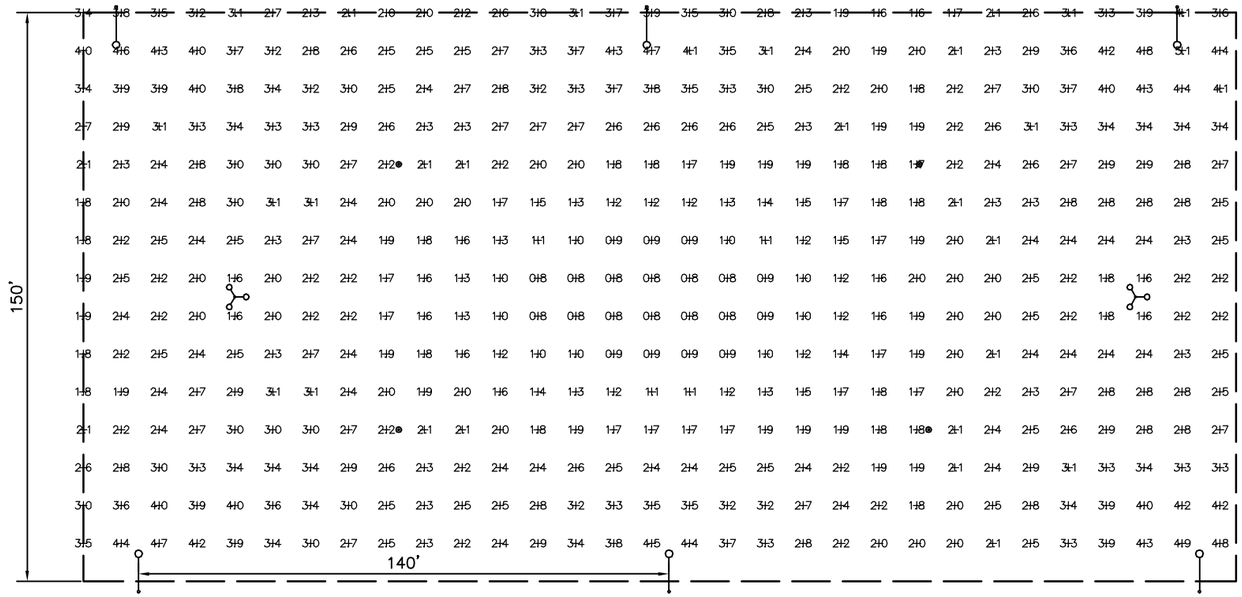
Average	2.7
Maximum	4.5
Minimum	0.9
Avg: Min	2.98
Max: Min	5.00
Coef Var	0.41

59' STREET – SINGLE SIDE STANDARD
MINIMUM LIGHT POLE SPACING 70'

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE C.1
MANDELA PARKWAY ZONE AUTOLUX LIGHTING ANALYSIS

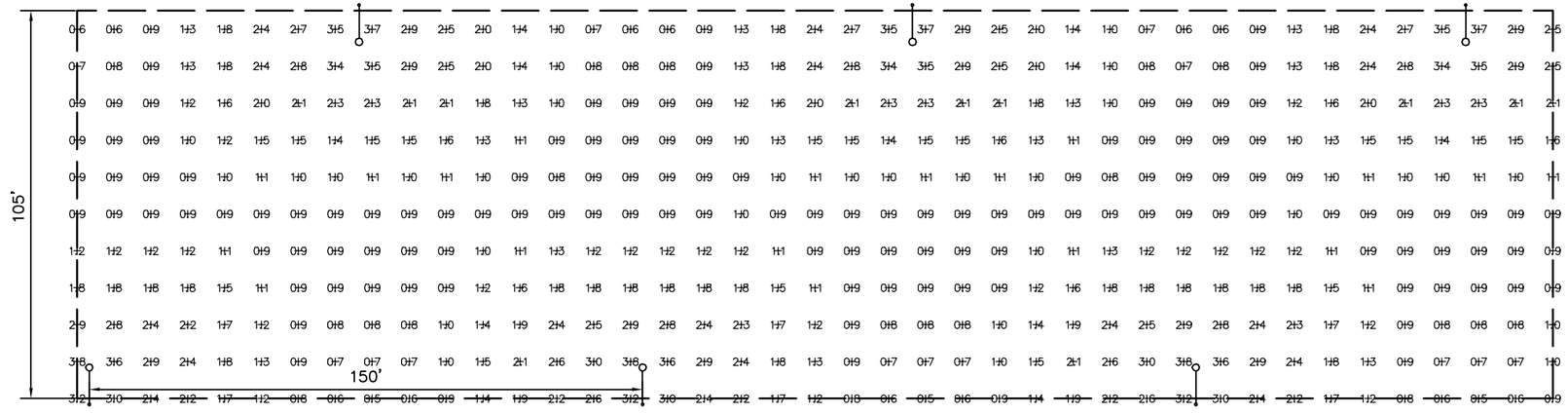
BkF
ENGINEERS / SURVEYORS / PLANNERS
1646 N CALIFORNIA BLVD
SUITE 400
WALNUT CREEK, CA 94596
925-940-2200
925-940-2299 (FAX)



150' TC TEST
465 points
HORIZONTAL FOOTCANDLES

Average	2.5
Maximum	5.1
Minimum	0.8
Avg: Min	3.00
Max: Min	6.38
Coef Var	0.36

150' STREET – DIVIDED BOTH OPPOSITE TEST
MINIMUM LIGHT POLE SPACING 140'



105' TC STAGGERED TEST
418 points
HORIZONTAL FOOTCANDLES

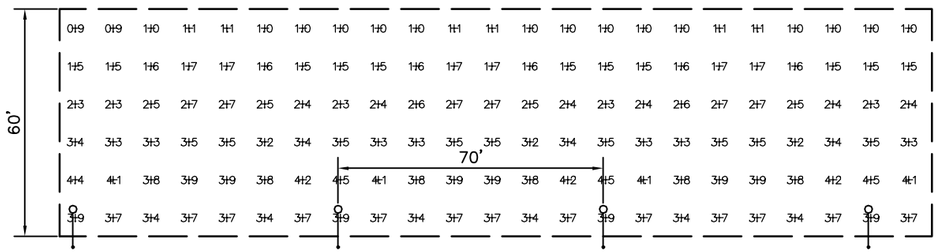
Average	1.5
Maximum	3.8
Minimum	0.5
Avg: Min	2.95
Max: Min	7.60
Coef Var	0.53

105' STREET – STAGGERED TEST
MINIMUM LIGHT POLE SPACING 150'

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE C.2
MANDELA PARKWAY ZONE AUTOLUX LIGHTING ANALYSIS

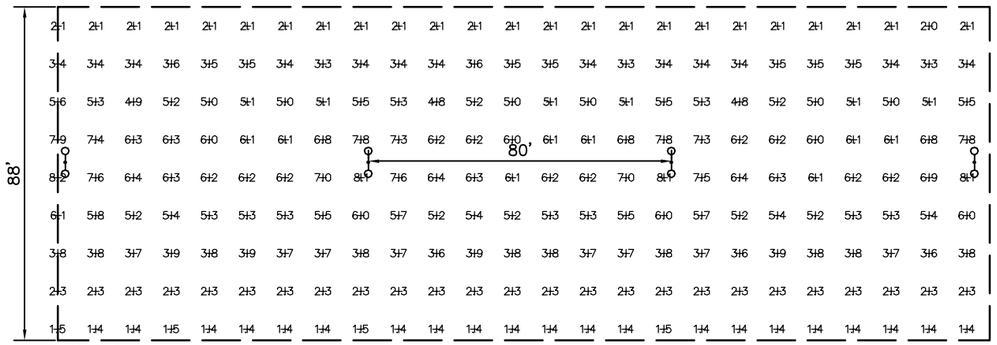
BKF ENGINEERS / SURVEYORS / PLANNERS
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60' TC TEST
186 points
HORIZONTAL FOOTCANDLES

Average	2.7
Maximum	4.5
Minimum	0.9
Avg: Min	2.98
Max: Min	5.00
Coef Var	0.41

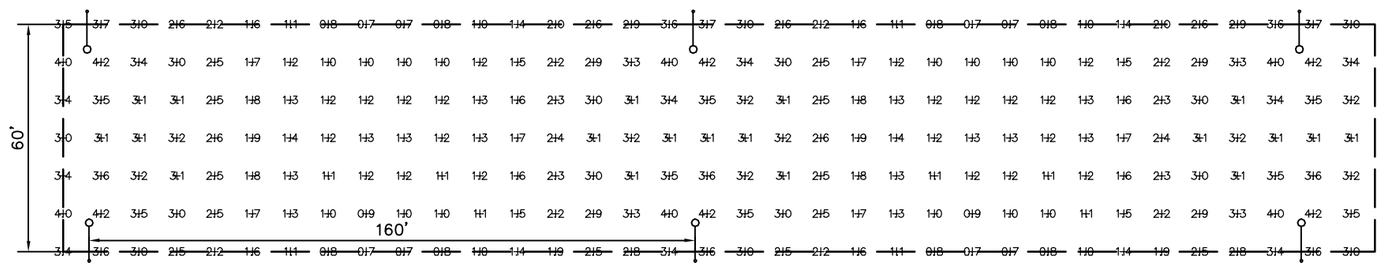
60' STREET – SINGLE SIDE STANDARD
MINIMUM LIGHT POLE SPACING 70'



88' TC TEST
256 points
HORIZONTAL FOOTCANDLES

Average	4.1
Maximum	8.2
Minimum	1.4
Avg: Min	2.94
Max: Min	5.86
Coef Var	0.46
UnifGrad	1.79

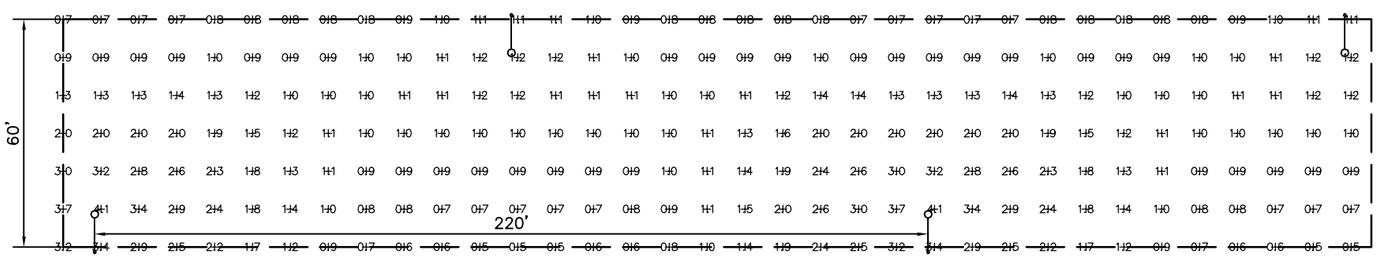
88' STREET – DOUBLE LIGHT TEST
MINIMUM LIGHT POLE SPACING 80'



60' TC TET
301 points
HORIZONTAL FOOTCANDLES

Average	2.1
Maximum	4.2
Minimum	0.7
Avg: Min	2.99
Max: Min	6.00
Coef Var	0.48
UnifGrad	1.47

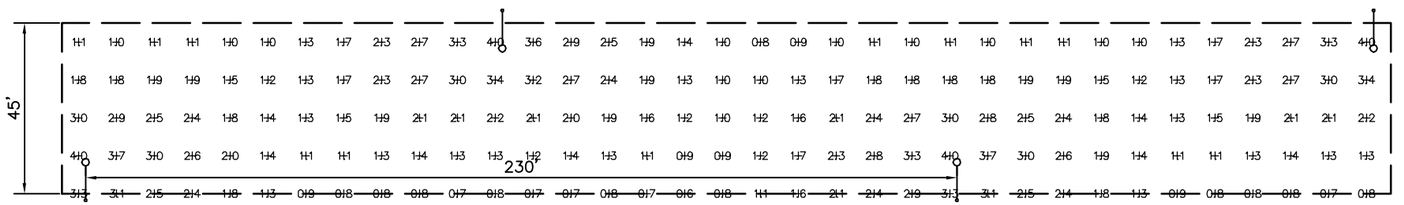
60' STREET – DOUBLE SIDE STANDARD
MINIMUM LIGHT POLE SPACING 160'



60' STAGGERED TEST
738 points
HORIZONTAL FOOTCANDLES

Average	1.4
Maximum	4.1
Minimum	0.5
Avg: Min	2.88
Max: Min	8.20
Coef Var	0.52

60' STREET – STAGGERED TEST
MINIMUM LIGHT POLE SPACING 220'



45' TC TEST
210 points
HORIZONTAL FOOTCANDLES

Average	1.8
Maximum	4.0
Minimum	0.6
Avg: Min	3.00
Max: Min	6.67
Coef Var	0.47
UnifGrad	2.00

45' STREET – STAGGERED TEST
MINIMUM LIGHT POLE SPACING 230'

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE C.3
3RD STREET ZONE AUTOLUX LIGHTING ANALYSIS

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Appendix D

Remedial Pavement Rehabilitation

REHABILITATION RECOMMENDATIONS

1. SLURRY SEAL
2. GRIND AND OVERLAY
3. REMOVE AC AND RECOMPACT BASE
4. FULL SECTION REPLACEMENT

880 580

Legend

211 Parcels

Face of Curb

0 250 500 Feet

N

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE D.1
MANDELA ZONE PAVEMENT REHABILITATION RECOMMENDATIONS

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REHABILITATION RECOMMENDATIONS

1. SLURRY SEAL
2. GRIND AND OVERLAY
3. REMOVE AC AND RECOMPACT BASE
4. FULL SECTION REPLACEMENT

Legend

Parcels
Face of Curb
BART Line
BART Line

0 150 300 Feet

N

CITY OF OAKLAND
ALAMEDA COUNTY

FIGURE D.2
3RD STREET ZONE PAVEMENT REHABILITATION RECOMMENDATIONS

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SUITE 400
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Appendix E

Cost Estimating Tables

Oakland Industrial District

Mandela Parkway Industrial/Commerical Zone

Oakland, CA

PAVEMENT REHABILITATION (5-10 YEAR LIFE EXTENSION)

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

BLOCK NO.	STREET NAME	TIER	QUADRANT	BEGIN STREET	END STREET	LENGTH (FT)	REHAB METHODS*	APPROX. LF COST	PAVEMENT REHAB COST ($)	QUADRANT SW	QUADRANT SE	QUADRANT NW	QUADRANT NE
83	10th	3	SW	Frontage	Pine	540	RR	$ 380	$ 205,000.00	205,000	-	-	-
85	11th	3	SW	-	Pine	290	RR	$ 400	$ 114,840.00	114,840	-	-	-
87	12th	3	SW	Pine	Wood	430	SS	$ 20	$ 9,030.00	9,030	-	-	-
12	14th	3	SE	Mandela	Kirkham	390	O	$ 170	$ 64,350.00	-	64,350	-	-
13	14th	3	SE	Kirkham	Poplar	290	O	$ 170	$ 47,850.00	-	47,850	-	-
14	14th	3	SE	Poplar	Union	290	O	$ 170	$ 47,850.00	-	47,850	-	-
90	14th	3	SW	Frontage	Wood	400	O	$ 170	$ 66,000.00	66,000	-	-	-
92	15th	3	SW	Wood	Willow	430	O	$ 90	$ 36,550.00	36,550	-	-	-
17	16th	3	SE	Mandela	Kirkham	380	O, RR	$ 190	$ 73,644.00	-	73,644	-	-
18	16th	3	SE	Kirkham	Poplar	300	O, RR	$ 190	$ 58,140.00	-	58,140	-	-
19	16th	3	SE	Poplar	Union	290	O, RR	$ 190	$ 56,202.00	-	56,202	-	-
95	16th	3	SW	Wood	Willow	430	O, RR	$ 190	$ 83,334.00	83,334	-	-	-
96	16th	3	SW	Willow	Campbell	430	O, RR	$ 190	$ 83,334.00	83,334	-	-	-
100	17th	3	SW	Wood	Willow	430	O, RR	$ 210	$ 91,482.50	91,483	-	-	-
101	17th	3	SW	Willow	Campbell	430	O, RR	$ 210	$ 91,482.50	91,483	-	-	-
102	17th	3	SW	Campbell	Peralta	430	O, RR	$ 210	$ 91,482.50	91,483	-	-	-
21	18th	3	SE	Mandela	Poplar	665	O, RR	$ 270	$ 176,358.00	-	176,358	-	-
78	18th	3	SW	Peralta	Mandela	420	O, RR	$ 270	$ 111,384.00	111,384	-	-	-
105	18th	3	SW	Wood	Campbell	860	O, RR	$ 270	$ 228,072.00	228,072	-	-	-
106	18th	3	SW	Campbell	Peralta	430	O, RR	$ 270	$ 114,036.00	114,036	-	-	-
23	19th	3	SE	Union	Adeline	650	O	$ 80	$ 48,750.00	-	48,750	-	-
22	20th	3	SE	Mandela	Poplar	660	O, RR	$ 240	$ 156,288.00	-	156,288	-	-
79	20th	3	SW	Peralta	Mandela	235	O, RR	$ 240	$ 55,648.00	55,648	-	-	-
109	20th	3	SW	Wood	Campbell	860	O, RR	$ 240	$ 203,648.00	203,648	-	-	-
110	20th	3	SW	Campbell	Peralta	430	O, RR	$ 240	$ 101,824.00	101,824	-	-	-
24	21st	3	SE	Poplar	Union	290	O	$ 90	$ 26,100.00	-	26,100	-	-
25	21st	3	SE	Union	Adeline	650	O	$ 90	$ 58,500.00	-	58,500	-	-
43	24th	3	NE	Mandela	Peralta	185	O, RR	$ 150	$ 28,120.00			-	28,120
44	24th	3	NE	Peralta	Kirkham	265	O, RR	$ 150	$ 40,280.00	-	-	-	40,280
45	24th	3	NE	Kirkham	Poplar	290	O, RR	$ 150	$ 44,080.00	-	-	-	44,080
46	24th	3	NE	Poplar	Union	290	O, RR	$ 150	$ 44,080.00	-	-	-	44,080
47	24th	3	NE	Union	Magnolia	310	O, RR	$ 150	$ 47,120.00	-	-	-	47,120
48	24th	3	NE	Magnolia	Adeline	335	O, RR	$ 150	$ 50,920.00	-	-	-	50,920
49	24th	3	NE	Adeline	Chestnut	320	O, RR	$ 150	$ 48,640.00	-	-	-	48,640
120	24th	3	NW	Wood	Willow	430	O, RR	$ 150	$ 65,360.00	-	-	65,360	-
121	24th	3	NW	Willow	Campbell	430	O, RR	$ 150	$ 65,360.00	-	-	65,360	-
59	26th	3	NE	Mandela	Peralta	560	O, RR	$ 260	$ 143,360.00	-	-	-	143,360
60	26th	3	NE	Peralta	Poplar	390	O, RR	$ 260	$ 99,840.00	-	-	-	99,840
61	26th	3	NE	Poplar	Union	290	O, RR	$ 260	$ 74,240.00	-	-	-	74,240
62	26th	3	NE	Union	Magnolia	320	O, RR	$ 260	$ 81,920.00	-	-	-	81,920
63	26th	3	NE	Magnolia	Adeline	320	O, RR	$ 260	$ 81,920.00	-	-	-	81,920
64	26th	3	NE	Adeline	Chestnut	320	O, RR	$ 260	$ 81,920.00	-	-	-	81,920
124	26th	3	NW	Wood	Willow	430	O, RR	$ 260	$ 110,080.00	-	-	110,080	-
125	26th	3	NW	Willow	Mandela	180	O, RR	$ 260	$ 46,080.00	-	-	46,080	-
72	28th	3	NE	Mandela	Campbell	345	O, RR	$ 120	$ 40,641.00	-	-	-	40,641
73	28th	3	NE	Campbell	Peralta	450	O, RR	$ 120	$ 53,010.00	-	-	-	53,010
74	28th	3	NE	Peralta	Poplar	215	O, RR	$ 120	$ 25,327.00	-	-	-	25,327
75	28th	3	NE	Poplar	Union	290	O, RR	$ 120	$ 34,162.00	-	-	-	34,162
76	28th	3	NE	Union	Magnolia	320	O, RR	$ 120	$ 37,696.00	-	-	-	37,696
77	28th	3	NE	Magnolia	Adeline	320	O, RR	$ 120	$ 37,696.00	-	-	-	37,696
128	32nd	3	NW	Wood	Mandela	380	O	$ 80	$ 30,400.00	-	-	30,400	-
130	34th	3	NW	Wood	Mandela	375	O	$ 90	$ 31,875.00	-	-	31,875	-
28	Adeline	2	SE	19th	21st	420	O	$ 80	$ 35,078.40	-	35,078	-	-
29	Adeline	2	SE	21st	W Grand	400	O	$ 80	$ 33,408.00	-	33,408	-	-
40	Adeline	2	NE	W Grand	24th	600	O	$ 80	$ 50,112.00	-	-	-	50,112
57	Adeline	2	NE	24th	26th	580	O	$ 80	$ 48,441.60	-	-	-	48,442
69	Adeline	2	NE	26th	28th	580	O	$ 80	$ 48,441.60	-	-	-	48,442
71	Adeline	2	NE	28th	30th	650	O	$ 80	$ 54,288.00	-	-	-	54,288
50	Campbell	3	NE	Mandela	26th	200	O, RR	$ 270	$ 53,760.00	-	-	-	53,760
51	Campbell	3	NE	26th	28th	475	O, RR	$ 270	$ 127,680.00	-	-	-	127,680
99	Campbell	3	SW	16th	17th	280	O, RR	$ 270	$ 75,264.00	75,264	-	-	-
103	Campbell	3	SW	17th	18th	290	O, RR	$ 270	$ 77,952.00	77,952	-	-	-
108	Campbell	3	SW	18th	20th	575	O, RR	$ 270	$ 154,560.00	154,560	-	-	-
113	Campbell	3	SW	20th	W Grand	630	O, RR	$ 270	$ 169,344.00	169,344	-	-	-
119	Campbell	3	NW	W Grand	24th	600	O, RR	$ 270	$ 161,280.00	-	-	161,280	-
41	Chestnut	3	NE	W Grand	24th	600	O	$ 80	$ 48,000.00	-	-	-	48,000
58	Chestnut	3	NE	24th	26th	580	O	$ 80	$ 46,400.00	-	-	-	46,400
20	Kirkham	3	SE	16th	18th	550	O	$ 90	$ 49,500.00	-	49,500	-	-
53	Kirkham	3	NE	24th	26th	580	O	$ 90	$ 52,200.00	-	-	-	52,200
39	Magnolia	3	NE	W Grand	24th	600	O	$ 90	$ 54,240.00	-	-	-	54,240
56	Magnolia	3	NE	24th	26th	580	O	$ 90	$ 52,432.00	-	-	-	52,432
68	Magnolia	3	NE	26th	28th	580	O	$ 90	$ 52,432.00	-	-	-	52,432
70	Magnolia	3	NE	28th	30th	650	O	$ 90	$ 58,760.00	-	-	-	58,760
1	Mandela	1	SW	12th	14th	640	NONE	$ -	$ -	-	-	-	-
2	Mandela	1	SW	14th	16th	550	NONE	$ -	$ -	-	-	-	-
3	Mandela	1	SW	16th	18th	550	NONE	$ -	$ -	-	-	-	-
4	Mandela	1	SW	18th	20th	570	NONE	$ -	$ -	-	-	-	-
5	Mandela	1	SW	20th	W Grand	590	NONE	$ -	$ -	-	-	-	-
6	Mandela	1	NW	W Grand	Peralta	270	NONE	$ -	$ -	-	-	-	-
7	Mandela	1	NW	Peralta	24th	270	NONE	$ -	$ -	-	-	-	-
8	Mandela	1	NW	24th	Campbell	620	NONE	$ -	$ -	-	-	-	-
9	Mandela	1	NW	Campbell	26th	235	NONE	$ -	$ -	-	-	-	-
10	Mandela	1	NW	26th	28th	440	NONE	$ -	$ -	-	-	-	-
11	Mandela	1	NW	28th	32nd	470	NONE	$ -	$ -	-	-	-	-

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Mandela Parkway Industrial/Commerical Zone

Oakland, CA

PAVEMENT REHABILITATION (5-10 YEAR LIFE EXTENSION)

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

BLOCK NO.	STREET NAME	TIER	QUADRANT	BEGIN STREET	END STREET	LENGTH (FT)	REHAB METHODS*	APPROX. LF COST	PAVEMENT REHAB COST ($)	QUADRANT SW	QUADRANT SE	QUADRANT NW	QUADRANT NE
131	Mandela	1	NW	32nd	34th	630	NONE	$ -	$ -	-	-	-	-
42	Peralta	2	NE	Mandela	24th	340	O, RR	$ 140	$ 48,025.00	-	-	-	48,025
52	Peralta	2	NE	24th	26th	615	O, RR	$ 140	$ 86,868.75	-	-	-	86,869
65	Peralta	2	NE	26th	28th	615	O, RR	$ 140	$ 86,868.75	-	-	-	86,869
80	Peralta	3	SW	17th	18th	300	NONE	$ -	$ -	-	-	-	-
81	Peralta	3	SW	18th	20th	580	NONE	$ -	$ -	-	-	-	-
82	Peralta	3	SW	20th	W Grand	580	NONE	$ -	$ -	-	-	-	-
84	Pine	3	SW	10th	11th	330	SS	$ 10	$ 3,868.39	3,868	-	-	-
86	Pine	3	SW	11th	12th	320	SS	$ 10	$ 3,751.16	3,751	-	-	-
15	Poplar	3	SE	14th	16th	575	O, RR	$ 490	$ 283,360.00	-	283,360	-	-
27	Poplar	3	SE	21st	W Grand	425	O, RR	$ 490	$ 209,440.00	-	209,440	-	-
37	Poplar	3	NE	W Grand	24th	600	O, RR	$ 490	$ 295,680.00	-	-	-	295,680
54	Poplar	3	NE	24th	26th	580	O, RR	$ 490	$ 285,824.00	-	-	-	285,824
26	Poplar	3	NE	18th	21st	715	O, RR	$ 490	$ 352,352.00	-	-	-	352,352
66	Poplar	3	NE	26th	28th	580	O, RR	$ 490	$ 285,824.00	-	-	-	285,824
16	Union	3	SE	14th	16th	575	O, RR	$ 110	$ 65,205.00	-	65,205	-	-
30	Union	3	SE	19th	21st	420	O, RR	$ 110	$ 47,628.00	-	47,628	-	-
31	Union	3	SE	21st	W Grand	430	O, RR	$ 110	$ 48,762.00	-	48,762	-	-
38	Union	3	NE	W Grand	24th	600	O, RR	$ 110	$ 68,040.00	-	-	-	68,040
55	Union	3	NE	24th	26th	580	O, RR	$ 110	$ 65,772.00	-	-	-	65,772
67	Union	3	NE	26th	28th	580	O, RR	$ 110	$ 65,772.00	-	-	-	65,772
32	W Grand	1	NE	Mandela	Poplar	690	O, RR	$ 220	$ 150,092.25	-	-	-	150,092
33	W Grand	1	NE	Poplar	Union	290	O, RR	$ 220	$ 63,082.25	-	-	-	63,082
34	W Grand	1	NE	Union	Magnolia	320	O, RR	$ 220	$ 69,608.00	-	-	-	69,608
35	W Grand	1	NE	Magnolia	Adeline	330	O, RR	$ 220	$ 71,783.25	-	-	-	71,783
36	W Grand	1	NE	Adeline	Chestnut	330	O, RR	$ 220	$ 71,783.25	-	-	-	71,783
114	W Grand	1	NW	Wood	Willow	680	SS	$ 70	$ 44,200.00	-	-	44,200	-
115	W Grand	1	NW	Willow	Campbell	440	SS	$ 70	$ 28,600.00	-	-	28,600	-
116	W Grand	1	NW	Campbell	Mandela	415	SS	$ 50	$ 18,924.00	-	-	18,924	-
94	Willow	3	SW	15th	16th	300	O, RR	$ 280	$ 83,160.00	83,160	-	-	-
98	Willow	3	SW	16th	17th	280	O, RR	$ 280	$ 77,616.00	77,616	-	-	-
112	Willow	3	SW	20th	W Grand	600	O, RR	$ 280	$ 166,320.00	166,320	-	-	-
118	Willow	3	NW	W Grand	24th	600	O, RR	$ 280	$ 166,320.00	-	-	166,320	-
123	Willow	3	NW	24th	26th	615	O, RR	$ 280	$ 170,478.00	-	-	170,478	-
127	Willow	3	NW	26th	Mandela	300	O, RR	$ 280	$ 83,160.00	-	-	83,160	-
88	Wood	3	SW	12th	13th	335	SS	$ 20	$ 7,236.00	7,236	-	-	-
89	Wood	3	SW	13th	14th	280	O	$ 70	$ 18,879.84	18,880	-	-	-
91	Wood	3	SW	14th	15th	280	O	$ 70	$ 18,879.84	18,880	-	-	-
93	Wood	3	SW	15th	16th	300	O	$ 70	$ 20,228.40	20,228	-	-	-
97	Wood	3	SW	16th	17th	300	O, RR	$ 100	$ 30,510.00	30,510	-	-	-
104	Wood	3	SW	17th	18th	290	O, RR	$ 100	$ 29,493.00	29,493	-	-	-
107	Wood	3	SW	18th	20th	575	O, RR	$ 100	$ 58,477.50	58,478	-	-	-
111	Wood	3	SW	20th	W Grand	600	O, RR	$ 130	$ 77,520.00	77,520	-	-	-
117	Wood	3	NW	W Grand	24th	600	O, RR	$ 170	$ 100,320.00	-	-	100,320	-
122	Wood	3	NW	24th	26th	615	O, RR	$ 170	$ 102,828.00	-	-	102,828	-
126	Wood	3	NW	26th	32nd	500	O, RR	$ 170	$ 83,600.00	-	-	83,600	-
129	Wood	3	NW	32nd	34th	640	O, RR	$ 170	$ 107,008.00	-	-	107,008	-
								25% Contingency	$ 2,420,000	$ 690,000	$ 400,000	$ 350,000	$ 980,000
								PAVEMENT REHABILITATION (5-10 YEAR LIFE EXTENSION) TOTAL	**$ 12,100,000**	$ 3,500,000	$ 2,000,000	$ 1,800,000	$ 4,900,000

* SS = SLURRY SEAL
O = OVERLAY
RR = REMOVE AND REPLACE SECTION

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Oakland Industrial District

3rd Street Corridor Industrial/Commerical Zone

Oakland, CA

PAVEMENT REHABILITATION (5-10 YEAR LIFE EXTENSION)

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	REHAB METHODS*	APPROX. LF COST	PAVEMENT REHAB COST ($)
1	3rd Street	2	Union	Magnolia	335	O, RR	$160	$ 54,300
2	3rd Street	2	Magnolia	Adeline	315	O, RR	$160	$ 51,000
3	3rd Street	2	Adeline	Chestnut	340	O, RR	$160	$ 55,100
4	3rd Street	2	Chestnut	Linden	315	O, RR	$160	$ 51,000
5	3rd Street	2	Linden	Filbert	310	O, RR	$160	$ 50,200
6	3rd Street	2	Filbert	Myrtle	310	O, RR	$160	$ 50,200
7	3rd Street	2	Myrtle	Market	335	O, RR	$160	$ 54,300
8	3rd Street	2	Market	Brush	275	O, RR	$160	$ 44,600
9	3rd Street	2	Brush	Castro	375	O, RR	$160	$ 60,700
10	3rd Street	2	Castro	MLK Jr.	380	O, RR	$160	$ 61,600
11	Union	3	S of I-880	3rd	300	O	$90	$ 28,000
12	Magnolia	3	S of I-880	3rd	500	O	$100	$ 50,400
13	Magnolia	3	3rd	RR	415	O	$100	$ 41,900
14	Adeline	1	S of I-880	3rd	770	SS	$30	$ 22,700
15	Adeline	1	3rd	RR	415	O, RR	$130	$ 54,000
16	Chestnut	3	5th S of BART	3rd	540	SS	$20	$ 9,100
17	Chestnut	3	3rd	RR	435	SS	$20	$ 7,400
18	Linden	3	3rd	RR	535	O, RR	$210	$ 113,200
19	Filbert	3	5th S of BART	3rd	550	SS, O	$50	$ 25,400
20	Filbert	3	3rd	RR	530	SS, O	$50	$ 24,500
21	Myrtle	3	3rd	RR	530	O	$70	$ 39,200
22	Market	2	5th	3rd	810	O, RR	$270	$ 221,700
23	Market	2	3rd	RR Cross	575	O, RR	$210	$ 118,600
24	Brush	3	4th	3rd	280	O	$100	$ 28,700
25	Brush	3	3rd	RR	520	O	$100	$ 53,300
26	MLK Jr.	3	4th	3rd	270	O, RR	$410	$ 109,400
27	MLK Jr.	3	3rd	2nd	290	O, RR	$410	$ 117,500
28	MLK Jr.	3	2nd	RR Cross	270	O, RR	$410	$ 109,400
29	4th	3	Market	Brush	300	O, RR	$180	$ 54,100
30	4th	3	Brush	Castro	380	O, RR	$180	$ 68,600
31	4th	3	Castro	MLK Jr.	380	O, RR	$180	$ 68,600
32	2nd	3	Brush	MLK Jr.	760	O	$100	$ 77,900
33	5th S of BART	3	Market	Filbert	400	O	$70	$ 27,200
34	5th S of BART	3	Filbert	Chestnut	630	O	$70	$ 42,800
35	5th S of BART	3	Chestnut	Adeline	330	O	$70	$ 22,400

25% Contingency	$	518,000
PAVEMENT REHABILITATION (5-10 YEAR LIFE EXTENSION) TOTAL	**$**	**2,600,000**

* SS = SLURRY SEAL
O = OVERLAY
RR = REMOVE AND REPLACE SECTION

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Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST **SAFETY**

LEVEL	DESCRIPTION	UNIT COST	QUADRANT	QTY.	UNIT	AMOUNT
	MANDELA PARKWAY ZONE					
	JOINT POLE RELOCATION	$ 100,000	NW	1	LS	$ 100,000
	SIGNAGE FOR CAMPBELL STREET	$ 100,000	SW	1	LS	$ 100,000

25% Contingency $ 50,000
SAFETY TOTAL **$ 250,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST **GATEWAY MONUMENTATION**

DESCRIPTION	UNIT COST	QUADRANT	QTY.	UNIT	AMOUNT
MANDELA PARKWAY ZONE GATEWAY MONUMENTATION					
W GRAND AND CAMPBELL	$ 100,000.00	NW	1	EA	$ 100,000
W GRAND AND CHESTNUT	$ 100,000.00	NE	1	EA	$ 100,000
MANDELA AND 32ND	$ 100,000.00	NW	1	EA	$ 100,000
MANDELA AND 14TH	$ 100,000.00	SW	1	EA	$ 100,000
MANDELA PARKWAY ZONE GATEWAY MONUMENTATION SUBTOTAL					**$ 400,000**
3RD STREET ZONE GATEWAY MONUMENTATION					
ADELINE AND 5TH ST	$ 100,000.00		1	EA	$ 100,000
3RD ST AND UNION ST	$ 100,000.00		1	EA	$ 100,000
MARKET ST AND 5TH ST	$ 100,000.00		1	EA	$ 100,000
3RD ST AND MLK JR. WAY	$ 100,000.00		1	EA	$ 100,000
3RD STREET ZONE GATEWAY MONUMENTATION SUBTOTAL					**$ 400,000**

25% Contingency $ 200,000
GATEWAY MONUMENTATION TOTAL **$ 800,000**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

Mandela Parkway Zone

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **STORM DRAIN IMPROVEMENTS**

Upsizing	$	15.00	per inch dia/ft pipe
Upsize applies to		30%	of the system
Rehabilitation	$	7.00	per inch dia/ft pipe
Rehab applies to		30%	of the system
*Assumed "0" Diameter		30	(diameter of pipes with "0" diameter)

PIPE DIAMETER (IN)	TIER 1 LENGTHS (FT)	TIER 2 LENGTHS	TIER 3 LENGTHS (FT)	TOTAL LENGTHS (FT)	TIER 1 (L*D)	TIER 2 (L*D)	TIER 3 (L*D)
0	415	734	872	2020	12440	22006.75752	26162.91024
3	35	0	0	35	105	0	0
4	239	230	0	469	958	919	0
6	0	70	920	990	0	421	5517
8	20	245	0	265	162	1959	0
10	242	431	2451	3124	2420	4305	24512
12	5999	1831	4224	12054	71983	21972	50688
14	59	0	0	59	833	0	0
15	386	427	233	1046	5786	6402	3495
18	1285	148	2421	3854	23125	2666	43573
21	1635	0	1340	2975	34343	0	28139
24	574	0	1626	2199	13769	0	39014
27	398	180	443	1020	10740	4847	11962
30	0	618	309	927	0	18550	9272
33	1204	86	927	2217	39720	2842	30593
36	953	677	1013	2643	34305	24367	36480
48	0	0	389	389	0	0	18688
51	0	55	1078	1134	0	2823	54988
54	0	0	59	59	0	0	3203
57	0	0	382	382	0	0	21747
58	0	1523	0	1523	0	88316	0
60	136	1681	858	2675	8146	100884	51493
63	110	644	0	754	6909	40564	0
66	0	0	314	314	0	0	20695
72	0	0	344	344	0	0	24743
78	1901	59	1780	3740	148265	4591	138843
84	479	0	0	479	40203	0	0
96	570	0	550	1120	54743	0	52824
Total	16638	9638	22533	48809	508953	348436	696631
				Upsizing Cost	$ 2,290,289	$ 1,567,962	$ 3,134,838
				Rehab Cost	$ 1,068,802	$ 731,716	$ 1,462,924
				Total Cost	$ 3,360,000	$ 2,300,000	$ 4,598,000

Notes
1. Pipe sizes and lengths obtained from City of Oakland.
2. Many pipe sizes were unkown according to City data. Pipes denoted with a size "0" diameter were priced according to an assumed diameter of the mean pipe size from known data.

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Oakland Industrial District
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MANDELA PARKWAY
SANITARY SEWER IMPROVEMENTS

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

Upsizing	$	15.00	per inch dia/ft pipe
Upsize applies to		30%	of the system
Rehabilitation	$	7.00	per inch dia/ft pipe
Rehab applies to		30%	of the system
*Assumed "0" Diameter		24	(diameter of pipes with "0" diameter)

PIPE DIAMETER (IN)	TIER 1 LENGTHS (FT)	TIER 2 LENGTHS (FT)	TIER 3 LENGTHS (FT)	TOTAL LENGTHS (FT)	TIER 1 (L*D)	TIER 2 (L*D)	TIER 3 (L*D)
0	323	98	2030	2451	7752	2352	48731
6	0	0	283	283	0	0	1695
8	2000	1398	10580	13977	15996	11181	84639
10	0	1357	4749	6106	0	13572	47485
12	2205	1512	9242	12959	26458	18147	110903
14	0	1223	0	1223	0	17120	0
15	0	489	34	523	0	7338	503
18	0	3001	881	3882	0	54016	15858
21	0	1206	0	1206	0	25326	0
24	0	1224	2129	3353	0	29387	51095
36	26	0	641	666	931	0	23060
48	323	0	0	323	15518	0	0
60	1283	0	0	1283	76972	0	0
73	721	0	0	721	52665	0	0
74	635	0	327	962	46968	0	24205
99	0	5887	0	5887	0	582794	0
Total	7515	17395	30895	55805	243260	761232	408175
				Upsizing Cost	$ 1,094,670	$ 3,425,545	$ 1,836,787
				Rehab Cost	$ 510,846	$ 1,598,588	$ 857,167
				Total Cost	$ 1,700,000	$ 5,100,000	$ 2,700,000

Notes
1. Pipe sizes and lengths obtained from City of Oakland.
2. Many pipe sizes were unkown according to City data. Pipes denoted with a size "0" diameter were priced according to an assumed diameter of the mean pipe size from known data.

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Oakland Industrial District
3rd Street Corridor Industrial/Commerical Zone
Oakland, CA

3RD STREET

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **STORM DRAIN IMPROVEMENTS**

Upsizing	$	15.00	per inch dia/ft pipe
Upsize applies to		30%	of the system
Rehabilitation	$	7.00	per inch dia/ft pipe
Rehab applies to		30%	of the system
Assumed "0" Diameter		24	(diameter of pipes with "0" diameter)

PIPE DIAMETER (IN)	TIER 1 LENGTHS	TIER 2 LENGTHS	TIER 3 LENGTHS	TOTAL LENGTHS (FT)	TIER 1 (L*D)	TIER 2 (L*D)	TIER 3 (L*D)
0	17	224	287	528	420	5384	6877
6	0	0	173	173	0	0	1039
8	0	307	733	1041	0	2457	5868
10	286	350	1136	1772	2863	3496	11358
12	993	444	3038	4475	11915	5328	36452
15	0	0	663	663	0	0	9940
18	0	52	155	207	0	942	2781
21	0	504	414	919	0	10592	8701
24	0	566	1979	2544	0	13576	47489
30	0	329	952	1281	0	9865	28558
31	0	0	713	713	0	0	22094
33	0	0	311	311	0	0	10252
36	0	1938	1977	3916	0	69780	71181
54	0	0	1583	1583	0	0	85467
63	0	281	0	281	0	17731	0
72	0	68.351674	572.753043	641	0	4921	41238
Total	1297	5064	14685	21046	15198	144072	389296
				Upsizing Cost	$ 68,392	$ 648,326	$ 1,751,831
				Rehab Cost	$ 31,916	$ 302,552	$ 817,521
				Total Cost	$ 101,000.00	$ 951,000.00	$ 2,570,000.00

Notes
1. Pipe sizes and lengths obtained from City of Oakland.
2. Many pipe sizes were unkown according to City data. Pipes denoted with a size "0" diameter were priced according to an assumed diameter of the mean pipe size from known data.

3rd Street Total Length	15005	ft
	2.84	miles
Total Cost Per Length	$ 242.00	/ft

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Oakland Industrial District
3rd Street Corridor Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

3RD STREET
SANITARY SEWER IMPROVEMENTS
WATER IMPROVEMENTS

Upsizing	$	15.00	per inch dia/ft pipe
Upsize applies to		30%	of the system
Rehabilitation	$	7.00	per inch dia/ft pipe
Rehab applies to		30%	of the system
*Assumed "0" Diameter		12	(diameter of pipes with "0" diameter)

PIPE DIAMETER (IN)	TIER 1 LENGTHS (FT)	TIER 2 LENGTHS (FT)	TIER 3 LENGTHS (FT)	TOTAL LENGTHS (FT)	TIER 1 (L*D)	TIER 2 (L*D)	TIER 3 (L*D)	Total Water Length	Water Unit Cost	Total Water Cost
0	120	3634	6466	10220	1436	43612	77587			
8	563	1660	4829	7052	4505	13283	38630			
10	0	0	1704	1704	0	0	17036			
12	0	888	1592	2480	0	10654	19103			
14	0	0	50	50	0	0	696			
15	256	0	33	288	3836	0	489			
18	369	15	331	715	6642	261	5964			
21	464	0	0	464	9749	0	0			
Total	1772	6197	15003	22972	26169	67811	159504	21201	100	$ 2,120,000
				Upsizing Cost	$ 117,760	$ 305,147	$ 717,769			
				Rehab Cost	$ 54,955	$ 142,402	$ 334,959			
				Total Cost	$ 173,000	$ 448,000	$ 1,053,000			

Notes
1. Pipe sizes and lengths obtained from City of Oakland.
2. Many pipe sizes were unkown according to City data. Pipes denoted with a size "0" diameter were priced according to an assumed diameter of the mean pipe size from known data.

3RD SS	$	1,700,000.00
3RD SD	$	3,700,000.00
	$	5,400,000.00

3rd Street Total Length		15005	ft
		2.84	ft
Total Cost Per Length	$	112.00	/ft

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

CONCEPTUAL ROUNDABOUT

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **MANDELA AND W GRAND AVE**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 150,000.00	1	LS	$ 150,000
102	TRAFFIC CONTROL	$ 200,000.00	1	LS	$ 200,000
103	CONTRACTOR FEE	$ 30,000.00	1	LS	$ 30,000
104	BONDING	$ 50,000.00	1	LS	$ 50,000
105	CONSTRUCTION STAKING	$ 20,000.00	1	LS	$ 20,000
106	EROSION CONTROL	$ 25,000.00	1	LS	$ 25,000
107	SOFT COSTS	$ 200,000.00	1	LS	$ 200,000
			MISCELLANEOUS SUBTOTAL		**$ 675,000**
200	***DEMOLITION***				
201	SAWCUT EXISTING ASPHALT	$ 1.75	100	LF	$ 1,000
202	REMOVE AND SALVAGE TRAFFIC SIGNAL ASSEMBLY	$ 2,000.00	4	EA	$ 8,000
203	REMOVE FOUNDATION & SALVAGE STREET LIGHT	$ 500.00	24	EA	$ 12,000
204	REMOVE TREE	$ 350.00	84	EA	$ 29,400
205	REMOVE ASPHALT CONCRETE	$ 1.25	177000	SF	$ 222,000
206	CLEAR AND GRUB	$ 0.20	36000	SF	$ 7,200
207	REMOVE TURF	$ 0.20	13300	SF	$ 2,700
208	REMOVE MISC SIGNS	$ 100.00	11	EA	$ 1,100
209	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	65000	SF	$ 130,000
210	REMOVE CURB AND GUTTER	$ 5.00	8500	LF	$ 43,000
			DEMOLITION SUBTOTAL		**$ 457,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 15.00	11,000	CY	$ 165,000
302	ASPHALT CONCRETE	$ 81.00	6,200	TON	$ 503,000
303	AGGREGATE BASE	$ 25.00	14,800	TON	$ 370,000
304	CONCRETE SIDEWALK	$ 5.00	65000	SF	$ 325,000
305	CURB AND GUTTER	$ 20.00	9200	LF	$ 184,000
306	CURB RAMP	$ 2,000.00	30	EA	$ 60,000
307	STREET LIGHT	$ 3,000.00	24	EA	$ 72,000
308	SIGNAGE	$ 50,000.00	1	LS	$ 50,000
309	STRIPING	$ 30,000.00	1	LS	$ 30,000
310	STREET TREES	$ 400.00	100	EA	$ 40,000
311	LANDSCAPING AREA	$ 10.00	70000	SF	$ 700,000
312	ADJUST FIRE HYDRANT	$ 1,200.00	2	EA	$ 3,000
313	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	2	EA	$ 600
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 2,503,000**
400	***STORM DRAIN IMPROVEMENTS***				
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	3	EA	$ 4,500
402	CONNECT SD LINE TO MAIN	$ 2,500.00	9	EA	$ 22,500
403	INSTALL SD CURB INLET	$ 2,500.00	6	EA	$ 15,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	200	LF	$ 12,000
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 54,000**
			25% Contingency		$ 923,000
			CONCEPTUAL ROUNDABOUT TOTAL		**$ 4,700,000**

Oakland Industrial Districts
Oakland, CA

Unit Costs

Demolition	Unit Cost	Unit
Remove Rail and Ties	$ 15.75	CY
Remove Ballast	$ 5.85	CY

Rail Installation	Unit Cost	Unit
Install Rail Sidetrack, (Includes ballast, timber ties, tie plates, track rail, spikes, splice bars, and crew)	$ 31.50	LF
Aggregate Base	$ 25.00	TON
8" Asphalt Concrete	$ 81.00	TON
Traffic Signal System - Intersection		EA

Subdrain System	Unit Cost	Unit
6" Perforated Pipe	$ 25.00	LF
Aggregate Base	$ 81.00	TON

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Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

RAIL REPLACEMENT
WITH CONCRETE PANELS

Based on 2900' Wood St Spur

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 25,000.00	1	LS	$ 25,000.00
102	TRAFFIC CONTROL	$ 25,000.00	1	LS	$ 25,000.00
103	CONTRACTOR FEE	$ 10,000.00	1	LS	$ 10,000.00
104	BONDING	$ 15,000.00	1	LS	$ 15,000.00
105	CONSTRUCTION STAKING	$ 5,000.00	1	LS	$ 5,000.00
106	EROSION CONTROL	$ 10,000.00	1	LS	$ 10,000.00
107	SOFT COSTS	$ 50,000.00	1	LS	$ 50,000.00
				MISCELLANEOUS SUBTOTAL	**$ 140,000**
200	***DEMOLITION***				
201	REMOVE ASPHALT CONCRETE	$ 1.25	43500	SF	$ 54,375.00
202	REMOVE RAIL AND TIES	$ 20.00	2900	LF	$ 58,000.00
203	REMOVE BALLAST	$ 10.00	2900	LF	$ 29,000.00
				DEMOLITION SUBTOTAL	**$ 87,000**
300	***RAIL INSTALLATION***				
301	INSTALL RAIL SIDETRACK (wood ties)	$ 180.00	2,900	LF	$ 522,000.00
302	INSTALL CONCRETE CROSSING PANELS	$ 250.00	2900	LF	$ 725,000.00
303	EXCAVATION AND EXPORT	$ 45.00	4840	CY	$ 217,800.00
304	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	43500	SF	$ 15,225.00
305	PAVEMENT TEXTURING	$ 2.50	43500	SF	$ 108,750.00
306	CONFORM GRINDING	$ 2.00	43500	SF	$ 87,000.00
307	AGGREGATE BASE	$ 25.00	1,650	TON	$ 41,250.00
308	8" ASPHALT CONCRETE	$ 81.00	720	TON	$ 58,320.00
				RAIL INSTALLATION SUBTOTAL	**$ 1,776,000**
400	***SUBDRAIN SYSTEM***				
401	6" PERFORATED PIPE	$ 25.00	5800	LF	$ 145,000.00
402	3/4" CRUSHED STONE DRAINAGE ROCK	$ 27.00	840	TON	$ 22,680.00
				SUBDRAIN SYSTEM SUBTOTAL	**$ 168,000**
				25% Contingency	$ 542,750
				RAIL REPLACEMENT TOTAL	**$ 2,725,000**
				Cost per LF	**$ 940**

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COMPLETE STREETSCAPE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

REPLACE EXISTING RAIL

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
1	Mandela Pkwy	1	12th	14th	640	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
2	Mandela Pkwy	1	14th	16th	550	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
3	Mandela Pkwy	1	16th	18th	550	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
4	Mandela Pkwy	1	18th	20th	570	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
5	Mandela Pkwy	1	20th	W Grand	590	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
6	Mandela Pkwy	1	W Grand	Peralta	270	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
7	Mandela Pkwy	1	Peralta	24th	270	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
8	Mandela Pkwy	1	24th	Campbell	620	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
9	Mandela Pkwy	1	Campbell	26th	235	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
10	Mandela Pkwy	1	26th	28th	440	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
11	Mandela Pkwy	1	28th	32nd	470	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
12	14th	3	Mandela	Kirkham	390	SE	Typical 80' R/W	$ 1,800.00	$ 702,000.00	-	702,000	-	-
13	14th	3	Kirkham	Poplar	290	SE	No Improvement Recommended	$ -	$ -	-	-	-	-
14	14th	3	Poplar	Union	290	SE	No Improvement Recommended	$ -	$ -	-	-	-	-
15	Poplar	3	14th	16th	575	SE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,523,750.00	-	1,523,750	-	-
16	Union	3	14th	16th	575	SE	Typical 60' R/W	$ 1,460.00	$ 839,500.00	-	839,500	-	-
17	16th	3	Mandela	Kirkham	380	SE	Typical 80' R/W	$ 1,800.00	$ 684,000.00	-	684,000	-	-
18	16th	3	Kirkham	Poplar	300	SE	Typical 80' R/W	$ 1,800.00	$ 540,000.00	-	540,000	-	-
19	16th	3	Poplar	Union	290	SE	Typical 80' R/W	$ 1,800.00	$ 522,000.00	-	522,000	-	-
20	Kirkham	3	16th	18th	550	SE	Typical 60' R/W	$ 1,460.00	$ 803,000.00	-	803,000	-	-
21	18th	3	Mandela	Poplar	665	SE	Typical 80' R/W & Replace Rail Siding	$ 2,980.00	$ 1,981,700.00	-	1,981,700	-	-
22	20th	3	Mandela	Poplar	660	SE	Typical 60' R/W, Perp Park, Replace Rail	$ 2,330.00	$ 1,537,800.00	-	1,537,800	-	-
23	19th	3	Union	Adeline	650	SE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	949,000	-	-
24	21st	3	Poplar	Union	290	SE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	423,400	-	-
25	21st	3	Union	Adeline	650	SE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	949,000	-	-
26	Poplar	3	18th	21st	715	SE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,894,750.00	-	1,894,750	-	-
27	Poplar	3	21st	W Grand	425	SE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,126,250.00	-	1,126,250	-	-
28	Adeline	2	19th	21st	420	SE	Typical 80' R/W	$ 1,800.00	$ 756,000.00	-	756,000	-	-
29	Adeline	2	21st	W Grand	400	SE	Typical 80' R/W	$ 1,800.00	$ 720,000.00	-	720,000	-	-
30	Union	3	19th	21st	420	SE	Typical 60' R/W	$ 1,460.00	$ 613,200.00	-	613,200	-	-
31	Union	3	21st	W Grand	430	SE	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	627,800	-	-
32	W Grand	1	Mandela	Poplar	690	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
33	W Grand	1	Poplar	Union	290	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
34	W Grand	1	Union	Magnolia	320	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
35	W Grand	1	Magnolia	Adeline	330	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
36	W Grand	1	Adeline	Chestnut	330	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
37	Poplar	3	W Grand	24th	600	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,590,000.00	-	-	-	1,590,000
38	Union	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
39	Magnolia	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
40	Adeline	2	W Grand	24th	600	NE	Typical 80' R/W	$ 1,800.00	$ 1,080,000.00	-	-	-	1,080,000
41	Chestnut	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
42	Peralta	2	Mandela	24th	340	NE	Typical 80' R/W	$ 1,800.00	$ 612,000.00	-	-	-	612,000
43	24th	3	Mandela	Peralta	185	NE	Typical 60' R/W	$ 1,460.00	$ 270,100.00	-	-	-	270,100
44	24th	3	Peralta	Kirkham	265	NE	Typical 60' R/W	$ 1,460.00	$ 386,900.00	-	-	-	386,900
45	24th	3	Kirkham	Poplar	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
46	24th	3	Poplar	Union	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
47	24th	3	Union	Magnolia	310	NE	Typical 60' R/W	$ 1,460.00	$ 452,600.00	-	-	-	452,600
48	24th	3	Magnolia	Adeline	335	NE	Typical 60' R/W	$ 1,460.00	$ 489,100.00	-	-	-	489,100
49	24th	3	Adeline	Chestnut	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
50	Campbell	3	Mandela	26th	200	NE	Typical 60' R/W	$ 1,460.00	$ 292,000.00	-	-	-	292,000

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COMPLETE STREETSCAPE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

REPLACE EXISTING RAIL

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
51	Campbell	3	26th	28th	475	NE	Typical 60' R/W	$ 1,460.00	$ 693,500.00	-	-	-	693,500
52	Peralta	2	24th	26th	615	NE	Typical 80' R/W	$ 1,800.00	$ 1,107,000.00	-	-	-	1,107,000
53	Kirkham	3	24th	26th	580	NE	To Be Vacated	$ -	$ -	-	-	-	-
54	Poplar	3	24th	26th	580	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,537,000.00	-	-	-	1,537,000
55	Union	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
56	Magnolia	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
57	Adeline	2	24th	26th	580	NE	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	-	-	-	1,044,000
58	Chestnut	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
59	26th	3	Mandela	Peralta	560	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,484,000.00	-	-	-	1,484,000
60	26th	3	Peralta	Poplar	390	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,033,500.00	-	-	-	1,033,500
61	26th	3	Poplar	Union	290	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 768,500.00	-	-	-	768,500
62	26th	3	Union	Magnolia	320	NE	Typical 60' R/W, Perp Park, Replace Rail	$ 2,330.00	$ 745,600.00	-	-	-	745,600
63	26th	3	Magnolia	Adeline	320	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 848,000.00	-	-	-	848,000
64	26th	3	Adeline	Chestnut	320	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 848,000.00	-	-	-	848,000
65	Peralta	2	26th	28th	615	NE	Typical 80' R/W	$ 1,800.00	$ 1,107,000.00	-	-	-	1,107,000
66	Poplar	3	26th	28th	580	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,537,000.00	-	-	-	1,537,000
67	Union	3	26th	28th	580	NE	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 754,000.00	-	-	-	754,000
68	Magnolia	3	26th	28th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
69	Adeline	2	26th	28th	580	NE	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	-	-	-	1,044,000
70	Magnolia	3	28th	30th	650	NE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	-	-	949,000
71	Adeline	2	28th	30th	650	NE	Typical 80' R/W	$ 1,800.00	$ 1,170,000.00	-	-	-	1,170,000
72	28th	3	Mandela	Campbell	345	NE	Typical 60' R/W	$ 1,460.00	$ 503,700.00	-	-	-	503,700
73	28th	3	Campbell	Peralta	450	NE	Typical 60' R/W	$ 1,460.00	$ 657,000.00	-	-	-	657,000
74	28th	3	Peralta	Poplar	215	NE	Typical 60' R/W	$ 1,460.00	$ 313,900.00	-	-	-	313,900
75	28th	3	Poplar	Union	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
76	28th	3	Union	Magnolia	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
77	28th	3	Magnolia	Adeline	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
78	18th	3	Peralta	Mandela	420	SW	Typical 80' R/W & Replace Rail Siding	$ 2,980.00	$ 1,251,600.00	1,251,600	-	-	-
79	20th	3	Peralta	Mandela	235	SW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 622,750.00	622,750	-	-	-
80	Peralta	3	17th	18th	300	SW	Typical 80' R/W	$ 1,800.00	$ 540,000.00	540,000	-	-	-
81	Peralta	3	18th	20th	580	SW	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	1,044,000	-	-	-
82	Peralta	3	20th	W Grand	580	SW	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	1,044,000	-	-	-
83	10th	3	Frontage	Pine	540	SW	10th Street 60' R/W	$ 1,380.00	$ 745,200.00	745,200	-	-	-
84	Pine	3	10th	11th	330	SW	Typical 60' R/W	$ 1,460.00	$ 481,800.00	481,800	-	-	-
85	11th	3	-	Pine	290	SW	11th Street 59' R/W	$ 1,340.00	$ 388,600.00	388,600	-	-	-
86	Pine	3	11th	12th	320	SW	Typical 60' R/W	$ 1,460.00	$ 467,200.00	467,200	-	-	-
87	12th	3	Pine	Wood	430	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
88	Wood	3	12th	13th	335	SW	Typical 60' R/W	$ 1,460.00	$ 489,100.00	489,100	-	-	-
89	Wood	3	13th	14th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
90	14th	3	Frontage	Wood	400	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
91	Wood	3	14th	15th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
92	15th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
93	Wood	3	15th	16th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
94	Willow	3	15th	16th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
95	16th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
96	16th	3	Willow	Campbell	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
97	Wood	3	16th	17th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
98	Willow	3	16th	17th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
99	Campbell	3	16th	17th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
100	17th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-

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COMPLETE STREETSCAPE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

REPLACE EXISTING RAIL

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
101	17th	3	Willow	Campbell	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
102	17th	3	Campbell	Peralta	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
103	Campbell	3	17th	18th	290	SW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 377,000.00	377,000	-	-	-
104	Wood	3	17th	18th	290	SW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 377,000.00	377,000	-	-	-
105	18th	3	Wood	Campbell	860	SW	18th Street 70' R/W	$ 1,460.00	$ 1,255,600.00	1,255,600	-	-	-
106	18th	3	Campbell	Peralta	430	SW	18th Street 70' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
107	Wood	3	18th	20th	575	SW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,523,750.00	1,523,750	-	-	-
108	Campbell	3	18th	20th	575	SW	Typical 60' R/W	$ 1,460.00	$ 839,500.00	839,500	-	-	-
109	20th	3	Wood	Campbell	860	SW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 2,279,000.00	2,279,000	-	-	-
110	20th	3	Campbell	Peralta	430	SW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,139,500.00	1,139,500	-	-	-
111	Wood	3	20th	W Grand	600	SW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,590,000.00	1,590,000	-	-	-
112	Willow	3	20th	W Grand	600	SW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	876,000	-	-	-
113	Campbell	3	20th	W Grand	630	SW	Typical 60' R/W	$ 1,460.00	$ 919,800.00	919,800	-	-	-
114	W Grand	3	Frontage	Willow	680	NW	Mandela Parkway Sidestreet	$ 1,170.00	$ 795,600.00	-	-	795,600	-
115	W Grand	3	Willow	Campbell	440	NW	Mandela Parkway Sidestreet	$ 1,170.00	$ 514,800.00	-	-	514,800	-
116	W Grand	3	Campbell	Mandela	415	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
117	Wood	3	W Grand	24th	600	NW	Typical 60' R/W, Perp Park, Replace Rail	$ 2,330.00	$ 1,398,000.00	-	-	1,398,000	-
118	Willow	3	W Grand	24th	600	NW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	876,000	-
119	Campbell	3	W Grand	24th	600	NW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	876,000	-
120	24th	3	Wood	Willow	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
121	24th	3	Willow	Campbell	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
122	Wood	3	24th	26th	615	NW	Typical 60' R/W, Perp Park, Replace Rail	$ 2,330.00	$ 1,432,950.00	-	-	1,432,950	-
123	Willow	3	24th	26th	615	NW	Typical 60' R/W	$ 1,460.00	$ 897,900.00	-	-	897,900	-
124	26th	3	Wood	Willow	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
125	26th	3	Willow	Mandela	180	NW	Typical 60' R/W	$ 1,460.00	$ 262,800.00	-	-	262,800	-
126	Wood	3	26th	32nd	500	NW	Typical 60' R/W, Perp Park, Replace Rail	$ 2,330.00	$ 1,165,000.00	-	-	1,165,000	-
127	Willow	3	26th	Mandela	300	NW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	-	-	438,000	-
128	32nd	3	Wood	Mandela	380	NW	Typical 60' R/W	$ 1,460.00	$ 554,800.00	-	-	554,800	-
129	Wood	3	32nd	34th	640	NW	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,696,000.00	-	-	1,696,000	-
130	34th	3	Wood	Mandela	375	NW	Typical 60' R/W	$ 1,460.00	$ 547,500.00	-	-	547,500	-
131	Mandela Pkwy	1	32nd	34th	630	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
							COMPLETE STREETSCAPE TOTAL		**$ 89,000,000**	**$ 26,000,000**	**$ 18,000,000**	**$14,000,000**	**$33,000,000**

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Oakland, CA

COMPLETE STREETSCAPE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

REPLACE RAIL WITH ASPHALT

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
1	Mandela Pkwy	1	12th	14th	640	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
2	Mandela Pkwy	1	14th	16th	550	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
3	Mandela Pkwy	1	16th	18th	550	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
4	Mandela Pkwy	1	18th	20th	570	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
5	Mandela Pkwy	1	20th	W Grand	590	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
6	Mandela Pkwy	1	W Grand	Peralta	270	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
7	Mandela Pkwy	1	Peralta	24th	270	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
8	Mandela Pkwy	1	24th	Campbell	620	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
9	Mandela Pkwy	1	Campbell	26th	235	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
10	Mandela Pkwy	1	26th	28th	440	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
11	Mandela Pkwy	1	28th	32nd	470	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
12	14th	3	Mandela	Kirkham	390	SE	Typical 80' R/W	$ 1,800.00	$ 702,000.00	-	702,000	-	-
13	14th	3	Kirkham	Poplar	290	SE	No Improvement Recommended	$ -	$ -	-	-	-	-
14	14th	3	Poplar	Union	290	SE	No Improvement Recommended	$ -	$ -	-	-	-	-
15	Poplar	3	14th	16th	575	SE	Typical 60' R/W	$ 1,460.00	$ 839,500.00	-	839,500	-	-
16	Union	3	14th	16th	575	SE	Typical 60' R/W	$ 1,460.00	$ 839,500.00	-	839,500	-	-
17	16th	3	Mandela	Kirkham	380	SE	Typical 80' R/W	$ 1,800.00	$ 684,000.00	-	684,000	-	-
18	16th	3	Kirkham	Poplar	300	SE	Typical 80' R/W	$ 1,800.00	$ 540,000.00	-	540,000	-	-
19	16th	3	Poplar	Union	290	SE	Typical 80' R/W	$ 1,800.00	$ 522,000.00	-	522,000	-	-
20	Kirkham	3	16th	18th	550	SE	Typical 60' R/W	$ 1,460.00	$ 803,000.00	-	803,000	-	-
21	18th	3	Mandela	Poplar	665	SE	Typical 80' R/W	$ 1,800.00	$ 1,197,000.00	-	1,197,000	-	-
22	20th	3	Mandela	Poplar	660	SE	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 858,000.00	-	858,000	-	-
23	19th	3	Union	Adeline	650	SE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	949,000	-	-
24	21st	3	Poplar	Union	290	SE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	423,400	-	-
25	21st	3	Union	Adeline	650	SE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	949,000	-	-
26	Poplar	3	18th	21st	715	SE	Typical 60' R/W	$ 1,460.00	$ 1,043,900.00	-	1,043,900	-	-
27	Poplar	3	21st	W Grand	425	SE	Typical 60' R/W	$ 1,460.00	$ 620,500.00	-	620,500	-	-
28	Adeline	2	19th	21st	420	SE	Typical 80' R/W	$ 1,800.00	$ 756,000.00	-	756,000	-	-
29	Adeline	2	21st	W Grand	400	SE	Typical 80' R/W	$ 1,800.00	$ 720,000.00	-	720,000	-	-
30	Union	3	19th	21st	420	SE	Typical 60' R/W	$ 1,460.00	$ 613,200.00	-	613,200	-	-
31	Union	3	21st	W Grand	430	SE	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	627,800	-	-
32	W Grand	1	Mandela	Poplar	690	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
33	W Grand	1	Poplar	Union	290	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
34	W Grand	1	Union	Magnolia	320	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
35	W Grand	1	Magnolia	Adeline	330	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
36	W Grand	1	Adeline	Chestnut	330	NE	No Improvement Recommended	$ -	$ -	-	-	-	-
37	Poplar	3	W Grand	24th	600	NE	Typical 60' R/W & Replace Rail Siding	$ 2,650.00	$ 1,590,000.00	-	-	-	1,590,000
38	Union	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
39	Magnolia	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
40	Adeline	2	W Grand	24th	600	NE	Typical 80' R/W	$ 1,800.00	$ 1,080,000.00	-	-	-	1,080,000
41	Chestnut	3	W Grand	24th	600	NE	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	-	876,000
42	Peralta	2	Mandela	24th	340	NE	Typical 80' R/W	$ 1,800.00	$ 612,000.00	-	-	-	612,000
43	24th	3	Mandela	Peralta	185	NE	Typical 60' R/W	$ 1,460.00	$ 270,100.00	-	-	-	270,100
44	24th	3	Peralta	Kirkham	265	NE	Typical 60' R/W	$ 1,460.00	$ 386,900.00	-	-	-	386,900
45	24th	3	Kirkham	Poplar	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
46	24th	3	Poplar	Union	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
47	24th	3	Union	Magnolia	310	NE	Typical 60' R/W	$ 1,460.00	$ 452,600.00	-	-	-	452,600
48	24th	3	Magnolia	Adeline	335	NE	Typical 60' R/W	$ 1,460.00	$ 489,100.00	-	-	-	489,100
49	24th	3	Adeline	Chestnut	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
50	Campbell	3	Mandela	26th	200	NE	Typical 60' R/W	$ 1,460.00	$ 292,000.00	-	-	-	292,000

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Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

COMPLETE STREETSCAPE
REPLACE RAIL WITH ASPHALT

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
51	Campbell	3	26th	28th	475	NE	Typical 60' R/W	$ 1,460.00	$ 693,500.00	-	-	-	693,500
52	Peralta	2	24th	26th	615	NE	Typical 80' R/W	$ 1,800.00	$ 1,107,000.00	-	-	-	1,107,000
53	Kirkham	3	24th	26th	580	NE	To Be Vacated	$ -	$ -	-	-	-	-
54	Poplar	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
55	Union	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
56	Magnolia	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
57	Adeline	2	24th	26th	580	NE	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	-	-	-	1,044,000
58	Chestnut	3	24th	26th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
59	26th	3	Mandela	Peralta	560	NE	Typical 60' R/W	$ 1,460.00	$ 817,600.00	-	-	-	817,600
60	26th	3	Peralta	Poplar	390	NE	Typical 60' R/W	$ 1,460.00	$ 569,400.00	-	-	-	569,400
61	26th	3	Poplar	Union	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
62	26th	3	Union	Magnolia	320	NE	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 416,000.00	-	-	-	416,000
63	26th	3	Magnolia	Adeline	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
64	26th	3	Adeline	Chestnut	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
65	Peralta	2	26th	28th	615	NE	Typical 80' R/W	$ 1,800.00	$ 1,107,000.00	-	-	-	1,107,000
66	Poplar	3	26th	28th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
67	Union	3	26th	28th	580	NE	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 754,000.00	-	-	-	754,000
68	Magnolia	3	26th	28th	580	NE	Typical 60' R/W	$ 1,460.00	$ 846,800.00	-	-	-	846,800
69	Adeline	2	26th	28th	580	NE	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	-	-	-	1,044,000
70	Magnolia	3	28th	30th	650	NE	Typical 60' R/W	$ 1,460.00	$ 949,000.00	-	-	-	949,000
71	Adeline	2	28th	30th	650	NE	Typical 80' R/W	$ 1,800.00	$ 1,170,000.00	-	-	-	1,170,000
72	28th	3	Mandela	Campbell	345	NE	Typical 60' R/W	$ 1,460.00	$ 503,700.00	-	-	-	503,700
73	28th	3	Campbell	Peralta	450	NE	Typical 60' R/W	$ 1,460.00	$ 657,000.00	-	-	-	657,000
74	28th	3	Peralta	Poplar	215	NE	Typical 60' R/W	$ 1,460.00	$ 313,900.00	-	-	-	313,900
75	28th	3	Poplar	Union	290	NE	Typical 60' R/W	$ 1,460.00	$ 423,400.00	-	-	-	423,400
76	28th	3	Union	Magnolia	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
77	28th	3	Magnolia	Adeline	320	NE	Typical 60' R/W	$ 1,460.00	$ 467,200.00	-	-	-	467,200
78	18th	3	Peralta	Mandela	420	SW	Typical 80' R/W	$ 1,800.00	$ 756,000.00	756,000	-	-	-
79	20th	3	Peralta	Mandela	235	SW	Typical 60' R/W	$ 1,460.00	$ 343,100.00	343,100	-	-	-
80	Peralta	3	17th	18th	300	SW	Typical 80' R/W	$ 1,800.00	$ 540,000.00	540,000	-	-	-
81	Peralta	3	18th	20th	580	SW	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	1,044,000	-	-	-
82	Peralta	3	20th	W Grand	580	SW	Typical 80' R/W	$ 1,800.00	$ 1,044,000.00	1,044,000	-	-	-
83	10th	3	Frontage	Pine	540	SW	10th Street 60' R/W	$ 1,380.00	$ 745,200.00	745,200	-	-	-
84	Pine	3	10th	11th	330	SW	Typical 60' R/W	$ 1,460.00	$ 481,800.00	481,800	-	-	-
85	11th	3	-	Pine	290	SW	11th Street 59' R/W	$ 1,340.00	$ 388,600.00	388,600	-	-	-
86	Pine	3	11th	12th	320	SW	Typical 60' R/W	$ 1,460.00	$ 467,200.00	467,200	-	-	-
87	12th	3	Pine	Wood	430	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
88	Wood	3	12th	13th	335	SW	Typical 60' R/W	$ 1,460.00	$ 489,100.00	489,100	-	-	-
89	Wood	3	13th	14th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
90	14th	3	Frontage	Wood	400	SW	No Improvement Recommended	$ -	$ -	-	-	-	-
91	Wood	3	14th	15th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
92	15th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
93	Wood	3	15th	16th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
94	Willow	3	15th	16th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
95	16th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
96	16th	3	Willow	Campbell	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
97	Wood	3	16th	17th	300	SW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	438,000	-	-	-
98	Willow	3	16th	17th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
99	Campbell	3	16th	17th	280	SW	Typical 60' R/W	$ 1,460.00	$ 408,800.00	408,800	-	-	-
100	17th	3	Wood	Willow	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-

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Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

COMPLETE STREETSCAPE

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

REPLACE RAIL WITH ASPHALT

BLOCK NO.	STREET NAME	TIER	BEGIN STREET	END STREET	LENGTH (FT)	QUADRANT	STREETSCAPE TYPE	UNIT COST ($/LF)	STREETSCAPE COST ($)	REPLACE RAIL INTX SW	INTX SE	INTX NW	INTX NE
101	17th	3	Willow	Campbell	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
102	17th	3	Campbell	Peralta	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
103	Campbell	3	17th	18th	290	SW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 377,000.00	377,000	-	-	-
104	Wood	3	17th	18th	290	SW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 377,000.00	377,000	-	-	-
105	18th	3	Wood	Campbell	860	SW	18th Street 70' R/W	$ 1,460.00	$ 1,255,600.00	1,255,600	-	-	-
106	18th	3	Campbell	Peralta	430	SW	18th Street 70' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
107	Wood	3	18th	20th	575	SW	Typical 60' R/W	$ 1,460.00	$ 839,500.00	839,500	-	-	-
108	Campbell	3	18th	20th	575	SW	Typical 60' R/W	$ 1,460.00	$ 839,500.00	839,500	-	-	-
109	20th	3	Wood	Campbell	860	SW	Typical 60' R/W	$ 1,460.00	$ 1,255,600.00	1,255,600	-	-	-
110	20th	3	Campbell	Peralta	430	SW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	627,800	-	-	-
111	Wood	3	20th	W Grand	600	SW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	876,000	-	-	-
112	Willow	3	20th	W Grand	600	SW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	876,000	-	-	-
113	Campbell	3	20th	W Grand	630	SW	Typical 60' R/W	$ 1,460.00	$ 919,800.00	919,800	-	-	-
114	W Grand	3	Frontage	Willow	680	NW	Mandela Parkway Sidestreet	$ 1,170.00	$ 795,600.00	-	-	795,600	-
115	W Grand	3	Willow	Campbell	440	NW	Mandela Parkway Sidestreet	$ 1,170.00	$ 514,800.00	-	-	514,800	-
116	W Grand	3	Campbell	Mandela	415	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
117	Wood	3	W Grand	24th	600	NW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 780,000.00	-	-	780,000	-
118	Willow	3	W Grand	24th	600	NW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	876,000	-
119	Campbell	3	W Grand	24th	600	NW	Typical 60' R/W	$ 1,460.00	$ 876,000.00	-	-	876,000	-
120	24th	3	Wood	Willow	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
121	24th	3	Willow	Campbell	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
122	Wood	3	24th	26th	615	NW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 799,500.00	-	-	799,500	-
123	Willow	3	24th	26th	615	NW	Typical 60' R/W	$ 1,460.00	$ 897,900.00	-	-	897,900	-
124	26th	3	Wood	Willow	430	NW	Typical 60' R/W	$ 1,460.00	$ 627,800.00	-	-	627,800	-
125	26th	3	Willow	Mandela	180	NW	Typical 60' R/W	$ 1,460.00	$ 262,800.00	-	-	262,800	-
126	Wood	3	26th	32nd	500	NW	Typical 60' R/W with Perpendicular Parking	$ 1,300.00	$ 650,000.00	-	-	650,000	-
127	Willow	3	26th	Mandela	300	NW	Typical 60' R/W	$ 1,460.00	$ 438,000.00	-	-	438,000	-
128	32nd	3	Wood	Mandela	380	NW	Typical 60' R/W	$ 1,460.00	$ 554,800.00	-	-	554,800	-
129	Wood	3	32nd	34th	640	NW	Typical 60' R/W	$ 1,460.00	$ 934,400.00	-	-	934,400	-
130	34th	3	Wood	Mandela	375	NW	Typical 60' R/W	$ 1,460.00	$ 547,500.00	-	-	547,500	-
131	Mandela Pkwy	1	32nd	34th	630	NW	No Improvement Recommended	$ -	$ -	-	-	-	-
							COMPLETE STREETSCAPE TOTAL		**$ 75,000,000**	**$ 22,000,000**	**$ 13,000,000**	**$11,000,000**	**$ 29,000,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

MANDELA SIDESTREET
CAMPBELL TO WOOD ST

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	700	SF	$ 1,400
205	REMOVE ASPHALT CONCRETE	$ 2.00	2000	SF	$ 4,000
				DEMOLITION SUBTOTAL	**$ 9,900**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	173	CY	$ 864.20
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	2000	SF	$ 700.00
303	ASPHALT CONCRETE	$ 81.00	99	TON	$ 7,992.00
304	AGGREGATE BASE	$ 25.00	237	TON	$ 5,916.67
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	700	SF	$ 7,700.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	180	SF	$ 2,700.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 30,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAIN	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

MANDELA SIDESTREET
CAMPBELL TO WOOD ST

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	0	LF	$ -
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	100	LF	$ 150.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	INSTALL TREE	$ 400.00	1	EA	$ 400.00
510	SHRUBS / GROUNDCOVER	$ 2.00	400	SF	$ 800.00
511	ORGANIC MULCH	$ 50.00	15	CY	$ 740.74
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 6,000**
	25% Contingency				$ 23,500
	MANDELA SIDESTREET TOTAL				**$ 117,400**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,170**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

RAIL REMOVAL
REPLACE WITH ASPHALT

Based on 2900' Wood St Spur

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 25,000.00	1	LS	$ 25,000.00
102	TRAFFIC CONTROL	$ 25,000.00	1	LS	$ 25,000.00
103	CONTRACTOR FEE	$ 10,000.00	1	LS	$ 10,000.00
104	BONDING	$ 15,000.00	1	LS	$ 15,000.00
105	CONSTRUCTION STAKING	$ 5,000.00	1	LS	$ 5,000.00
106	EROSION CONTROL	$ 10,000.00	1	LS	$ 10,000.00
107	SOFT COSTS	$ 50,000.00	1	LS	$ 50,000.00
				MISCELLANEOUS SUBTOTAL	**$ 140,000**
200	***DEMOLITION***				
201	REMOVE ASPHALT CONCRETE	$ 1.25	43500	SF	$ 54,375.00
202	REMOVE RAIL AND TIES	$ 20.00	2900	LF	$ 58,000.00
203	REMOVE BALLAST	$ 10.00	2900	LF	$ 29,000.00
				DEMOLITION SUBTOTAL	**$ 87,000**
300	***ROADWAY IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 45.00	4,833	CY	$ 217,500.00
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	43,500	SF	$ 15,225.00
303	PAVEMENT TEXTURING	$ 2.50	43,500	SF	$ 108,750.00
304	ASPHALT CONCRETE	$ 81.00	2146	TON	$ 173,826.00
305	AGGREGATE BASE	$ 25.00	7206.50	TON	$ 180,162.50
306	CONFORM GRINDING	$ 2.00	43,500	SF	$ 87,000.00
				ROADWAY IMPROVEMENTS SUBTOTAL	**$ 783,000**
				25% Contingency	$ 252,500
				RAIL REMOVAL TOTAL	**$ 1,275,000**
				Cost per LF	**$ 440**

Oakland Industrial District
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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

80' R/W STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	6400	SF	$ 12,800
			DEMOLITION SUBTOTAL		**$ 19,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	398	CY	$ 1,987.65
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	4600	SF	$ 1,610.00
303	ASPHALT CONCRETE	$ 81.00	227	TON	$ 18,381.60
304	AGGREGATE BASE	$ 25.00	544	TON	$ 13,608.33
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	2400	SF	$ 26,400.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	180	SF	$ 2,700.00
			ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 69,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAIN	$ 100.00	100	LF	$ 10,000.00
			UTILITY IMPROVEMENTS SUBTOTAL		**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

80' R/W STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	200	LF	$ 350.00
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	INSTALL TREE	$ 400.00	1	EA	$ 400.00
510	SHRUBS / GROUNDCOVER	$ 2.00	900	SF	$ 1,800.00
511	ORGANIC MULCH	$ 50.00	33	CY	$ 1,666.67
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 8,000**
	25% Contingency				$ 36,000
	80' R/W STREETSCAPE TOTAL				**$ 180,000**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,800**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

80' R/W STREETSCAPE
INCLUDES RAIL SIDING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	6400	SF	$ 12,800
				DEMOLITION SUBTOTAL	**$ 19,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	398	CY	$ 1,987.65
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	4600	SF	$ 1,610.00
303	ASPHALT CONCRETE	$ 81.00	227	TON	$ 18,381.60
304	AGGREGATE BASE	$ 25.00	544	TON	$ 13,608.33
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	2400	SF	$ 26,400.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	180	SF	$ 2,700.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 69,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAIN	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

80' R/W STREETSCAPE
INCLUDES RAIL SIDING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	REMOVE AND REPLACE RAIL SIDING	$ 940	100	LF	$ 94,000.00
502	STRIPING	$ 1.75	200	LF	$ 350.00
503	SIGNAGE	$ 500.00	1	LS	$ 500.00
504	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
505	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
506	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
507	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
508	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
509	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
510	INSTALL TREE	$ 400.00	1	EA	$ 400.00
511	SHRUBS / GROUNDCOVER	$ 2.00	900	SF	$ 1,800.00
512	ORGANIC MULCH	$ 50.00	33	CY	$ 1,666.67
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 102,000**
	25% Contingency				$ 59,500
	80' R/W STREETSCAPE TOTAL				**$ 297,500**
	STREETSCAPE COST PER LINEAR FOOT				**$ 2,980**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

70' R/W STREETSCAPE
WITH PERP. PARKING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	100	LF	$ 500
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	5400	SF	$ 10,800
				DEMOLITION SUBTOTAL	**$ 17,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	315	CY	$ 1,577.16
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	3650	SF	$ 1,277.50
303	ASPHALT CONCRETE	$ 81.00	180	TON	$ 14,585.40
304	AGGREGATE BASE	$ 25.00	432	TON	$ 10,797.92
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	1020	SF	$ 11,220.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 45,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAIN	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

70' R/W STREETSCAPE
WITH PERP. PARKING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	450	LF	$ 787.50
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	INSTALL TREE	$ 400.00	1	EA	$ 400.00
510	SHRUBS / GROUNDCOVER	$ 2.00	550	SF	$ 1,100.00
511	ORGANIC MULCH	$ 50.00	20	CY	$ 1,018.52
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 7,000**
	25% Contingency				$ 29,250
	70' R/W STREETSCAPE TOTAL				**$ 146,250**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,460**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE STREET LIGHTS	$ 750.00	1	EA	$ 750
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
			DEMOLITION SUBTOTAL		**$ 13,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	346	CY	$ 1,728.40
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	4000	SF	$ 1,400.00
303	ASPHALT CONCRETE	$ 81.00	197	TON	$ 15,984.00
304	AGGREGATE BASE	$ 25.00	473	TON	$ 11,833.33
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	1000	SF	$ 11,000.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
			ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 48,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
			UTILITY IMPROVEMENTS SUBTOTAL		**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	200	LF	$ 350.00
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	INSTALL TREE	$ 400.00	1	EA	$ 400.00
510	SHRUBS / GROUNDCOVER	$ 2.00	900	SF	$ 1,800.00
511	ORGANIC MULCH	$ 50.00	33	CY	$ 1,666.67
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 8,000**
	25% Contingency				$ 29,250
	60' R/W STREETSCAPE TOTAL				**$ 146,250**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,460**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
WITH PERP. PARKING
INCLUDES RAIL SIDING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
				DEMOLITION SUBTOTAL	**$ 15,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	272	CY	$ 1,361.11
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	3150	SF	$ 1,102.50
303	ASPHALT CONCRETE	$ 81.00	155	TON	$ 12,587.40
304	AGGREGATE BASE	$ 25.00	373	TON	$ 9,318.75
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	500	SF	$ 5,500.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 36,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
WITH PERP. PARKING
INCLUDES RAIL SIDING
Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	REMOVE AND REPLACE RAIL SIDING	$ 940	100	LF	$ 94,000.00
502	STRIPING	$ 1.75	400	LF	$ 700.00
503	SIGNAGE	$ 500.00	1	LS	$ 500.00
504	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
505	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
506	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
507	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
508	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
509	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
510	SHRUBS / GROUNDCOVER	$ 2.00	500	SF	$ 1,000.00
511	ORGANIC MULCH	$ 50.00	19	CY	$ 925.93
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 101,000**
	25% Contingency				$ 46,500
	60' R/W STREETSCAPE TOTAL				**$ 232,500**
	STREETSCAPE COST PER LINEAR FOOT				**$ 2,330**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
WITH PERP. PARKING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE STREET LIGHTS	$ 750.00	1	EA	$ 750
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
				DEMOLITION SUBTOTAL	**$ 13,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	272	CY	$ 1,361.11
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	3150	SF	$ 1,102.50
303	ASPHALT CONCRETE	$ 81.00	155	TON	$ 12,587.40
304	AGGREGATE BASE	$ 25.00	373	TON	$ 9,318.75
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	500	SF	$ 5,500.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 36,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
WITH PERP. PARKING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	400	LF	$ 700.00
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	SHRUBS / GROUNDCOVER	$ 2.00	500	SF	$ 1,000.00
510	ORGANIC MULCH	$ 50.00	19	CY	$ 925.93
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 7,000**
	25% Contingency				$ 26,000
	60' R/W STREETSCAPE TOTAL				**$ 130,000**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,300**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
INCLUDES RAIL SIDING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE STREET LIGHTS	$ 750.00	1	EA	$ 750
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
				DEMOLITION SUBTOTAL	**$ 13,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	346	CY	$ 1,728.40
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	4000	SF	$ 1,400.00
303	ASPHALT CONCRETE	$ 81.00	197	TON	$ 15,984.00
304	AGGREGATE BASE	$ 25.00	473	TON	$ 11,833.33
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	1000	SF	$ 11,000.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 48,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 24,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

60' R/W STREETSCAPE
INCLUDES RAIL SIDING

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	REMOVE AND REPLACE RAIL SIDING	$ 940	100	LF	$ 94,000.00
502	STRIPING	$ 1.75	100	LF	$ 175.00
503	SIGNAGE	$ 500.00	1	LS	$ 500.00
504	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
505	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
506	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
507	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
508	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
509	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
510	INSTALL TREE	$ 400.00	2	EA	$ 800.00
511	SHRUBS / GROUNDCOVER	$ 2.00	900	SF	$ 1,800.00
512	ORGANIC MULCH	$ 50.00	33	CY	$ 1,666.67
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 103,000**
	25% Contingency				$ 53,000
	60' R/W STREETSCAPE TOTAL				**$ 265,000**
	STREETSCAPE COST PER LINEAR FOOT				**$ 2,650**

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INTERSECTION TYPE J
ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	360	LF	$ 630	$ 630
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	660	SF	$ 1,320	$ 1,320
203	REMOVE CURB AND GUTTER	$ 5.00	125	LF	$ 625	$ 625
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	3,710	SF	$ 9,275	$ 9,275
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	180	LF	$ 169,200	$ 79,200
303	CONCRETE SIDEWALK	$ 11.00	660	SF	$ 7,260	$ 7,260
304	CURB AND GUTTER	$ 20.00	125	LF	$ 2,500	$ 2,500
305	CURB RAMP	$ 2,000.00	1	EA	$ 2,000	$ 2,000
306	STREET LIGHT	$ 2,000.00	1	EA	$ 2,000	$ 2,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	140	LF	$ 245	$ 245
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 194,000**	**$ 104,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	1	EA	$ 1,500	1500
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	90	LF	$ 5,400	5400
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 17,000**	**$ 17,000**
				25% Contingency	$ 59,500	$ 37,000
				INTERSECTION TYPE J TOTAL	**$ 297,500**	**$ 185,000**

Oakland Industrial District
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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE I

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	335	LF	$	586
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	905	SF	$	1,810
203	REMOVE CURB AND GUTTER	$	5.00	245	LF	$	1,225
					DEMOLITION SUBTOTAL	**$**	**4,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	4,690	SF	$	11,725
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	905	SF	$	9,955
304	CURB AND GUTTER	$	20.00	245	LF	$	4,900
305	CURB RAMP	$	2,000.00	2	EA	$	4,000
306	STREET LIGHT	$	2,000.00	0	EA	$	-
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	120	LF	$	210
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**32,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	1	EA	$	1,500
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	120	LF	$	7,200
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**19,000**
					25% Contingency	$	22,750
					INTERSECTION TYPE I TOTAL	**$**	**113,750**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE H

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	405	LF	$	709
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	555	SF	$	1,110
203	REMOVE CURB AND GUTTER	$	5.00	94	LF	$	470
					DEMOLITION SUBTOTAL	**$**	**3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	9,860	SF	$	24,650
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	555	SF	$	6,105
304	CURB AND GUTTER	$	20.00	94	LF	$	1,880
305	CURB RAMP	$	2,000.00	4	EA	$	8,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	615	LF	$	1,076
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**47,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	190	LF	$	11,400
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**25,000**
					25% Contingency	$	27,750
					INTERSECTION TYPE H TOTAL	**$**	**138,750**

Oakland Industrial District
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INTERSECTION TYPE G

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	310	LF	$ 543	$ 543
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	3,265	SF	$ 8,163	$ 8,163
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	161	LF	$ 151,340	$ 70,840
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	425	LF	$ 744	$ 744
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 182,000**	**$ 101,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	160	LF	$ 9,600	9600
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 23,000**	**$ 23,000**
				25% Contingency	$ 58,000	$ 37,750
				INTERSECTION TYPE G TOTAL	**$ 290,000**	**$ 188,750**

Oakland Industrial District
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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE F

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	380	LF	$	665
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	425	SF	$	850
203	REMOVE CURB AND GUTTER	$	5.00	80	LF	$	400
					DEMOLITION SUBTOTAL	**$**	**2,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	7,630	SF	$	19,075
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	425	SF	$	4,675
304	CURB AND GUTTER	$	20.00	80	LF	$	1,600
305	CURB RAMP	$	2,000.00	4	EA	$	8,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	185	LF	$	324
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**39,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	180	LF	$	10,800
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**24,000**
					25% Contingency	$	25,250
					INTERSECTION TYPE F TOTAL	**$**	**126,250**

Oakland Industrial District
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INTERSECTION TYPE D2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	360	LF	$ 630	$ 630
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	5,680	SF	$ 14,200	$ 14,200
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	116	LF	$ 109,040	$ 51,040
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	530	LF	$ 928	$ 928
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 145,000**	**$ 87,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	166	LF	$ 9,960	9960
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 23,000**	**$ 23,000**
			25% Contingency		$ 48,750	$ 34,250
			INTERSECTION TYPE D2 TOTAL		**$ 243,750**	**$ 171,250**

Oakland Industrial District
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INTERSECTION TYPE C2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	310	LF	$ 543	$ 543
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	4,250	SF	$ 10,625	$ 10,625
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	90	LF	$ 84,600	$ 39,600
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	430	LF	$ 753	$ 753
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 117,000**	**$ 72,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	140	LF	$ 8,400	8400
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 22,000**	**$ 22,000**
			25% Contingency		$ 41,500	$ 30,250
			INTERSECTION TYPE C2 TOTAL		**$ 207,500**	**$ 151,250**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE C1

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	310	LF	$	543
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	555	SF	$	1,110
203	REMOVE CURB AND GUTTER	$	5.00	94	LF	$	470
					DEMOLITION SUBTOTAL	**$**	**3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	5,600	SF	$	14,000
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	555	SF	$	6,105
304	CURB AND GUTTER	$	20.00	94	LF	$	1,880
305	CURB RAMP	$	2,000.00	4	EA	$	8,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	430	LF	$	753
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**36,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	140	LF	$	8,400
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**22,000**
					25% Contingency	$	24,250
					INTERSECTION TYPE C1 TOTAL	**$**	**121,250**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

INTERSECTION TYPE B

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	280	LF	$ 490	$ 490
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	3,550	SF	$ 8,875	$ 8,875
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	70	LF	$ 65,800	$ 30,800
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	370	LF	$ 648	$ 648
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 97,000**	**$ 62,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	130	LF	$ 7,800	7800
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 21,000**	**$ 21,000**
				25% Contingency	$ 36,250	$ 27,500
				INTERSECTION TYPE B TOTAL	**$ 181,250**	**$ 137,500**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

INTERSECTION TYPE A3

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	260	LF	$ 455	$ 455
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	1,810	SF	$ 4,525	$ 4,525
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	136	LF	$ 127,840	$ 59,840
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	320	LF	$ 560	$ 560
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 154,000**	**$ 86,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	120	LF	$ 7,200	7200
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 21,000**	**$ 21,000**
				25% Contingency	$ 50,500	$ 33,500
				INTERSECTION TYPE A3 TOTAL	**$ 252,500**	**$ 167,500**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

INTERSECTION TYPE A2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	260	LF	$ 455	$ 455
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	2,800	SF	$ 7,000	$ 7,000
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	70	LF	$ 65,800	$ 30,800
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	320	LF	$ 560	$ 560
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 95,000**	**$ 60,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	120	LF	$ 7,200	7200
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 21,000**	**$ 21,000**
				25% Contingency	$ 35,750	$ 27,000
				INTERSECTION TYPE A2 TOTAL	**$ 178,750**	**$ 135,000**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE A1

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	260	LF	$	455
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	555	SF	$	1,110
203	REMOVE CURB AND GUTTER	$	5.00	94	LF	$	470
					DEMOLITION SUBTOTAL	**$**	**3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	3,850	SF	$	9,625
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	555	SF	$	6,105
304	CURB AND GUTTER	$	20.00	94	LF	$	1,880
305	CURB RAMP	$	2,000.00	4	EA	$	8,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	320	LF	$	560
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**31,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	120	LF	$	7,200
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**21,000**
					25% Contingency	$	22,750
					INTERSECTION TYPE A1 TOTAL	**$**	**113,750**

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Oakland Industrial District
Mandela Parkway
Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION NO.	STREET 1	STREET 2	QUADRANT	INTERSECTION TYPE	AMOUNT 1 (REPLACE RAIL)	AMOUNT 2 (REPLACE RAIL WITH ASPHALT)	REPLACE RAIL				REPLACE RAIL W/ ASPHALT			
							INTX SW	INTX SE	INTX NW	INTX NE	INTX SW	INTX SE	INTX NW	INTX NE
1	Pine St	10th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
2	Pine St	11th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
3	Wood St	12th St	SW	C1	$ 121,250	$ 121,250	121,250	-	-	-	121,250	-	-	-
4	Wood St	13th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
5	Wood St	14th St	SW	C1	$ 121,250	$ 121,250	121,250	-	-	-	121,250	-	-	-
6	Wood St	15th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
7	Wood St	16th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
8	Wood St	17th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
9	Wood St	18th St	SW	B	$ 181,250	$ 137,500	181,250	-	-	-	137,500	-	-	-
10	Wood St	20th St	SW	A2	$ 178,750	$ 135,000	178,750	-	-	-	135,000	-	-	-
11	Wood St	W Grand	SW	J	$ 297,500	$ 185,000	297,500	-	-	-	185,000	-	-	-
12	Wood St	W Grand	NW	J	$ 297,500	$ 185,000	-	-	297,500	-	-	-	185,000	-
13	Wood St	24th St	NW	A2	$ 178,750	$ 135,000	-	-	178,750	-	-	-	135,000	-
14	Wood St	26th St	NW	A2	$ 178,750	$ 135,000	-	-	178,750	-	-	-	135,000	-
15	Wood St	32nd St	NW	A2	$ 178,750	$ 135,000	-	-	178,750	-	-	-	135,000	-
16	Wood St	34th St	NW	A2	$ 178,750	$ 135,000	-	-	178,750	-	-	-	135,000	-
17	Willow St	15th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
18	Willow St	16th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
19	Willow St	17th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
20	Willow St	20th St	SW	A2	$ 178,750	$ 135,000	178,750	-	-	-	135,000	-	-	-
21	Willow St	W Grand	SW	I	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
22	Willow St	W Grand	NW	I	$ 113,750	$ 113,750	-	-	113,750	-	-	-	113,750	-
23	Willow St	24th St	NW	A1	$ 113,750	$ 113,750	-	-	113,750	-	-	-	113,750	-
24	Willow St	26th St	NW	A2	$ 178,750	$ 135,000	-	-	178,750	-	-	-	135,000	-
25	Campbell St	16th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
26	Campbell St	17th St	SW	A1	$ 113,750	$ 113,750	113,750	-	-	-	113,750	-	-	-
27	Campbell St	18th St	SW	B	$ 181,250	$ 137,500	181,250	-	-	-	137,500	-	-	-
28	Campbell St	20th St	SW	A2	$ 178,750	$ 135,000	178,750	-	-	-	135,000	-	-	-
29	Campbell St	W Grand	SW	F	$ 126,250	$ 126,250	126,250	-	-	-	126,250	-	-	-
30	Campbell St	24th St	NW	A1	$ 113,750	$ 113,750	-	-	113,750	-	-	-	113,750	-
31	Peralta St	17th St	SW	C1	$ 121,250	$ 121,250	121,250	-	-	-	121,250	-	-	-
32	Peralta St	18th St	SW	G	$ 290,000	$ 188,750	290,000	-	-	-	188,750	-	-	-
33	Peralta St	20th St	SW	C2	$ 207,500	$ 151,250	207,500	-	-	-	151,250	-	-	-
34	Kirkham St	14th St	SE	C1	$ 121,250	$ 121,250	-	121,250	-	-	-	121,250	-	-
35	Kirkham St	16th St	SE	C1	$ 121,250	$ 121,250	-	121,250	-	-	-	121,250	-	-
36	Kirkham St	18th St	SE	C2	$ 207,500	$ 151,250	-	207,500	-	-	-	151,250	-	-
37	Peralta St	24th St	NE	C1	$ 121,250	$ 121,250	-	-	-	121,250	-	-	-	121,250
38	Campbell St	26th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000
39	Kirkham St	24th St	NE	C2	$ 207,500	$ 151,250	-	-	-	207,500	-	-	-	151,250
40	Peralta St	26th St	NE	C2	$ 207,500	$ 151,250	-	-	-	207,500	-	-	-	151,250
41	Ettie St	28th St	NE	C2	$ 207,500	$ 151,250	-	-	-	207,500	-	-	-	151,250
42	Peralta St	28th St	NE	C1	$ 121,250	$ 121,250	-	-	-	121,250	-	-	-	121,250
43	Poplar St	14th St	SE	D2	$ 243,750	$ 171,250	-	243,750	-	-	-	171,250	-	-
44	Poplar St	16th St	SE	C2	$ 207,500	$ 151,250	-	207,500	-	-	-	151,250	-	-
45	Poplar St	18th St	SE	C2	$ 207,500	$ 151,250	-	207,500	-	-	-	151,250	-	-
46	Poplar St	20th St	SE	A3	$ 252,500	$ 167,500	-	252,500	-	-	-	167,500	-	-
47	Poplar St	21st St	SE	A2	$ 178,750	$ 135,000	-	178,750	-	-	-	135,000	-	-
48	Poplar St	W Grand	SE	E2	$ 250,000	$ 173,750	-	250,000	-	-	-	173,750	-	-
49	Poplar St	24th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000
50	Poplar St	26th St	NE	A3	$ 252,500	$ 167,500	-	-	-	252,500	-	-	-	167,500
51	Poplar St	28th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000

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Oakland Industrial District
Mandela Parkway
Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION NO.	STREET 1	STREET 2	QUADRANT	INTERSECTION TYPE	AMOUNT 1 (REPLACE RAIL)	AMOUNT 2 (REPLACE RAIL WITH ASPHALT)	REPLACE RAIL				REPLACE RAIL W/ ASPHALT			
							INTX SW	INTX SE	INTX NW	INTX NE	INTX SW	INTX SE	INTX NW	INTX NE
52	Union St	14th St	SE	D1	$ 128,750	$ 128,750	-	128,750	-	-	-	128,750	-	-
53	Union St	16th St	SE	C1	$ 121,250	$ 121,250	-	121,250	-	-	-	121,250	-	-
54	Union St	20th St	SE	A2	$ 178,750	$ 135,000	-	178,750	-	-	-	135,000	-	-
55	Union St	21st St	SE	A1	$ 113,750	$ 113,750	-	113,750	-	-	-	113,750	-	-
56	Union St	W Grand	SE	E1	$ 115,000	$ 115,000	-	115,000	-	-	-	115,000	-	-
57	Union St	24th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
58	Union St	26th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000
59	Union St	28th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
60	Magnolia St	W Grand	NE	E1	$ 115,000	$ 115,000	-	-	-	115,000	-	-	-	115,000
61	Magnolia St	24th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
62	Magnolia St	26th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000
63	Magnolia St	28th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
64	Magnolia St	30th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
65	Adeline St	19th St	SE	C1	$ 121,250	$ 121,250	-	121,250	-	-	-	121,250	-	-
66	Adeline St	21st St	SE	C1	$ 121,250	$ 121,250	-	121,250	-	-	-	121,250	-	-
67	Adeline St	W Grand	NE	H	$ 138,750	$ 138,750	-	-	-	138,750	-	-	-	138,750
68	Adeline St	24th St	NE	C1	$ 121,250	$ 121,250	-	-	-	121,250	-	-	-	121,250
69	Adeline St	26th St	NE	C2	$ 207,500	$ 151,250	-	-	-	207,500	-	-	-	151,250
70	Adeline St	28th St	NE	C1	$ 121,250	$ 121,250	-	-	-	121,250	-	-	-	121,250
71	Adeline St	30th St	NE	C1	$ 121,250	$ 121,250	-	-	-	121,250	-	-	-	121,250
72	Chestnut St	W Grand	NE	E1	$ 115,000	$ 115,000	-	-	-	115,000	-	-	-	115,000
73	Chestnut St	24th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
74	Chestnut St	26th St	NE	A2	$ 178,750	$ 135,000	-	-	-	178,750	-	-	-	135,000
75	Beach St	34th St	NE	A1	$ 113,750	$ 113,750	-	-	-	113,750	-	-	-	113,750
				TOTAL	**$ 11,700,000**	**$ 9,820,000**	**$3,550,000**	**$2,690,000**	**$1,540,000**	**$3,930,000**	**$3,060,000**	**$2,200,000**	**$1,210,000**	**$3,360,000**
							$ 890,000	$ 670,000	$ 380,000	$ 980,000	$ 770,000	$ 550,000	$ 300,000	$ 840,000
							$ 4,500,000	$ 3,400,000	$ 2,000,000	$ 5,000,000	$ 3,900,000	$ 2,800,000	$ 1,600,000	$ 4,200,000

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Oakland, CA

INTERSECTION TYPE E2

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST — **REMOVE AND REPLACE RAIL**

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT 1	AMOUNT 2
100	***MISCELLANEOUS***					
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**	**$ 24,000**
200	***DEMOLITION***					
201	SAWCUT EXISTING ASPHALT	$ 1.75	360	LF	$ 630	$ 630
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$ 2.00	555	SF	$ 1,110	$ 1,110
203	REMOVE CURB AND GUTTER	$ 5.00	94	LF	$ 470	$ 470
			DEMOLITION SUBTOTAL		**$ 3,000**	**$ 3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***					
301	AC GRIND/OVERLAY (MINIMUM 2")	$ 2.50	5,030	SF	$ 12,575	$ 12,575
302	REMOVE AND REPLACE RAIL	$ 940 / $ 440	122	LF	$ 114,680	$ 53,680
303	CONCRETE SIDEWALK	$ 11.00	555	SF	$ 6,105	$ 6,105
304	CURB AND GUTTER	$ 20.00	94	LF	$ 1,880	$ 1,880
305	CURB RAMP	$ 2,000.00	4	EA	$ 8,000	$ 8,000
306	STREET LIGHT	$ 2,000.00	2	EA	$ 4,000	$ 4,000
307	SIGNAGE	$ 500.00	1	LS	$ 500	$ 500
308	STRIPING	$ 1.75	155	LF	$ 271	$ 271
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$ 300.00	1	EA	$ 300	$ 300
			ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 149,000**	**$ 88,000**
400	***STORM DRAIN IMPROVEMENTS***					
401	ADJUST MANHOLE TO GRADE	$ 1,500.00	2	EA	$ 3,000	3000
402	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000	5000
403	INSTALL SD CURB INLET	$ 2,500.00	2	EA	$ 5,000	5000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	170	LF	$ 10,200	10200
			STORM DRAIN IMPROVEMENTS SUBTOTAL		**$ 24,000**	**$ 24,000**
				25% Contingency	$ 50,000	$ 34,750
				INTERSECTION TYPE E2 TOTAL	**$ 250,000**	**$ 173,750**

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE E1

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	332	LF	$	581
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	275	SF	$	550
203	REMOVE CURB AND GUTTER	$	5.00	110	LF	$	550
					DEMOLITION SUBTOTAL	**$**	**2,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	6,280	SF	$	15,700
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	275	SF	$	3,025
304	CURB AND GUTTER	$	20.00	110	LF	$	2,200
305	CURB RAMP	$	2,000.00	2	EA	$	4,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	78	LF	$	137
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**30,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	170	LF	$	10,200
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**24,000**
					25% Contingency	$	23,000
					INTERSECTION TYPE E1 TOTAL	**$**	**115,000**

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Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE DESCRIPTIONS

Type A1
The intersection of two 60' ROW streets with no rail siding.

Type A2
The intersectino of two 60' ROW streets with one length of rail siding.

Type A3
The intersection of two 60' ROW streets with two lengths of rail siding.

Type B
The intersection of one 60' ROW street and a 70' ROW street with one length of rail siding.

Type C1
The intersection of a 60' ROW street and an 80' ROW street with no rail siding.

Type C2
The intersection of a 60' ROW street and an 80' ROW street with one length of rail siding.

Type D1
The intersection of a 60' ROW street and an 106' ROW street with no rail siding.

Type D2
The intersection of a 60' ROW street and an 106' ROW street with one length of rail siding.

Type E1
The intersection of a 60' ROW street and an 110' ROW street with no rail siding.

Type E2
The intersection of a 60' ROW street and an 110' ROW street with one length of rail siding.

Type F
The intersection of a 60' ROW street and an 120' ROW street with no rail siding.

Type G
The intersection of two 80' ROW streets with two lengths of rail siding.

Type H
The intersection of an 80' ROW street and a 110' ROW street with no rail siding.

Type I
The intersection of a West Grand Avenue side street and a 60' ROW street with no rail siding

Type J
The intersection of a West Grand Avenue side street and Wood street with two lengths of rail siding

Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

INTERSECTION TYPE D1

ITEM	DESCRIPTION		UNIT COST	QTY.	UNIT		AMOUNT
100	***MISCELLANEOUS***						
101	MOBILIZATION	$	2,000.00	1	LS	$	2,000
102	TRAFFIC CONTROL	$	2,000.00	1	LS	$	10,000
103	CONTRACTOR FEE	$	2,000.00	1	LS	$	5,000
104	BONDING	$	8,000.00	1	LS	$	2,000
105	CONSTRUCTION STAKING	$	2,000.00	1	LS	$	2,000
106	EROSION CONTROL	$	3,000.00	1	LS	$	5,000
107	SOFT COSTS	$	5,000.00	1	LS	$	10,000
					MISCELLANEOUS SUBTOTAL	**$**	**36,000**
200	***DEMOLITION***						
201	SAWCUT EXISTING ASPHALT	$	1.75	360	LF	$	630
202	REMOVE EXISTING CONCRETE SIDEWALKS, PEDESTRIAN RAMPS	$	2.00	555	SF	$	1,110
203	REMOVE CURB AND GUTTER	$	5.00	94	LF	$	470
					DEMOLITION SUBTOTAL	**$**	**3,000**
300	***ROADWAY/HARDSCAPE IMPROVEMENTS***						
301	AC GRIND/OVERLAY (MINIMUM 2")	$	2.50	7,420	SF	$	18,550
302	REMOVE AND REPLACE RAIL	$	940	0	LF	$	-
303	CONCRETE SIDEWALK	$	11.00	555	SF	$	6,105
304	CURB AND GUTTER	$	20.00	94	LF	$	1,880
305	CURB RAMP	$	2,000.00	4	EA	$	8,000
306	STREET LIGHT	$	2,000.00	2	EA	$	4,000
307	SIGNAGE	$	500.00	1	LS	$	500
308	STRIPING	$	1.75	530	LF	$	928
309	ADJUST/ESTABLISH SURVEY MONUMENTS	$	300.00	1	EA	$	300
					ROADWAY/HARDSCAPE IMPROVEMENTS SUBTOTAL	**$**	**41,000**
400	***STORM DRAIN IMPROVEMENTS***						
401	ADJUST MANHOLE TO GRADE	$	1,500.00	2	EA	$	3,000
402	CONNECT SD LINE TO MAIN	$	2,500.00	2	EA	$	5,000
403	INSTALL SD CURB INLET	$	2,500.00	2	EA	$	5,000
404	PVC STORM DRAIN PIPE (ASSUME 12")	$	60.00	166	LF	$	9,960
					STORM DRAIN IMPROVEMENTS SUBTOTAL	**$**	**23,000**
					25% Contingency	$	25,750
					INTERSECTION TYPE D1 TOTAL	**$**	**128,750**

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Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

11TH ST STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
			MISCELLANEOUS SUBTOTAL		**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE STREET LIGHTS	$ 750.00	1	EA	$ 750
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
			DEMOLITION SUBTOTAL		**$ 13,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	264	CY	$ 1,317.90
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	3050	SF	$ 1,067.50
303	ASPHALT CONCRETE	$ 81.00	150	TON	$ 12,187.80
304	AGGREGATE BASE	$ 25.00	361	TON	$ 9,022.92
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	1075	SF	$ 11,825.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
			ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL		**$ 41,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 60.00	20	LF	$ 1,200.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
			UTILITY IMPROVEMENTS SUBTOTAL		**$ 24,000**

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Oakland Industrial District
Mandela Parkway Industrial/Commerical Zone
Oakland, CA

ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

11TH ST STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	360	LF	$ 630.00
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	100	LF	$ 150.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	SHRUBS / GROUNDCOVER	$ 2.00	0	SF	$ -
510	ORGANIC MULCH	$ 50.00	0	CY	$ -
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 5,000**
	25% Contingency				$ 26,750
	11TH ST STREETSCAPE TOTAL				**$ 133,750**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,340**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

10TH ST STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
100	***MISCELLANEOUS***				
101	MOBILIZATION	$ 2,000.00	1	LS	$ 2,000
102	TRAFFIC CONTROL	$ 2,000.00	1	LS	$ 2,000
103	CONTRACTOR FEE	$ 2,000.00	1	LS	$ 2,000
104	BONDING	$ 8,000.00	1	LS	$ 8,000
105	CONSTRUCTION STAKING	$ 2,000.00	1	LS	$ 2,000
106	EROSION CONTROL	$ 3,000.00	1	LS	$ 3,000
107	SOFT COSTS	$ 5,000.00	1	LS	$ 5,000
				MISCELLANEOUS SUBTOTAL	**$ 24,000**
200	***DEMOLITION***				
201	REMOVE CONCRETE CURB & GUTTER	$ 5.00	200	LF	$ 1,000
202	REMOVE STRORM DRAIN STRUCTURE	$ 500.00	1	EA	$ 500
203	REMOVE MISCELLANEOUS ITEMS	$ 3,000.00	1	LS	$ 3,000
204	REMOVE CONCRETE SIDEWALKS, DRIVEWAYS, & PEDESTRIAN RAMPS	$ 2.00	800	SF	$ 1,600
205	REMOVE ASPHALT CONCRETE	$ 2.00	4400	SF	$ 8,800
				DEMOLITION SUBTOTAL	**$ 15,000**
300	***ROADWAY AND HARDSCAPE IMPROVEMENTS***				
301	EXCAVATION AND EXPORT	$ 5.00	432	CY	$ 2,160.49
302	SCARIFICATION AND RECOMPACTION OF NATIVE SOIL	$ 0.35	5000	SF	$ 1,750.00
303	ASPHALT CONCRETE	$ 81.00	247	TON	$ 19,980.00
304	AGGREGATE BASE	$ 25.00	592	TON	$ 14,791.67
305	CONCRETE CURB AND GUTTER (6")	$ 20.00	200	LF	$ 4,000.00
306	CONCRETE SIDEWALK (4" PCC/4" AB)	$ 11.00	1000	SF	$ 11,000.00
307	REINFORCED CONCRETE DRIVEWAY (6" AC/12" AB)	$ 15.00	90	SF	$ 1,350.00
				ROADWAY AND HARDSCAPE IMPROVEMENTS SUBTOTAL	**$ 56,000**
400	***UTILITY IMPROVEMENTS***				
401	CONNECT SD LINE TO MAIN	$ 2,500.00	2	EA	$ 5,000.00
402	INSTALL SD CURB INLET	$ 2,500.00	1	EA	$ 2,500.00
403	PVC STORM DRAIN PIPE (ASSUME 12")	$ 2,500.00	20	LF	$ 50,000.00
404	UPGRADES TO SEWER AND STORM INFRASTRUCTURE	$ 154.00	30	LF	$ 4,620.00
405	NEW WATER MAINS	$ 100.00	100	LF	$ 10,000.00
				UTILITY IMPROVEMENTS SUBTOTAL	**$ 73,000**

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ENGINEER'S OPINION OF PROBABLE CONSTRUCTION COST

10TH ST STREETSCAPE

Based on 100' Sample Streetscape

ITEM	DESCRIPTION	UNIT COST	QTY.	UNIT	AMOUNT
500	***MISCELLANEOUS IMPROVEMENTS***				
501	STRIPING	$ 1.75	360	LF	$ 630.00
502	SIGNAGE	$ 500.00	1	LS	$ 500.00
503	ADJUST WATER METER BOX	$ 150.00	0.5	EA	$ 75.00
504	ADJUST WATER VALVE	$ 300.00	0.5	EA	$ 150.00
505	ADJUST ELECTRICAL MANHOLE	$ 500.00	0.25	EA	$ 125.00
506	STREET LIGHT POLE AND LUMINARIES FOR INSTALLATION	$ 2,000.00	1	EA	$ 2,000.00
507	INSTALL CONDUIT AND CONDUCTORS	$ 1.50	200	LF	$ 300.00
508	IRRIGATION SYSTEM	$ 500.00	1	LS	$ 500.00
509	SHRUBS / GROUNDCOVER	$ 2.00	0	SF	$ -
510	ORGANIC MULCH	$ 50.00	0	CY	$ -
	MISCELLANEOUS IMPROVEMENTS SUBTOTAL				**$ 5,000**
	25% Contingency				$ 27,500
	10TH ST STREETSCAPE TOTAL				**$ 137,500**
	STREETSCAPE COST PER LINEAR FOOT				**$ 1,380**

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Appendix F

FEMA: Flood Insurance Rate Maps (FIRM)

2120000 FT



MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0067G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 67 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALAMEDA, CITY OF	060002	0067	G
OAKLAND, CITY OF	065048	0067	G

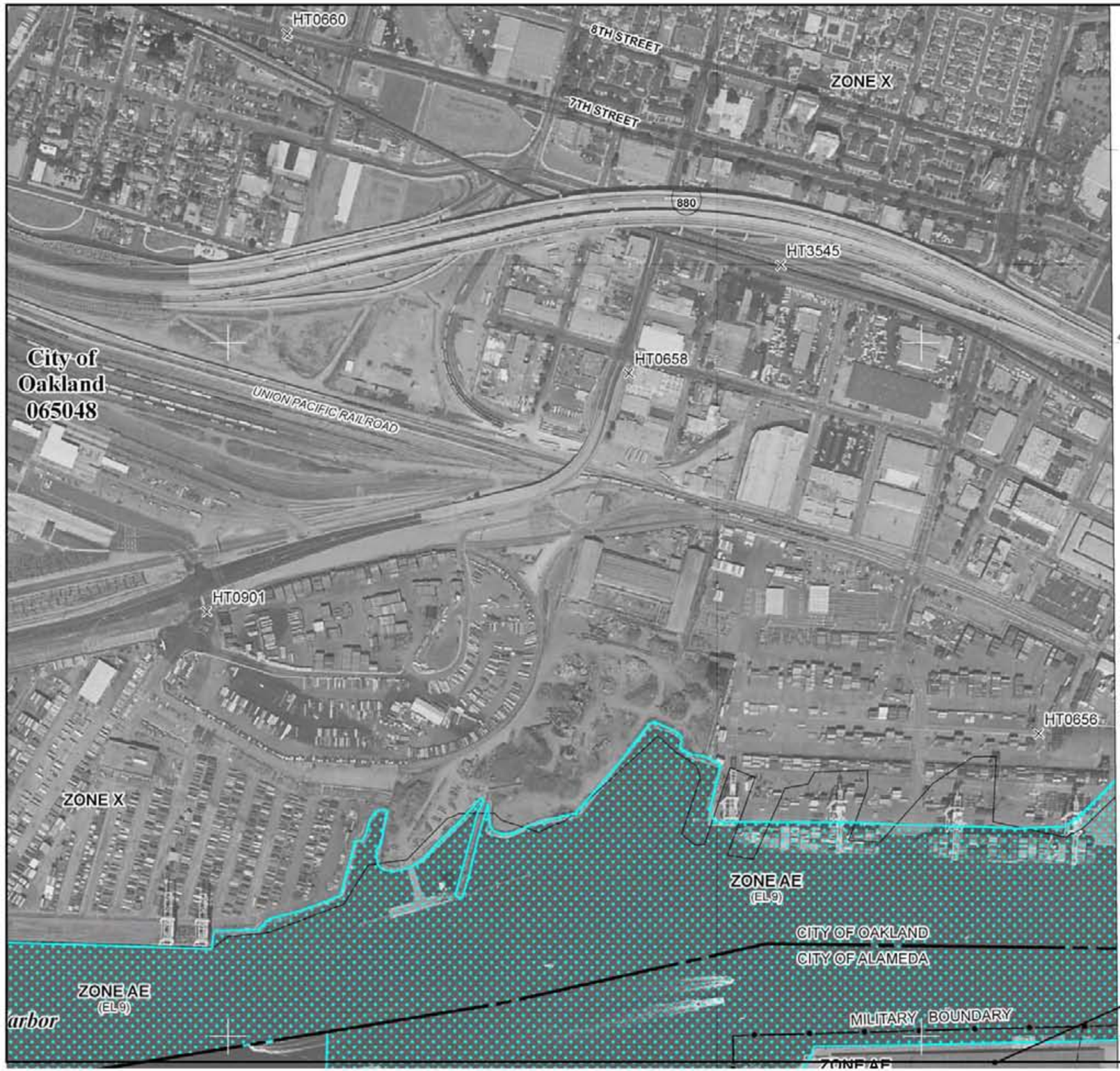
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06001C0067G

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

PANEL 0066G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 66 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALAMEDA, CITY OF	060002	0066	G
OAKLAND, CITY OF	065048	0066	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06001C0066G

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

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JOINS PANEL 0058

6045000 FT

12



MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0066G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 66 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALAMEDA, CITY OF	060002	0066	G
OAKLAND, CITY OF	065048	0066	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06001C0066G

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 500'

250 0 500 1000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0058G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 58 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EMERYVILLE, CITY OF	060005	0058	G
OAKLAND, CITY OF	065048	0058	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06001C0058G

EFFECTIVE DATE
AUGUST 3, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 500'

250 0 500 1000

FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0058G

FIRM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 58 OF 725

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EMERYVILLE, CITY OF	060005	0058	G
OAKLAND, CITY OF	065048	0058	G

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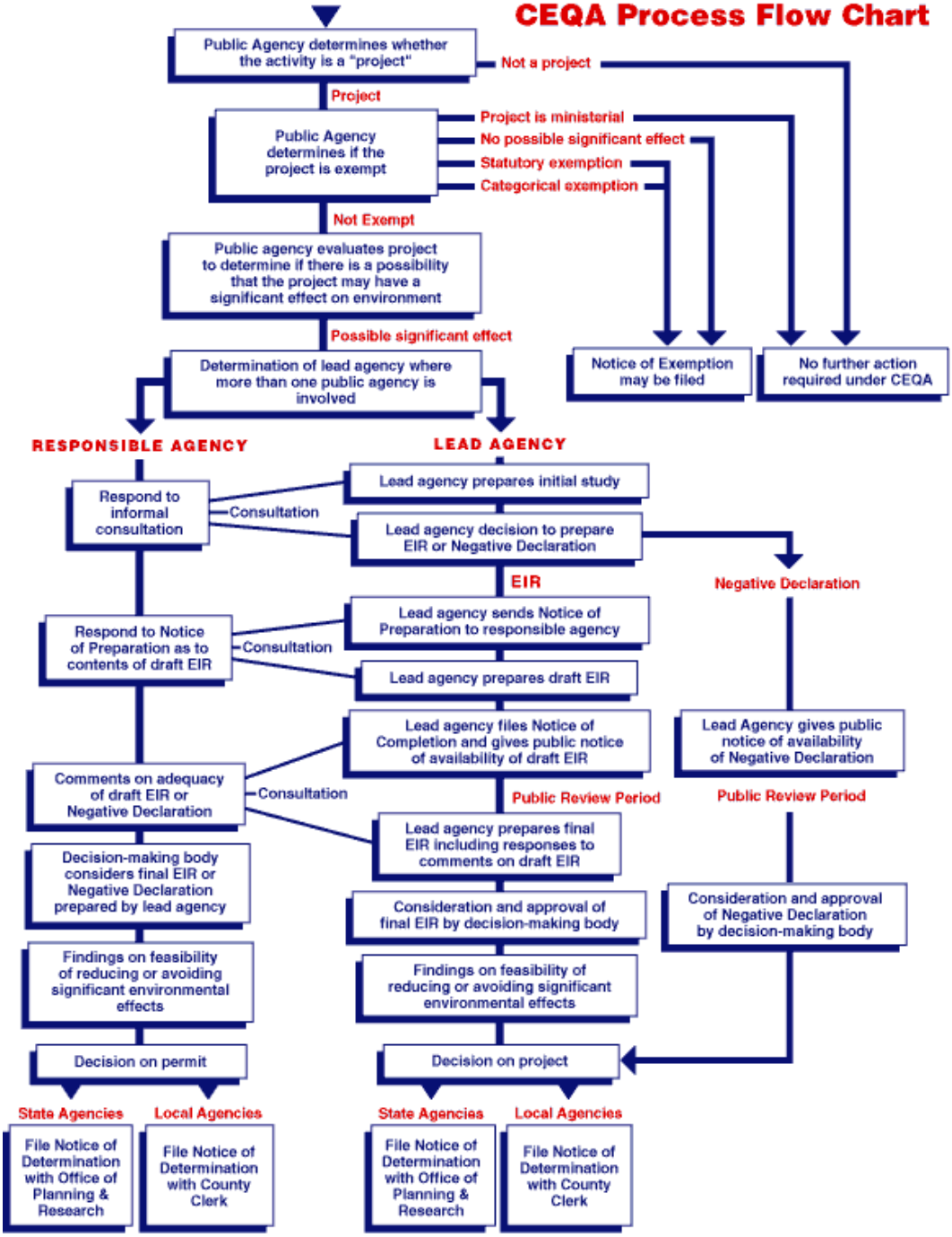
Appendix G

CEQA Process Flowchart

CEQA

The California Environmental Quality Act

Credits | Disclaimer



| CERES | CEQA Home | LUPIN | Wetlands |

This file last modified on: Wednesday, May 25, 2005.
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Appendix H

Chapter 6

"Environmental Procedures" of CalTrans
"Local Assistance Procedures Manual"
Dated May 30, 2008

CHAPTER 6 ENVIRONMENTAL PROCEDURES

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CHAPTER 6 ENVIRONMENTAL PROCEDURES

6.1 INTRODUCTION

One of the most important phases of the project development process is full and early compliance with the National Environmental Policy Act (NEPA) and other applicable federal environmentally related laws. Local agencies may not proceed with the final design of a project or request "Authorization to Proceed with Right of Way," or "Authorization to Proceed with Construction" until Caltrans has signed a Categorical Exclusion (CE), a Finding of No Significant Impact (FONSI), or a Record of Decision (ROD). Failure to follow this requirement will make the project ineligible for Federal Highway Administration (FHWA) reimbursement. Upon final environmental approval, it is incumbent upon the District Local Assistance Engineer (DLAE) to provide the local agency with immediate notification and a copy of the signed CE, FONSI, or ROD, so the local agency can commence with final design.

This chapter provides an overview of the NEPA process and contains procedural guidance for preparing and processing CEs, routine Environmental Assessments (EAs), complex EAs and Environmental Impact Statements (EISs) in support of local assistance projects (local agency federal-aid transportation projects "off" the State Highway System [SHS]). The local agency is required to complete the Preliminary Environmental Study (PES) Form first, and then follow the step-by-step procedures (set forth in Chapter 6 of the *Local Assistance Procedures Manual* [LAPM]) that are associated with the particular NEPA Class of Action recommended in the PES Form.

Local agency projects proposed on the SHS are called "Locally Sponsored Projects." For locally sponsored projects (local agency projects "on" the SHS), the local agency is required to prepare a Preliminary Environmental Analysis Report (PEAR) first, and then follow the procedures set forth in the Project Development Procedures Manual (PDPM). The content and format requirements of environmental technical studies/reports and NEPA documents prepared in support of either a local assistance project or a locally sponsored project must follow the guidance set forth in the Caltrans Standard Environmental Reference (SER) at: http://www.dot.ca.gov/ser/

AUTHORITY

National Environmental Policy Act (NEPA) and its supporting federal regulations establish certain requirements that must be adhered to for any project "...financed, assisted, conducted or approved by a federal agency...." In short, federal regulations require that a federal agency "...determine whether the proposed action may significantly affect the quality of the human environment." (http://www.law.cornell.edu/uscode/42/ch55.html)

Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). On August 10, 2005, President George W. Bush signed into law the new Federal Transportation Act for Federal Fiscal Years 2003-2009, (SAFETEA-LU). Title VI-Transportation Planning and Project Delivery (Sections 6002 through 6005) of the Act was, promulgated to improve the efficiency of environmental review and to streamline the federal environmental process. (http://www.fhwa.dot.gov/safetealu/index.htm).

Two provisions in particular, "**Section 6004** - State Assumption of Responsibility for Categorical Exclusions," and "**Section 6005** - Surface Transportation Project Delivery Pilot Program," have the potential to shorten the environmental processes for state and local assistance federal-aid transportation projects by formally assigning to the State Department of Transportation responsibility and authority for the federal environmental review process, thus eliminating the need for separate FHWA review of environmental documents. These two programs are together referred to in the Department as "NEPA Delegation," and Section 6005 is referred to as "Pilot Program."

Section 6004(a) of the SAFETEA-LU (P.L.109-59) (SAFETEA-LU), codified as Section 326 of amended Chapter 3 of Title 23, United States Code (23 U.S.C. 326) allows the Secretary of the United States Department of Transportation (USDOT Secretary) to assign and the State to assume:

- responsibility for determining whether certain designated activities are included within classes of action that are categorically excluded from requirements for an EA, or EIS pursuant to regulations promulgated by the Council on Environmental Quality under 40 CFR Part 1500 (as in effect on October 1, 2003).
- all or part of certain federal responsibilities for environmental review, consultation, or other related actions required.

Memorandum of Understanding (MOU) between FHWA, California Division and the California Department of Transportation State Assumption of Responsibility for Categorical Exclusions (effective June 7, 2007). USDOT Secretary, acting by and through the FHWA, officially assigns specific responsibilities with respect to designated CEs to the State in accordance with the terms of the MOU. A copy of the MOU is available at:
http://www.dot.ca.gov/ser/downloads/MOUs/nepa_delegation/6004_MOU_executed_6-7-07.pdf

The MOU stipulates that the CE responsibilities assigned to the State by FHWA include:

- Activities listed in 23 CFR 771.117(c)
- The example activities listed in 23 CFR 771.117(d)
- Additional actions listed in Appendix A of the MOU

The MOU transfers to the State all responsibilities for processing the CEs designated in Stipulation I(B) and any required reevaluations of CEs under 23 CFR 771.129. The MOU superseded the November 18, 2003, Programmatic Categorical Exclusion Agreement.

Section 6005(a) of the SAFETEA-LU (P.L. 109-59) (SAFETEA-LU), codified as Section 327 of amended Chapter 3 of Title 23, United States Code (23 U.S.C. 327), established a Surface Transportation Project Delivery Pilot Program that allows the Secretary of the USDOT to assign, and a State to assume, the USDOT Secretary's responsibilities under NEPA and all or part of the USDOT Secretary's responsibilities for environmental review, consultation, or other action required under any federal law (e.g., Section 106 of the National Historic Preservation Act, Section 7 of the Endangered Species Act, Section 4(f) of the Department of Transportation Act, etc.) with respect to one or more highway projects within the State.

Memorandum of Understanding Between the Federal Highway Administration and the California Department of Transportation Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program (effective July 1, 2007). USDOT Secretary, acting by and through the FHWA, officially assigns and the Department assumes all of the USDOT Secretary's responsibilities under

NEPA.A copy of the MOU is available at: http://www.dot.ca.gov/ser/downloads/MOUs/nepa_delegation/6005mou.pdf. It stipulates that pursuant to the MOU, the USDOT Secretary assigned, and the Department assumed, DOT Secretary responsibilities for environmental review, interagency consultation and regulatory compliance for the environmental review and/or approval of projects.

A list of all applicable federal environmental laws is provided below:

- 40 CFR 1500, "Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act," (CEQ, November 29, 1978)
- U.S. DOT Order 5610.1C, (September 18, 1979)
- 23 CFR 771, "Environmental Impact And Related Procedures"
- Technical Advisory T6640.8A
- Clean Air Act (CAA) (42 U.S.C.7401-7671(q), except for Conformity Determinations required under Section 176 of the CAA (42 U.S.C.7506)
- Compliance with the Noise Regulations at 23 CFR 772
- Section 7 of the Endangered Species Act of 1973, 16 U.S.C. 1531-1544 and Section 1536
- Marine Mammal Protection Act, 16 U.S.C. 1361
- Anadromous Fish Conservation Act, 16 U.S.C. 757(a)-757(g)
- Fish and Wildlife Coordination Act, 16 U.S.C. 661-667(d)
- Migratory Bird Treaty Act, 16 U.S.C. 703-712
- Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended, 16 U.S.C. 1801 et seq.
- Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470(f) et seq.
- Archeological Resources Protection Act of 1977, 16 U.S.C. 470(aa)-11
- Archeological and Historic Preservation Act, 16 U.S.C. 469-469(c)
- Native American Grave Protection and Repatriation Act (NAGPRA), 25 U.S.C. 3001-3013
- American Indian Religious Freedom Act, 42 U.S.C. 1996
- Farmland Protection Policy Act (FPPA), 7 U.S.C. 4201-4209
- Clean Water Act, 33 U.S.C. 1251-1377: Section 404, Section 401, and Section 319
- Coastal Barrier Resources Act, 16 U.S.C. 3501-3510
- Coastal Zone Management Act, 16 U.S.C. 1451-1465
- Land and Water Conservation Fund Act (LWCF), 16 U.S.C. 4601-4604
- Safe Drinking Water Act (SDWA), 42 U.S.C. 300(f)-300(j)(6)
- Wild and Scenic Rivers Act, 16 U.S.C. 1271-1287
- Emergency Wetlands Resources Act, 16 U.S.C. 3921, 3931
- Mitigation of Impacts to Wetlands and Natural Habitat, 23 CFR 777
- TEA-21 Wetlands Mitigation, 23 U.S.C. 103(b)(6)(m), 133(b)(11)
- Flood Disaster Protection Act, 42 U.S.C. 4001-4128
- 23 U.S.C. 138 and Section 4(f) of the Department of Transportation Act of 1966

- 49 U.S.C. 303 and implementing regulations at 23 CFR 774
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675
- Superfund Amendments and Reauthorization Act of 1986 (SARA)
- Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901-6992(k)
- Executive Order 11990 - Protection of Wetlands
- Executive Order 11988 - Floodplain Management
- Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- Executive Order 13112 - Invasive Species

Refer to the SER (Chapter 1) for a description of each of the above statutes, regulations, policy and guidance.

ROLES AND RESPONSIBILITIES

LOCAL AGENCY

1. Develops a complete Project Description (including project limits, purpose and need, logical termini and independent utility) and prepares project area maps and cross-sections showing existing and proposed project.
2. Conducts a preliminary environmental investigation, requests technical information from resource and regulatory agencies, and completes the PES Form (Exhibit 6-A, "Preliminary Environmental Study [PES] Form") in accordance with the instructions provided in Exhibit 6-B, "Instructions for Completing the Preliminary Environmental Study (PES) Form" in this chapter.

   Note: Coordination with the State Historic Preservation Office (SHPO), the U.S. Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS) beyond information gathering is the responsibility of the Caltrans District Senior Environmental Planner (SEP) (or designee).
3. Ensures that where PES Form indicates no technical studies are required, the continuation sheet of the PES Form summarizes how the requirements of relevant federal environmentally related laws have been met.
4. Submits the PES Form to the DLAE in accordance with the Step-by-Step Procedures provided at Section 6.4 of this chapter.
5. Waits to initiate required technical studies until the PES Form has been fully signed by Caltrans.
6. Prepares a draft Area of Potential Effect (APE) map and identifies historic properties.
7. Ensures that the qualifications of consultants preparing Section 106 studies meet the Secretary of Interior Standards for the appropriate discipline.
8. Ensures that consultant contracts and scopes of work direct the development of technical studies and reports consistent with the fully signed PES Form, and that the format and content of all technical reports and NEPA documents is consistent with guidance set forth in the SER.
9. Performs the first Quality Control Review on all EAs and EISs and their supporting technical studies.

10. Completes the External Certifications (Environmental Document Quality Control Review Certification) form for all EAs and EISs.
11. Utilizes the NEPA-Only EA and EIS Annotated Outlines or the Joint EIR/EIS, Joint EIR/EA and Joint IS/EA Annotated Outlines.
12. Is responsible for complying with applicable state and local laws, obtaining necessary permits, and ensuring that mitigation commitments are fully incorporated into Final Plans, Specifications and Estimates (PS&E), and fully implemented during construction.
13. Provides Caltrans with a list of mitigation commitments required to comply with NEPA. *Note: Reference to mitigation is in a NEPA context, not CEQA.*
14. Provides Caltrans with a copy of all environmental permits, approvals and agreements from resource and regulatory agencies, including all terms and conditions of the permits, agreements and approvals.
15. Maintains copies of NEPA documentation and supporting technical reports for a period of three (3) years following FHWA reimbursement for final project costs. When mitigation is required, environmental documentation shall be maintained until all terms of required mitigation have been fully implemented. This includes the required monitoring period.
16. For major projects exceeding $500 million, a draft Project Management Plan (PMP) shall be submitted by the local agency to the DLAE prior to the ROD, FONSI, or CE determination. A final PMP shall be submitted within ninety (90) days after the environmental determination which determines the scope of the project. See Chapter 2, "Roles and Responsibilities," of the LAPM for details.
17. Notifies the DLAE of changes in project scope, cost, schedule, or project limits.

CALTRANS:

1. District Local Assistance:

1.1 District Local Assistance Engineer (DLAE) or designee when applicable

1.1.1. Reviews the PES Form and supporting documentation for all projects.

1.1.2. Verifies that project is properly listed in the Regional Transportation Program (RTP) and Federal Statewide Transportation Improvement Program (FSTIP) prior to signing PES Form and CE Form.

1.1.3. Indicates concurrence with recommended NEPA Class of Action (CE, EA, EIS) and required technical studies by signing the PES Form.

1.1.4. Ensures, that where the PES Form indicates that no technical studies are required, the continuation sheet of the PES Form summarizes how the requirements of relevant federal environmentally related laws have been met.

1.1.5. Arranges and attends Early Coordination Meeting.

1.1.6. Jointly approves CE Determinations (with District SEP).

1.1.7. Informs the District SEP (or designee) of the local agency project delivery schedule, tracks review of local agency technical reports and NEPA documents, and notifies the District SEP (or designee) when issues arise or any changes occur that may affect the NEPA process.

1.1.8. Reviews and signs APE map (in coordination with District Professionally Qualified Staff [PQS]) for undertakings when applicable.

1.1.9. Immediately notifies local agency of NEPA approval so that they may commence with final design.

1.1.10. Serves as the focal point (unless otherwise designated) between the local agency and Caltrans.

1.1.11. Serves as the focal point for coordination with FHWA regarding engineering decisions and design exceptions.

1.1.12. Transmits (unless otherwise delegated) all correspondence and documentation between local agency and Caltrans.

1.1.13. Transmits (unless otherwise delegated) all correspondence and documentation between Caltrans and FHWA.

1.1.14. Ensures all environmental fields in Local Assistance Database, Local Program 2000 (LP2000) are completed promptly in support of annual reporting requirements and compliance with performance measures.

1.1.15. Determines and approves Reasonable and Feasible Noise Abatement Measures.

1.1.16. Jointly approves Summary of Floodplain Encroachment Form (with District SEP).

1.1.17. Makes Only Practicable Alternative Finding (for significant Floodplain encroachments). *Note: If a significant floodplain encroachment is identified as a result of floodplains studies, FHWA will need to approve the encroachment and concur in the Only Practicable Finding. See Chapter 17 of the SER for additional information regarding floodplains.*

1.1.18. Attends and supports public hearings on EAs and EISs.

1.1.19. Determines in coordination with the District SEP (or designee) whether mitigation represents a reasonable and prudent expenditure of public funds and whether mitigation measures are eligible for federal funding.

1.1.20. Maintains project files and general administrative files.

1.1.21. Ensures project files and general administrative files are available for inspection by FHWA staff upon reasonable notice (*Note: the Section 6005 Pilot Program MOU defines reasonable notice as making documents available on-site in no less than five (5) days following a request by FHWA*).

1.1.22. Assists, as needed, with the self-assessment of the Caltrans Quality Control and Quality Assurance process in the identification of areas needing improvement and the implementation of corrective actions necessary to address areas needing improvement.

1.1.23. Assists, as needed, in the development of the 6005 Quarterly Report to FHWA.

1.1.24. Maintains adequate organizational resources and sufficient staff capability and expertise to carry out the responsibilities assigned under the 6004 and 6005 MOU effectively.

1.2 District Senior Environmental Planner (SEP) or Designee

1.2.1. Reviews the PES Form and supporting documentation for all projects.

1.2.2. Determines NEPA Class of Action (CE, EA, EIS) and required technical studies by signing PES Form.

1.2.3. Ensures that where PES Form indicates that no technical studies are required, the continuation sheet of the PES Form summarizes how the requirements of relevant environmentally related laws have been met.

1.2.4. Attends Early Coordination Meeting when requested.

1.2.5. Determines if the CE/CE Form is ready for signature. Jointly signs CE/CE Form with DLAE. *Note: District SEP's signature on CE/CE Form may not be delegated below the level of the District SEP.*

1.2.6. Reviews NEPA documents and supporting technical reports and determines if they are complete and sufficient in accordance with the guidance set forth in the SER.

1.2.7. Jointly signs the Summary of Floodplain Encroachment Form with DLAE.

1.2.8. Section 7 Conference Opinion for Endangered Species Act (ESA) Proposed Species or Proposed Critical Habitat.

1.2.9. Initiates Section 7 Formal and Informal Consultation with USFWS and/or NMFS for ESA listed species and/or their critical habitat.

1.2.10. Establishes the environmental project file utilizing the Caltrans Uniform Environmental File System as soon as environmental studies begin.

1.2.11. Completes all environmental fields in the LP2000 in support of annual reporting requirements and compliance with performance measures.

1.2.12. Monitors District Local Assistance environmental process relating to project determinations, environmental analysis and project file documentation, checks for errors and omissions, and takes corrective action as needed.

1.2.13. Provides training to both internal and external partners on environmentally related topics, as requested or as resources allow.

1.2.14. Cooperates in monitoring performance under the MOU and modifies practices as needed to assure quality performance.

1.2.15. Assists with the development of the Section 6005 Quarterly Reports and the Quarterly Performance Reports under Section 6004.

1.2.16. Cooperates fully with FHWA in all quality assurance activities.

1.2.17. Provides FHWA any information necessary in order for the FHWA to carry out its government-to-government consultation.

1.2.18. Provides FHWA with evidence that the NEPA compliance and any other environmental responsibilities assigned under the 6004 and 6005 MOUs have been completed in accordance with the MOU prior to request for authorization for funding or other action.

1.2.19. Carries out assigned consultation, review, and coordination activities in a timely and proactive manner.

1.2.20. Makes all reasonable and good faith efforts to identify and resolve conflicts with federal, State, and local agencies.

1.2.21. Performs Document Quality Control Review and signs Certification forms for EAs and EISs.

1.2.22. Makes Wetlands Only Practicable Alternatives Finding and Least Environmentally Damaging Practicable Alternative (LEDPA).

1.2.23. Makes determination that proposed action includes all Practicable Measures to Minimize Harm.

1.2.24. Signs Protection of Wetlands Statement.

1.2.25. Coordinates with the Army Corps of Engineers (ACOE), Environmental Protection Agency (EPA), USFWS, and NMFS prior to making Wetland Determination.

1.2.26. Approves Section 4(f) de minimis and Programmatic Section 4(f) Evaluations.

1.2.27. Approves Draft Section 4(f) Evaluations for Public Circulation.

1.2.28. Approves Individual Section 4(f) Evaluations.

1.2.29. Determines validity of approved CEs, EAs, and EISs for Reevaluations (memo or report) and Revalidations (form).

1.2.30. Approves Notice of Intent (NOI) to prepare an EIS, and sends to FHWA for publication in the Federal Register (FR). *Note: Only a federal agency can post in the FR.*

1.2.31. Attends public hearing on EAs and EISs.

1.3 District Professionally Qualified Staff (PQS)

1.3.1. Reviews the PES Form and supporting documentation for all projects.

1.3.2. Reviews the PES Form and indicates the results of their review in the PQS signature block of the PES Form.

1.3.3. Indicates appropriate response to Question #35 under Section A of the PES Form, completes Sections B, C, and D (regarding Section 106), and signs the Section G of the PES Form for all projects.

1.3.4. When applicable, reviews and signs (in concert with the DLAE) the local agency-prepared APE maps, indicating approval.

1.3.5. Attends Early Coordination Meetings when requested and provides the local agency with guidance on proper procedures and required format and content of all cultural reports.

1.3.6. Reviews and approves cultural resource reports and transmits them to the SHPO when required.

1.3.7. Provides the DLAE with periodic updates and copies of all transmittals to the SHPO.

1.4 District Local Assistance NEPA Delegation Coordinator

1.4.1. Assists as needed with the district review of EISs and routine and complex EAs.

1.4.2. Assists with new record-keeping and reporting to document whether Caltrans performs the federal functions responsibly and appropriately, and whether or not the programs in fact streamlined the project delivery process.

1.4.3. Assists with quarterly reporting on CEs approved under the Section 6004 assignment.

1.4.4. Assists with 15-month programwide Section 6004 report.

1.4.5. Assists with Section 6005 formal federal audits twice a year for the first two years and once a year thereafter.

1.4.6. Assists with internal self-assessments.

1.4.7. Assists with audit protocol.

1.4.8. Assists with report to Legislature on time-savings and qualitative measures.

1.4.9. Assists with FHWA process reviews.

1.4.10. Assists with training internal staff and local agencies on the new forms and procedures to implement Section 6004 and 6005 assignment; provides outreach to local agencies and their consultants to explain the NEPA Delegation programs.

1.4.11. Provides training to local agencies and internal staff on the new procedures under NEPA Delegation and assists them through the new processes.

1.4.12. Assists in maintaining consistency in document review, reporting, and training between cross-district allocations.

1.5. District NEPA Quality Control Reviewer

1.5.1. Reviews technical reports, administrative Draft, Final EISs and Complex EAs.

1.5.2. Signs Internal Certifications (Environmental Document Quality Control Review Certification) form.

1.6. Deputy District Director (DDD) for Environmental or Designee

1.6.1. Signs EA (NEPA-only) title page, FONSI, and Supplemental EIS.

1.7. District Director (DD) or Designee

1.7.1. Signs EIS title page and ROD.

1.7.2. Signs Section 106 MOAs as concurring party.

2) Division of Environmental Analysis (DEA)

2.1. HQ Division of Environmental Analysis Environmental Coordinator (HQ EC)

2.1.1. Resolves disputes on environmental findings in accordance with protocols in SER.

2.1.2. Reviews and comments on EISs, complex EAs and Individual Section 4(f) Evaluations for compliance per Quality Control/Quality Assurance procedures set forth in the MOU.

2.1.3. Provides expertise as needed.

2.1.4. Provides concurrence date (via e-mail) on PES Form for EAs and EISs.

2.2. Chief, HQ Division of Environmental Analysis

2.2.1. As the Department's designated Preservation Officer, signs Section 106 MOAs as signatory for Caltrans.

3) Division of Legal

3.1. Reviews local assistance administrative EISs to ensure their legal sufficiency.

3.2. Defends local assistance NEPA documents in a court of law.

3.3. Reviews Individual Section 4(f) Evaluations to ensure they are legally sufficient.

4) Division of Local Assistance (DLA)

4.1. Statewide NEPA Delegation Coordinator

4.1.1 Manages the implementation of the NEPA Delegation Pilot Program for Local Assistance.

4.1.2. Works with districts, cities, counties, Regional Transportation Planning Associations (RTPAs), Metropolitan Planning Organizations (MPOs),

other Headquarters units, and FHWA, as needed, to ensure a smooth transition.

4.1.3. Ensures RTPAs, MPOs, and regulatory agencies working on local assistance projects understand the NEPA Delegation Programs.

4.1.4. Addresses local agency questions and concerns throughout the program.

4.1.5. Serves on or leads statewide and corporate teams to ensure that the local assistance needs and issues are addressed under NEPA Delegation.

4.1.6. Ensures that the local assistance NEPA Delegation and environmental programs are continuously updated to be consistent with DEA's policies and procedures, including data-tracking, reporting and document standards, and ensures local assistance issues are addressed in those policies.

4.1.7. Participates in FHWA semi-annual and annual audits, as requested, and ensure statewide quality control of the reporting for these and for the reports to the State Legislature.

4.1.8. Ensures statewide consistency and quality in the program statewide, including informing the NEPA Delegation SEPs immediately of policy developments. Provides them with training, guidance and tools for performing their jobs, and facilitating their interaction as part of a statewide team.

4.1.9. Monitors local assistance financial resources necessary to carry out the responsibilities being assumed and takes appropriate action to obtain the additional financial resources needed to carry out the responsibilities assumed in the MOUs.

4.2. Statewide NEPA Compliance Coordinator

4.2.1. Serves or leads statewide and corporate teams to ensure that local assistance environmental needs and issues are addressed in the local assistance guidance and procedures.

4.2.2. Maintains and updates the NEPA compliance components of the LAPM, the LP2000 database, and relevant sections in the SER pertaining to local assistance to be consistent with DEA's policies and procedures, including data tracking, reporting, and document standards.

4.2.3. Develops and provides training to DLAEs, District, and Region environmental staff for local assistance and local agencies as needed.

4.2.4. Performs process reviews to assess compliance with federal requirements.

4.2.5. Assists with and/or coordinates the resolution of issues that cannot be resolved in the district.

4.2.6. Assists with FHWA process reviews, semi-annual and annual audits, and reports to the State Legislature.

5) FHWA

5.1. Posts NOI and ROD in FR.

5.2. Performs environmental review, consultation or other related action on:

- projects requiring FTA funding or approval
- projects involving international and state border crossings
- high priority projects under E.O. 13274

- projects funded by Federal Lands Highway Program unless Caltrans designs and constructs

5.3. Performs all government-to-government consultation with Indian Tribes as defined in 36 CFR Part 800.16(m).

5.4. Makes air quality conformity determinations as specified in the 6005 MOU.

5.5. Approves significant floodplain encroachments, identified as a result of floodplain studies, and concurs in the Only Practicable Alternative Finding.

5.6. Performs audits and process reviews to ensure Caltrans compliance with Section 6004 and 6005 MOUs.

5.7. Performs US DOT responsibilities for statewide and metropolitan planning.

5.8. Provides and assists with training as necessary.

6) Other State and Federal Responsible and Regulatory Agencies

6.1. Determine whether the local agency's action complies with the provisions of law germane to their statutory responsibility.

APPLICABILITY

Any local assistance project, "...financed, assisted, conducted, regulated or approved by a federal agency..." (FHWA), (40 CFR Part 1508.18[a]**)** is subject to compliance with the provisions of the NEPA. Any amount of federal involvement in a project requires that the entire project be included in the process, regardless of phases or segments not funded by FHWA. The scope of NEPA responsibility is not determined based on funding alone.

SCIENTIFIC AND COMMERCIAL DATA

NEPA requires that environmental information be "... of high quality based on accurate scientific analysis and expert agency comment…" (40 CFR Part 1500.1[b]). Local agencies are required to follow Caltrans policy and guidance set forth in the SER to ensure that NEPA determinations and documents reflect the most current scientific methodologies, and that analysis is of the highest quality.

6.2 AN OVERVIEW OF THE ENVIRONMENTAL PROCESS

This section provides a general overview of the NEPA process and the three classes of actions possible to achieve compliance with the requirements of NEPA. A brief overview of other applicable federal environmental requirements and general procedures for demonstrating compliance with these requirements is also provided.

A list of MOUs intended to expedite compliance with NEPA and other federal environmental requirements are provided later in this section. Information on the integration of California Environmental Quality Act (CEQA) and NEPA time frames for achieving environmental compliance, general information on permits, mitigation, scope change, and reevaluations are also discussed in this section.

NEPA

The NEPA process is guided by the National Environmental Policy Act and its implementing regulations, 23 CFR Part 771 (see Section 6-1, "Authority"). The process

helps determine the appropriate class of action (EIS, EA, or CE) based on the potential for "significant" impact as defined in 40 CFR Part 1508.27.

Other federal environmentally related laws are intended to protect a specific element of the environment. These include, but are not limited to, Section 4(f) (Protection of Publicly Owned Park, Recreation Area, Wildlife or Waterfowl Refuge or Land from Historic Sites), Section 106 (Protection of Cultural Resources & Historic Properties), Section 7 (Protection of Endangered Species), E.O. 11990 (Protection of Wetlands), E.O. 11998 (Protection of Floodplains), and E.O. 13112 (Invasive Species).

Federal actions must comply with the provisions of NEPA and all applicable federal environmentally related laws. The NEPA document is a summary of the findings made and conclusions reached during the environmental analysis of a proposed federal action. Therefore, when other federal environmentally related laws are involved, it is expected that compliance with these laws will be completed prior to completion of the NEPA process.

CATEGORICAL EXCLUSION (CE)

CEs are actions that meet the definition contained in 40 CFR Part 1508.4 based on past experience with similar actions that do not involve significant environmental impacts. They are actions: a) that do not induce significant impacts to plan growth or land use for the area, b) that do not require the relocation of significant numbers of people, c) that do not have a significant impact on any natural, cultural, recreational, historical or other resources, d) that do not involve significant air, noise, or water quality impacts, and e) that do not have significant impacts on travel patterns, or do not otherwise (either individually or cumulatively) have any significant environmental impacts (23 CFR Part 771.117[a]).

A CE is prepared and processed when environmental documentation supports the conclusion that no significant environmental impacts will occur as a result of the project. Refer to the SER, Chapter 30, for details on preparing CEs and Section 6.5 and 6.6 (in this chapter) for procedures on processing CEs.

Any action that normally would be classified as a CE, but would involve unusual circumstances will require FHWA (or Caltrans where assigned under Section 6004 or 6005) to conduct appropriate environmental studies to determine in cooperation with the local agency, if the CE classification is proper (23 CFR Part 771.117[b]).

Such unusual circumstances include:

a) significant environmental impacts
b) substantial controversy on environmental grounds
c) significant impacts on properties protected by Section 4(f) of the DOT Act
d) significant impacts on properties protected by Section 106 of the National Historic Preservation Act
e) inconsistencies with any federal, state, or local law, requirement or administrative determination relating to the environmental aspects of the action

A list of actions meeting the criteria for a CE in accordance with 40 CFR Part 1508.4 and 23 CFR Part 771.117(a), and normally not requiring any further NEPA approvals by Caltrans, where assigned under Section 6004 and 6005 MOUs, (or FHWA for projects not assigned) are provided in Exhibit 6-E, "Categorical Exclusion Checklist," in this chapter.

Additional actions meeting the criteria for a CE in accordance with 40 CFR Part 1508.4 and 23 CFR Part 771.117(a), may be designated as CEs only after approval by Caltrans, where assigned under Section 6004 and 6005 MOUs (or FHWA for projects not assigned). The local agency should refer to the CE Checklist provided at Exhibit 6-E "Categorical Exclusion Checklist," when preliminarily considering whether the action meets the criteria for a CE.

FHWA and Caltrans further determined pursuant to 23 CFR Part 771.117(d) that the list of actions provided in Appendix A of the 6004 MOU also satisfies the criteria for a CE based on documentation that demonstrates that the specific conditions or criteria for the CEs are satisfied, and that significant environmental effects will not occur.

ENVIRONMENTAL ASSESSMENT (EA)

An EA is an analysis of the impacts of a project and is used to determine if the project will have significant environmental impacts. When a project cannot be designated as a CE by Caltrans and yet does not clearly require preparation of an EIS, preparation of an EA will assist in determining whether an EIS is needed.

The requirement to prepare an EA may come about through one or more of the following situations:

a) based on information gathered during PES, where it is clear that the proposed project will not qualify for a CE, or where unusual circumstances are likely. The local agency identifies the potential for significance under Sections A and B of the PES Form and recommends the development of an EA (under Section G of the PES Form). The DLAE and District SEP determine that an EA is the appropriate NEPA Class of Action by signing the PES Form, and the HQ EC will concur via e-mail to the District SEP.

b) during or upon completion of technical studies when it becomes apparent that the proposed project will not qualify for a CE, or that unusual circumstances exist, the decision to prepare an EA is made by the District SEP in collaboration with the DLAE and with the written concurrence by e-mail of the HQ EC.

Depending upon the complexity of issues involved in the project, Caltrans may determine that the Draft EA be reviewed and processed as a "Complex EA." Complex EAs are projects that typically involved one or more of the following:

- multiple location alternatives
- debate related to purpose and need
- strong public controversy
- issues of logical termini or independent utility
- individual Section 4(f) determinations
- complex Endangered Species Act issues
- numerous cumulative impacts
- high mitigation costs

The DLAE and District SEP with concurrence of the HQ EC shall determine if the EA should be processed as a complex EA.

The local agency is responsible for conducting all required technical studies and for preparing the technical reports and the Draft EA in accordance with guidance set forth in

the SER. The EA is a summary of the findings and conclusions of technical reports and the results of regulatory and resource agency coordination, and should accurately reflect the outcome of both. Local agencies are required to use the:

- Initial Study/Environmental Assessment Annotated Outline, provided at: http://www.dot.ca.gov/ser/downloads/templates/IS-EAoutline aug06.doc
- Environmental Impact Report/Environmental Assessment Annotated - Outline provided at: http://www.dot.ca.gov/ser/downloads/templates/EIR-EA Outline Annotated aug06.doc, or
- NEPA-Only Environmental Assessment Annotated Outline provided at: http://www.dot.ca.gov/ser/downloads/templates/

The local agency is also responsible for performing the initial Quality Control Review of their Draft EA and supporting technical studies and for documenting their Quality Control Review on the External Certifications (Environmental Document Quality Control Review Certification) form, provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc prior to submitting their Draft and Final EAs to Caltrans for review and approval.

Caltrans District SEP (or designee) and District technical specialists are responsible for performing the second Quality Control Review of the Draft EA, supporting technical studies, and documenting their Quality Control Review on the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: (http://www.dot.ca.gov/ser/vol1/sec6/cha38nepa/Internal_QC_Certification.doc).

Approval of the Draft EA may be subject to revisions being made by the local agency prior to circulation. When District Environmental Staff determines that deficiencies exist, the DLAE notifies the local agency.

Technical reports and Draft EAs that do not comply with FHWA policies and guidance, requirements of all applicable federal laws, executive orders and regulations, or are not internally consistent, or are not prepared consistent with the applicable SER annotated environmental document outlines, will be returned to the local agency by the DLAE with guidance on necessary revisions needed for a compliance and sufficiency determination.

Technical reports and Draft EAs that do comply with FHWA policies and guidance, the requirements of all applicable federal laws, executive orders and regulations, and are found to be internally consistent and prepared consistent with the applicable SER annotated environmental document outlines are approved for public availability by the Caltrans District Director or Deputy District Director (Environmental) or the Environmental Office Chief, if designated by District Director.

NEPA encourages public participation. However, because there is no formal scoping requirement for an EA, the degree of public participations and the means of soliciting public inputs are determined on a case-specific-basis, taking into consideration the degree of public interest or controversy. The local agency initiates public circulation of the draft EA following approval by Caltrans and following public involvement, responds to comments as necessary, and prepares the Final EA. Local agencies are responsible for performing the initial Quality Control on Final EAs. When an EA does not identify any significant impacts, and no significant impacts are identified during the public availability, the local agency submits the record of public comments, responses, and request for a FONSI to the DLAE.

Pursuant to tracking and reporting requirements stipulated in the 6005 MOU, the local agency is also responsible for providing the DLAE with a list of all mitigation commitments and a copy of environmental permits and permit conditions.

In accordance with the 6005 MOU, Caltrans is responsible for making the official "finding" that a proposed project will not significantly impact the environment. The Caltrans District Director or Deputy District Director (Environmental) or Environmental Office Chief, if designated by District Director, signs the FONSI making this "finding."

The DLAE notifies the local agency immediately upon Caltrans approval of the FONSI, so that they may commence with final design.

When an EA indicates that the project has the potential to result in a significant impact, an EIS must be prepared. An EA is not required when a decision has already been made to prepare an EIS. For details on preparing and processing an EA refer to the SER, Chapter 31.

Prior to submitting a "Request for Authorization" for new phases of work, the local agency will enter the appropriate coding and the date Caltrans signed the FONSI, under "Environmental Data." Refer to Chapter 3, Exhibit 3-E "Request for Authorization to Proceed Data Sheets," and Exhibit 3-F "Instructions for Request for Authorization Data Sheets," of the LAPM.

The District SEP (or designee) completes appropriate environmental fields in LP2000 for tracking, report, and performance monitoring.

ENVIRONMENTAL IMPACT STATEMENT (EIS)

An EIS is a full disclosure document and is the highest level of analysis required by NEPA. The determination to prepare an EIS may result from one or more of the following situations:

- based on information gathered during the PES, where it is clear that the proposed project will have significant impacts. The local agency indicates the potential for significance under Sections A and B of the PES Form, and the DLAE and District SEP (with written concurrence of HQ EC in e-mail) determine that EIS is the appropriate NEPA Class of Action, by signing the PES Form.
- based on the conclusions of the draft EA where the potential for "cumulative" significant adverse impacts are shown.

When it is determined that a proposal may have a significant environmental impact, the local agency drafts the NOI to prepare an EIS in collaboration with the DLAE and District SEP (or designee) and arranges for the Early Scoping Meeting.

The local agency conducts the Early Coordination Meeting, undertakes all required technical studies, and prepares the required technical reports and the Draft EIS in accordance with guidance set forth in the SER.

An EIS is a summary of the findings and conclusions of technical reports, the results of regulatory and resource agency coordination and should accurately reflect the outcome of both. The local agency is required to use the Environmental Impact Report/ Environmental Impact Statement Annotated Outline provided at: http://www.dot.ca.gov/ser/downloads/templates/EIR-EIS outline aug06.doc,

or the NEPA-Only Environmental Impact Statement Annotated Outline provided at: http://www.dot.ca.gov/ser/downloads/templates/.

The local agency is responsible for performing a quality control review of their EIS and supporting technical studies and completing the External Certifications (Environmental Document Quality Control Review Certification) form.

Details on preparing and processing EISs are provided in Section 6.9 of this chapter. The District SEP (or designee) tracks the review and processing of the EIS and records relevant dates and information in LP2000. The DLAE provides notification to the local agency of environmental document status and approval.

Prior to submitting a "Request for Authorization" for new phases of work, the local agency enters the appropriate coding and date of Caltrans District Director signature on the ROD under "Environmental Data." Refer to the Chapter 3, Exhibit 3-G, "Request for Authorization - Data Sheets," and Exhibit 3-H, "Request for Authorization - Application Instructions" in the LAPM.

OTHER FEDERAL ENVIRONMENTALLY RELATED PROCESSES

Every action that has federal involvement must comply with laws that protect particular elements of the environment. Although NEPA requirements have remained relatively unchanged over the years, environmentally related processes have increased in number and importance.

Following is a summary of those federal environmentally related laws processes most commonly required on local assistance transportation projects. Local agencies are required to comply with the provisions of these laws prior to finalizing NEPA documentation.

- **Section 4(f) - (Protection of Publicly Owned Park, Recreation Area, Wildlife or Waterfowl Refuge, or Land from Historic Sites)** - The Section 4(f) process was established in the U.S. Department of Transportation Act of 1966 to give certain protections to publicly owned public parks, recreational areas, wildlife and waterfowl refuges, and land from historic sites of national, state or local significance. Section 4(f) requires that the agency must show that there are no feasible or prudent alternatives to the use of these areas. If Section 4(f) land is required, a Section 4(f) avoidance alternative is required. If Section 4(f) land is still required, all possible planning must be taken to minimize the impact. Guidance on compliance with the provisions of Section 4(f) is provided in the SER, Chapter 20.
- **Section 106 - (Protection of Cultural Archaeological Resources & Historic Properties)** - The National Historic Preservation Act of 1966 declares a national policy of historic preservation and encourages preservation. It established the Advisory Council on Historic Preservation (ACHP) and required that federal agencies take into account the effect of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation (Council) a reasonable opportunity to comment on the undertaking. ACHP promulgated procedures, codified in 36 CFR 800, et.seq., that must be followed on any federal project or action. Caltrans and FHWA entered into a Programmatic Agreement (PA) on how to implement 36 CFR Part 800 for California's federal-aid highway program. Guidance on compliance with the provisions of 36 CFR Part 800 and the PA is provided in the SER, Chapter 28.
- **Section 7 of the Endangered Species Act - (Protection of Endangered Species)** - The federal Endangered Species Act (ESA) provides a means to conserve the ecosystems upon which federally listed threatened and endangered species depend

and provide a program for the conservation of those species. The ESA requires federal agencies consult with the USFWS and NMFS to ensure that actions approved or funded by federal agencies (such as FHWA) are not likely to jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of the critical habitat of such species. Compliance with Section 10 of the ESA does not meet Section 7 requirements. Guidance on compliance with the provisions of Section 7 of the U.S. ESA is provided in the SER, Chapter 14.

- **Presidential Executive Order 11990 (E.O. 11990) - Protection of Wetlands** - EO 11990 requires that when a construction project involves wetlands, a finding must be made, 1) that there is no practicable alternative to such construction, and 2) that the proposed action includes all practicable measures to minimize impacts to wetlands resulting from such use. The FHWA Division Administrator or Caltrans, where assigned under Section 6004 or 6005 makes the finding required by Executive Order 11990. Guidance on compliance with the provisions of EO 11990 is provided in the SER, Chapter 15.

- **Presidential Executive Order 11988 (E.O. 11988) - Floodplain Management** - In response to EO 11988, FHWA or Caltrans, where assigned under Section 6004 or 6005, requires a formal "Floodplain Finding" be made for federal actions involving significant encroachments in floodplains. The formal Floodplain Finding is based on information contained in the Location Hydraulic Report. The formal Floodplain Finding is included as part of the supporting documentation for the Final Environmental Impact Study (FEIS). Guidance on compliance with the provisions of E.O. 11988 is provided in the SER, Chapter 17.

- **Presidential Executive Order 12898 (EO 12898) - "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"-** This EO, issued on February 11, 1994, emphasizes the intent of Title VI of the Civil Rights Act of 1964. The EO requires federal agencies to ensure that their programs, policies and activities do not have the effects of: 1) excluding persons and populations from participation, 2) denying persons and populations the benefits of federal programs, or 3) subjecting persons and populations to discrimination because of race, color or national origin. Consideration of environmental justice impacts must be addressed in all NEPA classes of action. When preparing an EIS, local agencies must disclose disproportionate impacts on minority or low-income communities. Guidance on compliance with the provisions of EO 12898 is provided in the SER, Chapter 25.

- **Presidential Executive Order 13112 (EO 13112) - Invasive Species, issued on February 3, 1999 (effective November 15, 1999)** - This EO prohibits the use of federal-aid for construction, re-vegetation, or landscaping activities that purposely include the use of known invasive plant species. Until an approved national list of invasive plants is defined by the National Invasive Species Council, "known invasive plants," shall be consistent with the official noxious weed list of the State in which the activity occurs. Caltrans recommends use of federal-aid for new and expanded invasive species control efforts under each State's Department of Transportation roadside vegetation management program. Where the potential exists for the introduction or spread of invasive species, the environmental document should include a discussion of the potential impact of these species and any anticipated prevention or control measures to be taken. Guidance on compliance with the provisions of EO 13112 is available in the SER, Chapter 1.

- **Clean Air Act, as amended (42 U.S.C. 7401 et seq.)** - This Act requires that federally supported activities must conform to the State Implementation Plan (SIP), whose purpose is

that of attaining and maintaining the National Ambient Air Quality Standards (NAAQS). Section 176(c) of the Clean Air Act as amended in 1990, established the criteria and procedures by which FHWA (Title 23 U.S.C.) and MPOs determine the conformity of federally funded or approved highway and transit plans, programs, and projects to SIPs. The provisions of 40 CFR Part 51 and Part 93 (Final Rule effective November 24, 1993) shall apply in all non-attainment and maintenance areas for transportation-related criteria pollutants for which the area is designated non-attainment or has a maintenance plan. For additional information refer to the SER, Chapter 1.

- **Clean Water Act of 1977 & 1987 (33 U.S.C. 1251-1359) –** This Act protects the chemical, physical and biological integrity of the Nation's waters by regulating discharges of pollutants into waters of the U.S. Section 401 of the Clean Water Act (CWA) requires a water quality certification from the State or Regional Water Quality Control Board when a project requires a federal license or permit, and will result in a discharge into waters of the U.S. Section 402 of the CWA establishes a permitting system for the discharge of any pollutant into waters of the U.S. A National Pollutant Discharge Elimination System (NPDES) permit is required for all point discharges of pollutants to surface waters. Section 404 of the CWA establishes a permit program administered by the ACOE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands). For additional information refer to the SER, Chapter 1.

GENERAL PROCEDURES FOR DEMONSTRATING COMPLIANCE WITH THESE PROCESSES

The general procedures for demonstrating compliance with these Acts are provided below:

- The local agency consults current databases, reviews relevant literature and maps, requests technical information from resource and regulatory agencies, and determines whether compliance with any of the above federal requirements is necessary. The local agency considers the results of this preliminary research when completing the PES Form, and submits the PES Form with all supporting documentation to the DLAE.
- The DLAE and District SEP (or designee) confirm applicability of relevant laws for the project by signing the PES Form. The District PQS determines applicability of Section 106 and confirms the need for APE map. Prior to initiation of technical studies, the local agency prepares a draft APE map for Section 106 studies in accordance with guidance in the SER (and preferably with the assistance of the District PQS) and requests the DLAE to schedule a Coordination Meeting. The Coordination Meeting is the appropriate forum to meet the Caltrans District staff responsible for reviewing and determining the adequacy of the technical reports, obtain District PQS and DLAE signatures on the APE map, and discuss the format and content requirements for each technical report.
- Local agency completes the required technical studies, prepares the technical reports and submits the reports to the DLAE for review and processing. To ensure timely project delivery, local agency and consultants are responsible for ensuring that the format and content of required technical reports and environmental documents are consistent with guidance and annotated outlines set forth in the SER.
- The Caltrans District SEP (or designee) reviews the reports, facilitates consultation under regulation or interagency agreement (or makes the appropriate finding or determination required by law, regulation or EO), and forwards the results of their action to the DLAE for transmittal to the local agency.

- Caltrans District SEP (or designee) logs transmittal date in LP2000 and tracks Caltrans and resource and regulatory agency review time and various other milestones.
- The local agency prepares the appropriate NEPA document based on the results of Caltrans consultation and processes the document to the DLAE for review and approval

INTERAGENCY AGREEMENTS AND MEMORANDUMS OF UNDERSTANDING

Several Agreements have been developed to expedite compliance with NEPA. These Agreements require full documentation and demonstration that the required conditions have been met.

Programmatic Agreement among the FHWA, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (Section 106 PA), effective January 1, 2004. - The Section 106 Programmatic Agreement (PA) implements Section 106 of the NEPA for the Federal-aid Highway Program in California, except when the undertaking is on federally recognized Native American tribal land, in which case the 36 CFR Part 800 procedures must be followed. This Agreement allows Caltrans to consult directly with the SHPO for all steps of the Section 106 process on projects assigned under NEPA Delegation and for most steps on projects exempted from delegation. The Agreement exempts certain property types from evaluation and exempts certain types of projects from any 106 involvements. It reemphasizes the use of Environmentally Sensitive Areas (ESAs) to avoid site excavations for evaluation, defines APE guidelines, and sets out qualifications for decision-making staff. Any project must be screened by the District PQS to determine applicability of Section 106. A copy of the Agreement and guidance on compliance with the terms of the Agreement are provided in the SER, Volume 2, Exhibit 1.1 at: (http://www.dot.ca.gov/ser/vol2/PA-04-EH.pdf)

Programmatic Agreement Regarding the Seismic Retrofit of Historic Bridge Structures in California (March 21, 1995) - This Agreement is for Section 106 process only and provides for the expeditious fulfillment of the requirements under Section 106. Additional assistance from the Caltrans PQS is required when utilizing this Agreement.

Memorandum of Understanding Among the Federal Highway Administration, California Department of Transportation, U.S. EPA, U.S. ACOE, USFWS and the NMFS, National Environmental Policy Act, and Clean Water Act, Section 404 Integration Process for Federal-aid Surface Transportation Projects in California (April 2006). The ACOE, USFWS, FHWA, EPA, NMFS and Caltrans agree on early and ongoing coordination for issues pertaining to waters of the U.S. and associated sensitive species and specifically for projects likely to require an EIS, an individual permit, impact special aquatic sites or impact greater than five (5) acres of other waters of the U.S. The MOU specifies written concurrences that must be obtained from the resource agencies.

If it is anticipated that the project will permanently impact more than five (5) acres of waters of the U.S. and is being processed with an EIS, the local agency, DLAE, and SEP (or designee) shall meet as early as possible to discuss MOU procedures and ensure conformity. A copy of the MOU and procedures for its use are provided in the

SER at: http://www.dot.ca.gov/ser/downloads/MOUs/NEPA404/nepa404_2006_final-mou.pdf

FHWA SECTION 4(F) NATIONWIDE PROGRAMMATICS

- **Independent Bikeway and Walkway Construction Projects, May 23, 1977**- For independent bikeway and pedestrian walkway projects that require the use of recreation and park areas http://environment.fhwa.dot.gov/projdev/4fbikeways.asp
- **FHWA Projects that Necessitate the Use of Historic Bridges, July 5, 1983** - For historic bridge replacement projects. Full historic evaluation and to meet Section 106 requirements are still required http://environment.fhwa.dot.gov/projdev/4fbridge.asp.
- **Federally aided Highway Projects with Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges, December 23, 1986** - This is for federal-aid projects that use minor amounts of land from publicly owned public parks, recreation areas, and wildlife and waterfowl refuges http://environment.fhwa.dot.gov/projdev/4fmparks.asp *Note: This Programmatic 4(f) type may be superseded for many projects by Section 6009 (a), De Minimis Impacts to Section 4(f) Resources (discussed in bullet 6 below).*
- **Federally aided Highway Projects with Minor Involvements with Historic Sites, December 23, 1986** - This is for federal-aid projects which use minor amounts of land from historic sites, which are eligible for inclusion on the National Register of Historic Places. This only applies when the use of the land does not constitute an adverse effect to the historic property at: http://environment.fhwa.dot.gov/projdev/4fmhist.asp *Note: This Programmatic 4(f) type is largely superseded by Section 6009 (a), De Minimis Impacts to Section 4(f) Resources (discussed in bullet 6 below).*
- **Projects that have a Net Benefit to a Section 4(f) Property** - For any project, regardless of NEPA Class of Action (CE, EA or EIS), where a net benefit, or overall enhancement is achieved to the Section 4(f) property. A project does not achieve a net benefit if it will result in a substantial diminishment of the function or value that made the property eligible for Section 4(f) protection. http://www.dot.ca.gov/ser/vol1/sec3/special/ch204f/chap20.htm
- **De Minimis Impacts to Section 4(f) Resources** - SAFETEA-LU Section 6009(a) amended existing Section 4(f) legislation to allow the U.S. DOT to determine that certain uses of Section 4(f) land will have no adverse effect on the protected resource. Under the NEPA assignment, Caltrans determines if a transportation use of Section 4(f) property results in a *de minimis* impact on that property at: http://www.dot.ca.gov/ser/vol1/sec3/special/ch204f/chap20.htm#deminimis
- **Interim Guidance on Applying Section 4(f) On Transportation Enhancement Projects and National Recreational Trails Projects (August 22, 1994)** - Section 4(f) should not be applied to the National Recreational Trails Funding Program and should only be applied to the "Transportation Enhancements Program" when certain conditions are not met by each project. The interim guidance issued in the FR as a final policy interpretation contains the basis for determinations and will be in effect until changes to 23 CFR Part 771 are disseminated through the regulatory

rulemaking process. Once 23 CFR Part 771 has been revised to address this subject, the interim guidance will become null and void.

INTEGRATING CEQA AND NEPA

While this chapter deals exclusively with federal environmental requirements, local agencies are responsible for ensuring full compliance with other state and local environmental laws, and to the fullest extent possible, integrating the NEPA process with the review processes established by these laws. Because state and federal requirements are similar, it is possible to perform only one environmental process that satisfies both state and federal requirements simultaneously when federal approval is required. The environmental document types for CEQA/NEPA (i.e., CE/CE, IS/EA, EIR/EIS) do not necessarily need to match up with each other. An EA may be the appropriate document to prepare under NEPA when an EIR is appropriate under CEQA and so on. Guidance on developing of Joint CEQA/NEPA documents is available in the SER, Chapter 37.

Following are some of the basic similarities and differences between the NEPA and CEQA.

- **Categorical Exclusion (NEPA)/Categorical Exemption (CEQA) Determination** - The list of projects exempt from the federal legislation is quite different from that of the State of California. Because NEPA requires that each federal agency identify its own list of CEs, the list of projects exempt from NEPA is specific to FHWA, unlike CEQA guidelines that list 32 standard categories for all agencies to use. Thus, a careful reading of 23 CFR 771.117 and the Section 6004 and 6005 MOUs is necessary to determine which actions are Categorically Excluded. Separate determinations must be made for the NEPA and CEQA. Section 6.5 "Categorical Exclusions," in this chapter describes this phase of the process.
- **Environmental Assessment/Initial Study** - The required contents of an EA are similar to that of an Initial Study (IS). However, NEPA requires that an EA discuss alternatives, whereas CEQA does not require a discussion of alternatives in an IS. Guidance on the development of Joint IS/EAs is available in the SER, Chapter 37.
- **Integrating Other Environmentally Related Processes (NEPA/CEQA)** - One of the more complex aspects of the EA or EIS preparation is the requirement for integrating NEPA with other federal environmental requirements. The local agency must identify and list in the EA or EIS all other federal environmental requirements that may be applicable to the proposed action and, to the fullest extent possible, integrate the NEPA process with the review processes established by these laws. See Section 6.2 "Other Federal Environmentally Related Processes" in this chapter for a brief overview of the other federal environmental requirements. This degree of integration of state and local environmental review is not required under CEQA.
- **Significant Impact (NEPA) vs. Significant Effect (CEQA)** - NEPA requires the identification of any impacts and the avoidance and minimization of them, with compensation considered when reasonable. NEPA does not focus on assessment of whether each and every adverse impact is significant or not. Presence or absence of "**significant impacts**" as defined by NEPA is the determining factor for what type of environmental document is appropriate. NEPA's definition of a significant impact does not necessarily correlate with CEQA identified "**significant effects**." Further, CEQA requires mitigation only when an impact is designated as "**significant**." This can result in measures to avoid or reduce impacts being identified under NEPA that would not be identified under CEQA.

In cases where the local agency project is processed with no federal involvement, the project will only require compliance with the CEQA.

TIMING FOR ENVIRONMENTAL PROCESSES

Estimating the time required for preparing and processing technical studies and environmental documents is very important when establishing a project delivery schedule. The amount of time needed to demonstrate full compliance with the provisions of NEPA and other federal environmental requirements varies depending upon project scope and the presence of federally protected environmental attributes within and immediately adjacent to the project area (direct), indirect (secondary), and cumulative impacts.

Compliance with the environmental requirements may occur simultaneously with Preliminary Engineering. However, the local agency may not commence with final design prior to obtaining the following environmental document approval: 1) a Caltrans signed CE, 2) FONSI, or 3) ROD. It is incumbent upon the DLAE to notify the local agency as soon as approval is granted and to forward a copy of the signed environmental approval.

The following time frames reflect best case scenarios and do not take into account the time involved in consultant selection, correction of inadequate studies, regulatory or advisory agency review and comment, projects involving large numbers of very complex, unusual environmental issues or controversy. The time frames also assume the various environmental studies and documents are performed and written simultaneously.

Below are some examples for estimating time frames:

- A project eligible for CE with "no required technical studies" can be processed in two (2) weeks, assuming the PES Form and supporting information are complete and sufficient.
- A CE "with required technical studies" may take from one (1) month to one (1) year depending upon the required technical studies that must be completed and the time of year the studies are initiated.
- It is important to identify and plan for critical survey periods when determining a project schedule. For example, surveys for certain plants species may have to be performed in spring or during their appropriate blooming/identifiable period.
- It is also important to factor in sufficient time for potentially lengthy processes such as Section 106. Depending upon the nature of the undertaking and its effects to historic properties, the Section 106 process can take less than one (1) week for screened undertakings to more than twenty (20) months for very complex projects involving multiple resources or requiring archaeological excavation.
- An EA that results in FONSI may take between six (6) months to a year for a project with few complications. The draft EA must undergo a thirty (30) day public availability period. Environmentally complicated or controversial projects may take more than one (1) year for the document to be completed and approved.
- Processing an EA which results in a FONSI with an Historic Property Survey Report (HSPR), or any other environmentally related process may require additional time because these environmentally related processes require separate studies and separate regulatory reviews. For example, a preliminary Finding of Effect to cultural or archaeological resources must be completed before a draft EA or an EIS can be

circulated for public review. Final Section 106 must be complete before the final EA or an FEIS can be approved.

- The local agency should start working on "required technical studies" as early as possible in order to avoid delays. ***Note: The local agency shall not begin "required technical studies" prior to obtaining DLAE and District SEP (or designee) concurrences on the PES Form and attending the Coordination Meeting***. Section 106 studies should not begin until the District PQS can provide guidance on appropriate kinds and level of work. This will minimize the potential for investing in studies that may not be required.

6.3 OTHER CONSIDERATIONS

PERMITS

The local agency is responsible for obtaining all necessary permits, agreements, and approvals from resource and regulatory agencies (401/404, Encroachment, and Coast Guard Bridge Permit, etc,) prior to advertisement for construction. The local agency shall transmit one (1) copy of each permit (with conditions) to the DLAE for submittal to the District SEP (or designee). The District SEP (or designee) shall enter permit data (as required) into the LP2000.

MITIGATION COMMITMENTS AND PLANS, SPECIFICATIONS & ESTIMATE

The local agency shall develop a list of all mitigation as related to NEPA and provide it along with the technical reports and draft environmental document to the DLAE.

The local agency shall certify that all required mitigation has been completed and/or is included in the Final Plans, Specifications and Estimate (PS&E), and that any required ongoing maintenance of mitigation is implemented (23 CFR Parts 635,771, and 772).

The DLAE (in coordination with the District SEP) ensures that mitigation is a reasonable expenditure of federal funds. Caltrans assures that mitigation measures and any required ongoing maintenance of mitigation are implemented by conducting periodic process reviews.

MITIGATION COMMITMENTS AND CONSTRUCTION

The local agency is responsible for ensuring that all required mitigation is included in the construction contract. The local agency checks plans in the field and certifies that all mitigation commitments have been completed and documentation to this effect has been prepared for inclusion in the project's final record/voucher.

SCOPE CHANGE

In advance of any mitigation commitment, the local agency notifies the DLAE of any changes in the project scope or project limits. Major changes may require a Transportation Improvement Program (TIP) amendment or air quality redetermination. The DLAE notifies the District SEP (or designee) of the changes, and the District SEP (or designee) determines if additional environmental studies will be required, or if any mitigation agreements will require modifications. When permits, approvals, and agreements from resource and regulatory agencies require modifications, the DLAE requests the District SEP (or designee) initiates re-consultation/reevaluation immediately. Scope changes shall be documented and appended to the PES Form.

REEVALUATION

There are three triggers that necessitate the initiation of the consultation or reevaluation process:

1. Project is proceeding to the next major federal approval
2. Project changes
3. Three year timeline for an EIS

Reevaluations may include a site visit and evaluation by a qualified environmental planner and any technical specialists deemed necessary. Assessments by technical specialists should be prepared for any topical areas affected by a change in the project, its surroundings, new information or requirements, or other factors that may cause the original evaluation to no longer be valid. Additional studies and/or coordination with other agencies should be conducted as appropriate.

The local agency is responsible for informing the DLAE of any changes in the project so that these changes can be evaluated, and the validity of the CE Determination can be re-evaluated.

The local agency, DLAE, and District SEP (or designee) will consult and depending on the circumstances, there will be one of three possible conclusions: (1) the original CE Determination remains valid, (2) a CE Determination which addresses the magnitude of change in the scope of work and/or impact is necessary, or (3) a different type of environmental document is needed. Documentation of the decision and supporting information as appropriate shall be prepared and signed by the DLAE and the District SEP and placed in the project file.

A copy of the NEPA/CEQA Revalidation Form is available at:
http://www.dot.ca.gov/ser/downloads/memos/nepa/Revalidationform6-13-07.doc

The FHWA/Caltrans policy memo regarding Reevaluations is available at:
http://www.dot.ca.gov/ser/downloads/memos/nepa/Signed%20Ltr-FHWA-NEPA-21June07.pdf

PROCESS REVIEW

FHWA and Caltrans periodically conduct process reviews to determine the adequacy of existing processes and monitor the process for compliance with applicable laws, regulations and procedures. This includes but is not limited to, monitoring compliance with the assurances stated in the NEPA Pilot Program application; stipulations of the 6004 and 6005 MOU; monitoring the quality of NEPA documents and supporting technical reports, and monitoring PS&E and project construction to ensure mitigation commitments are included in PS&E, constructed, and (in the case of long-term commitments) monitored by the local agency.

TRAINING

The DLAE and District Training Coordinator are responsible for notifying the local agency of available training and for assisting them with training registration. Training opportunities available through external agencies or other federal/state agencies are posted at: http://www.dot.ca.gov/hq/LocalPrograms/training/training.html

RECORD KEEPING

The District SEP (or designee) is responsible for establishing the environmental project file as soon as environmental studies begin and for converting existing environmental project files to the Uniform Environmental File System. Instructions for using the Uniform Environmental Filing System are provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/chap38.htm#instructions

CONSULTANT CONTRACTS FOR TECHNICAL STUDIES

Locally administered environmental consultant contracts for NEPA documents and technical studies shall comply with the provisions of the Brooks Act (40 U.S.C. 1101-1104), and the scope of services agreement negotiated between the local agency and its consultant shall be based on information contained in the complete and fully signed PES Form. The consultant's qualifications and the format and content of the technical reports shall be consistent with guidance set forth in the SER.

QUARTERLY REPORTING REQUIREMENT

In accordance with Stipulation IV.F.1 of the 6004 MOU, pertaining to performance monitoring and quality assurance, Caltrans shall submit to FHWA a list of all CE determinations made each fiscal quarter. The DLA will provide the DEA with a Discoverer Report on quarterly local assistance CE determinations based on information contained in LP2000. DLAE and District SEP (or designee) with assistance from the Local Assistance NEPA Delegation Coordinators are required to maintain all environmental fields in LP2000 consistent with the DLA July 20, 2007, Memo, Subject: Tracking Local Assistance NEPA Compliance Milestones, to ensure that information provided in the report is accurate and complete.

6.4 STEP-BY-STEP PROCEDURES – PES FORM

Following are step-by-step procedures for conducting a preliminary environmental investigation and completing the PES Form. It is important that the local agency and their consultants carefully follow and complete each step to avoid unexpected project costs or delays in project development and to ensure a "complete and sufficient" submittal. Local agency(ies) shall not commence with any required technical study until after the PES Form has been fully signed by all signatories.

The PES/Categorical Exclusion (CE) process is shown in Flowchart 6-1, "PES Form and Categorical Exclusion (CE) Process Flowchart," (page 6-29). The numbers on the flowchart correlate with the step-by-step procedures within this section.

1. Local Agency (LA) develops complete project description and project maps.
2. LA reviews relevant literature, maps and inventories.
3. LA requests technical information from resource and regulatory agencies.
4. LA verifies research findings in the field (site visit).
5. LA completes PES Form (LAPM, Exhibit 6-A) in accordance with the Instructions (LAPM, Exhibit 6-B). On the PES Continuation Sheet the LA provides, (1) additional information on project description, (2) a summary of how the requirements of federal laws have been satisfied for all "No" answers (i.e., identify

the steps that were taken to determine a "No" response), and (3) specific information for all "Yes" and "To Be Determined" answers (i.e., if question #.15 regarding Federally listed Threatened and Endangered Species is checked "Yes," identify the specific plant or animal species which was observed or which could potentially occur within the project).

6. LA signs PES Form and sends to DLAE with all supporting documentation.
7. DLAE date stamps the PES Form on day received and verifies that project is in the RTP and FSTIP, and that the scope of work is consistent with the project description in the FSTIP.
8. DLAE provides a review of the PES Form and maps to ensure that the project description matches what is programmed and that the packet is complete and sufficient. If the packet is incomplete, the DLAE returns the packet to the LA or schedules a field review to assist them with completion of the PES Form. DLAE invites the District SEP (or designee) and appropriate technical specialists (i.e., biologist, hazardous waste coordinator, PQS, etc.) to the field review. For complex projects, the DLAE may also want to invite the HQ EC and/or the Local Assistance NEPA Delegation Coordinator.
9. The District SEP (or designee) requests the District PQS review the PES Form and maps, and conduct Section 106 Screening. The District Biologist reviews the PES Form, maps and results of general reconnaissance surveys, and makes a "Finding of No Effect," if applicable. District SEP identifies which District PQS, biologist, and other technical specialist will assist with reviewing the PES Form.
10. District PQS reviews PES Form, screens project under Section 106, completes questions #35 & #36 in Section A, and Sections B, C, D, indicates results of screening in Section G, signs the PES Form and returns the signed PES Form to the District SEP (or designee).
11. If the District SEP concurs with the recommended NEPA Class of Action and the recommended required technical studies, the District SEP signs the PES Form.

6.5. STEP-BY-STEP PROCEDURES – CATEGORICAL EXCLUSION WITH NO TECHNICAL STUDIES

Are further technical studies required? If "Yes," GO TO STEP #17. If "No," GO TO STEP #12.

12. The District SEP (or designee) completes the CE Checklist (LAPM, Exhibit 6-E) and the CE Form (LAPM, Exhibit 6-F) and for Section 6004 CEs; ensures Caltrans makes the project-level conformity determination consistent with the guidance provided in Chapter 38 of the SER.

    Note: Projects covered under Section 6004 are processed using certain NEPA CEs categories only, and the conformity determination is made along with NEPA approval by Caltrans.

Does project meet the criteria for a CE? If "Yes," GO TO STEP #13. If "No," GO TO STEP #17.

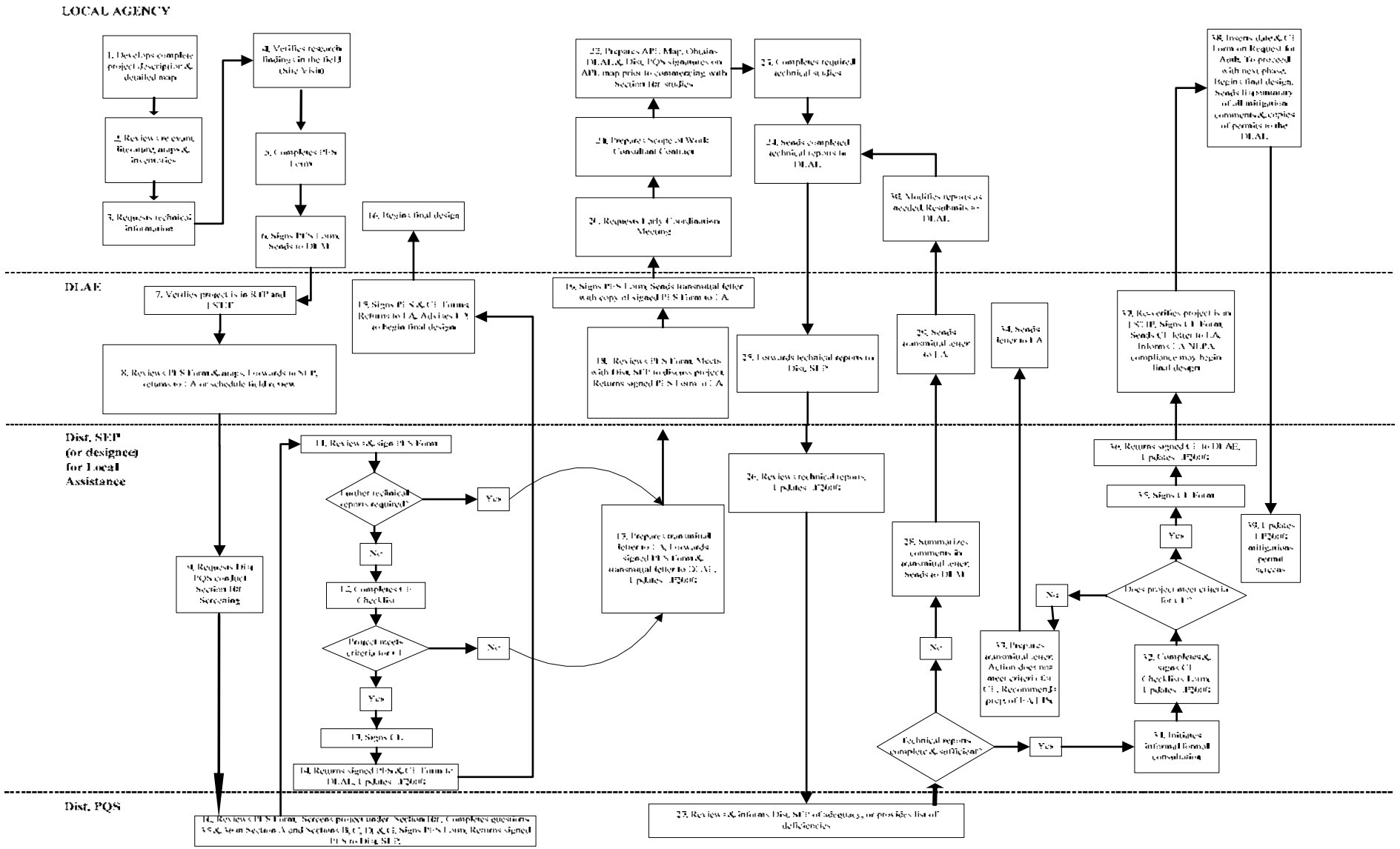
13. District SEP signs the CE Form.
14. District SEP (or designee) forwards the signed PES Form and signed CE Form to the DLAE, and updates LP2000 as follows: On Project Environmental Milestones Screen: (1) enter date completed PES Form was received by the DLAE and use comments field to note, a) if the LA submitted a complete and sufficient PES Form or if Caltrans had to assist with completing the PES Form during the field review, and b) reason for delay, if excessive, between Authorization to Proceed and receipt of PES Form, (2) enter date of last signature on PES Form and use comments field to note if multiple iterations were needed to produce complete/accurate form, internal delays (if applicable), and/or LA delays (if applicable), (3) enter date of letter to LA that transmitted the fully signed PES Form, and use comments field to capture internal and external delays associated with completing the PES Form, (4) enter date CE is received in the district or date CE is prepared by Caltrans, and use comments field to capture external/internal delays associated with the development of the NEPA determination, (5) enter date District SEP signs the CE Form and use comments field to note any delays or changes in scope from what was described in PES Form, (6) use Environmental Document drop-down arrow to select the environmental document identified on the PES Form, Section E. Preliminary Environmental Document Classification (NEPA) (i.e., 6004 CE(c), 6004 CE(d) or 6005 CE.
15. DLAE signs the PES Form and the CE Form. The DLAE retains the original PES Form and the original CE Form for the project files. The DLAE sends a copy of the signed CE and a copy of the fully signed PES Form to the LA, and informs the LA that compliance with NEPA is complete and they may now begin final design.
16. LA begins final design.

6.6 STEP-BY-STEP PROCEDURES – CATEGORICAL EXCLUSION WITH TECHNICAL STUDIES

17. When PES indicates that **further technical study is required,** District SEP (or designee) prepares transmittal letter to the LA outlining:
    - All technical studies/reports required.
    - A SER link for each of the technical studies.
    - The LA's responsibility for ensuring that all required technical reports are prepared in accordance with guidance set forth in the SER.
    - The LA's responsibility for ensuring that the conclusions of all technical reports are clearly stated and consistently summarized in the environmental document.
    - How the project-level conformity determination will be made. (See Step #31)
    - The LA's responsibility for preparing a summary/list of mitigation commitments (avoidance, minimization and mitigation measures) identified in each required technical report and providing said list to the DLAE along with each technical report.

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Flowchart 6-1 PES Form and Categorical Exclusion (CE) Process Flowchart



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- The LA's responsibility to incorporate all of the mitigation commitments (avoidance, minimization and mitigation measures) included on the list into their PS&E and be able to demonstrate that they have been incorporated into the project design.
- The LA's responsibility to provide a copy of all permits, when available, to the DLAE.

The District SEP (or designee) forwards the signed PES Form and the transmittal letter to the DLAE. District SEP (or designee) updates LP2000 for tracking compliance and annual reporting, as follows: On Project Environmental Milestones Screen, (1) enter date completed PES Form was received by the DLAE, and use comments field to note, a) whether the LA submitted a complete and sufficient PES Form, or if Caltrans had to assist with completing the PES Form during the field review, and b) reason for delay, if excessive, between Authorization to Proceed and receipt of PES Form, (2) enter date of last signature on PES Form and use comments field to note multiple iterations needed to produce complete/accurate form (if applicable), internal delays (if applicable) and/or LA delays (if applicable), (3) enter date of letter to LA transmitting fully signed PES Form, and use comments field to capture internal and external delays associated with completing the PES Form, (4) enter date the CE is received in the district, or date a CE is prepared by Caltrans, and use comments field to capture external/internal delays associated with the development of the NEPA determination, (5) enter date District SEP signs the CE Form, and use comments field to note any delays and if changes in project scope from what was described in PES Form, (6) use Environmental Document drop-down arrow to select the environmental document identified on the PES Form, Section G. Preliminary Environmental Document Classification (NEPA) (i.e., 6004 CE(c), 6004 CE (d) or 6005 CE, (7) on Environmental Studies – Environmental Study Milestones Screen, use Study Type drop-down arrow to select all required study types identified in Section B of the PES Form.

18. DLAE reviews project description, project maps, and PES Form to determine if the project is technically sound (adequate and feasible) from an engineering perspective. DLAE and the District SEP (or designee) meet to discuss the following:
    - Is the project technically sound from an engineering perspective?
    - Can the city or county get the project done in the amount of time indicated on the PES Form (i.e., have they missed any survey windows, or are the issues more complex than they anticipated)?
    - Will the funding need to be moved out to adjust for the schedule?
    - Do the technical studies/reports identified in the PES Form indicate that the LA may need to budget more money for NEPA compliance?
    - Is the LA's preliminary design on track?
    - Do the project maps make sense? Are the maps correct? Is the project footprint map consistent with the project, as identified in the FSTIP? Are the engineering drawings consistent with the project, as identified in the FSTIP?
    - Is the project likely to include mitigation commitments and/or mitigation that would warrant environmental review of the PS&E and project during/after construction?

19. DLAE signs the PES Form and sends a copy of the fully signed PES Form along with the transmittal letter outlining the requirements of each required technical study and report to the LA.

    (*Note: If DLAE authorizes the District SEP (or designee) to perform this step, a copy of letter that is sent to the LA shall be provided to the DLAE*.)

20. LA may request an Early Coordination Meeting with the DLAE, District SEP (or designee) and others as needed, to discuss the specific requirements of each required technical report, etc. The District SEP (or designee), District PQS, and applicable technical specialists should be invited to participate in the meeting as needed, based on the environmental issues and the complexity of the project, etc.

21. LA prepares scope of work/consultant contract (if necessary) in accordance with LAPM, Chapter 10, "Consultant Selection," and the requirements contained in the PES Form and retains environmental consultant to undertake required technical studies. (*Note: Environmental Consultant scope of work must reference the SER and the LAPM*). The District SEP (or designee) is available to review the environmental scope of work to ensure that it accurately reflects Caltrans requirements.

22. LA prepares a draft APE Map (if applicable) according to the guidance in the SER and preferably after consultation with District PQS, and obtains DLAE and District PQS signatures on the APE map prior to commencing with any Section 106 studies.

23. LA/Consultant completes required technical studies in accordance with guidance in SER. (*Note: The LA is responsible for performing a quality assurance and quality control review of all technical reports, prior to submittal to the DLAE, to ensure that the format and content of each technical report is consistent with guidance prescribed in the SER.*)

24. LA sends the completed technical report(s) to the DLAE.

25. DLAE date stamps the report on the date received and forwards the technical report(s) to the District SEP (or designee).

26. District SEP (or designee) requests (in writing) appropriate District technical specialists (i.e., PQS, biologists, air, noise, hazardous materials, etc.) review the technical report and determine whether the report is complete and sufficient in accordance with the format and content requirements outlined in the SER. The District SEP (or designee) updates LP2000 as follows: On Environmental Studies – Environmental Study Milestones Screen, (1) enter the date each study/technical report was received by the DLAE, (2) enter the date each study/technical report was received by the District SEP (or designee), (3) using the agency drop-down arrow, select Caltrans as the agency, and indicate the date that each technical report is sent to the District technical specialist for review.

27. District technical specialists review technical reports and determine whether technical reports are complete and ready for resource/regulatory agency review (if applicable). (*Note: This service does not relieve LA's responsibility for quality assurance and quality control.)* When District technical specialists determine that the technical reports are not complete**,** they shall document all noted deficiencies in writing and submit them to the District SEP (or designee). When District technical specialists determine that the technical reports are complete and ready for resource/regulatory review (if applicable), they inform the District SEP (or designee).

(Note #1: Under NEPA Delegation, this can no longer be an "informal" or verbal process. All deficiencies must be documented in writing and project files must contain a documented record of deficiencies and demonstrate that any and all deficiencies have been corrected.) (Note #2: When there are no District technical specialists available to review a particular technical report, or when other priorities delay the review of technical reports in support of local assistance projects, the District SEP [or designee] shall inform the Environmental Branch Chief and request their assistance in resolving the issue.)

District SEP (or designee) considers: Are Technical Reports complete and sufficient? If "No," GO TO STEP #28. If "Yes," GO TO STEP #31.

28. District SEP (or designee) prepares a transmittal letter to the LA, summarizing all comments received from District technical specialists and forwards the letter to the DLAE.
29. DLAE sends transmittal letter, outlining any deficiencies to the LA.
30. LA modifies the technical reports in accordance with the comments and resubmits the report(s) to the DLAE, beginning at Step #24.
31. When all technical reports are determined to be complete and sufficient, District SEP may in the case of Section 7 BAs, initiate informal/formal consultation with appropriate resource and regulatory agencies. **(*Note: For 6005 CEs, as soon as the Air Quality staff determine that the Air Quality Report is complete and sufficient, the District SEP [or designee] sends a request for Air Quality Conformity Determination to FHWA*).** District SEP (or designee) updates LP2000 as follows: On Environmental Studies – Environmental Study Milestones Screen, (1) using the "Agency" drop-down arrow, select the agency that the particular technical study/report was sent to for action, and (2) indicate the "Date Sent to Agency" *(Note: This will be the date on the District SEP's letter to the LA requesting consultation).* When the same technical study will be sent to multiple agencies (i.e., BA to USFWS and NMFS), list Study Type (BA) twice in the Study Type column and then under Agency, select USFWS for one and NMFS for the second.
32. When resource and regulatory agency action is complete, the District SEP (or designee) updates LP2000 as follows: On the Environmental Studies-Environmental Study Milestone Screen, 1) using the "Agency" drop-down arrow, select the agency that the particular technical report was sent to for actions, 2) enter the date of resource or regulatory agency letter, documenting their final correct opinion/ concurrence/agreement, etc., (3) use the Delay drop-down arrow to indicate "Yes" or "No." Enter "Yes" if USFWS or NMFS exceeded 135 days in issuing a Biological Opinion; if USFWS or NMFS exceeded thirty (30) days in issuing a Concurrence Letter; if the SHPO exceeds thirty (30) days in issuing concurrence on the HPSR or Finding of Effect (FOE) (if PA requires SHPO review); or if excessive delays occurred during any other agency review, (4) use the comments field to document number of iterations needed between Caltrans and LA to produce a complete and sufficient report and/or number of iterations needed between Caltrans and resource and regulatory agency to produce an acceptable report.

    The District SEP (or designee) also completes the CE Checklist and determines whether conclusions of the technical studies and the results of consultation indicate that the action qualifies for the CE.

Does project meet criteria for the CE? If "No," continue with STEP #33. If "Yes," GO TO STEP #35.

33. When the CE Checklist indicates that the action does not meet the criteria for a CE, the District SEP (or designee) prepares a transmittal letter to the LA explaining why the action does not meet the criteria for a CE and recommends preparation of an EA or an EIS, as appropriate. The District SEP forwards the letter to the DLAE for transmittal to the LA and updates LP2000 accordingly.
34. DLAE sends the letter to the LA.
35. District SEP (or designee) verifies, 1) that there are no scope changes, or 2) that technical studies address areas where all project scope changes will occur. District SEP signs CE Form.
36. District SEP (or designee) prepares a transmittal letter for the DLAE, informing the LA that:

    - NEPA compliance is complete.
    - LA may commence with final design.
    - LA is responsible for incorporating all minimization, avoidance and mitigation measures, and the conditions of all permits agreements and approvals into final design.
    - LA is responsible for fully implementing all minimization, avoidance and mitigation measures, and the conditions of all permits during project construction.
    - A copy of all mitigation commitments and permits shall be sent to the DLAE prior to advertisement for construction.

    District SEP forwards the signed CE and letter to the DLAE for transmittal to the LA and updates LP2000.
37. DLAE re-verifies that project is in the FSTIP and that there are no changes in project scope description, footprint; signs the CE Form; sends the signed CE Form and transmittal letter to the LA informing them that they may begin final design.
38. LA inserts the date the DLAE signed the CE/CE Determination Form in the LA/State Comments field when completing the Request for Authorization for the next phase of the project (see Chapter 3 "Project Authorization," in the LAPM). LA begins final design. Prior to advertisement for construction, LA sends the DLAE a copy of all permits (i.e., Coastal, 401, 404, 1602 Series, Sec 10, State or Federal Encroachment and/or Right of Entry).
39. Upon receipt of list of mitigation commitments and permits, the District SEP (or designee) updates LP2000 Environmental-Permits Screen and Mitigation Commitments Screens in accordance with instructions provided in July 20, 2007 DLA memo, Subject: Tracking Local Assistance NEPA Compliance Milestones.

6.7 STEP-BY-STEP PROCEDURES – ROUTINE ENVIRONMENTAL ASSESSMENT (EA)

The requirement to prepare an EA may come about through one or more of the following situations:

- Based on information gathered during PES, where it is clear that the proposed project will not qualify for a CE or where unusual circumstances are likely. The LA identifies the potential for significance under Sections A of the PES Form and recommends the development of an EA (under Section E of the PES Form). The DLAE and District SEP determine (with an e-mail concurrence from HQ EC) that an EA is the appropriate NEPA Class of Action, by signing the PES Form.
- During or upon completion of technical studies, when it becomes apparent that the proposed project will not qualify for a CE or that unusual circumstances exist; the decision to prepare an EA is made by the District SEP in collaboration with the DLAE with written e-mail concurrence from HQ EC, and must be clearly documented for the project file.

The Routine Environmental Assessment (EA) process is shown in Flowchart 6-2, "Routine Environmental Assessment (EA) Process Flowchart," (page 6-37). The numbers on the flowchart correlate with the step-by-step procedures within this section.

1. LA receives signed PES Form recommending an EA as the NEPA Class of Action.
2. LA consults with interested agencies and others to advise them of the scope of the project and potential social, economic, or environmental impacts identified in the PES Form.
3. LA identifies alternatives and measures which might mitigate adverse environmental impacts.
4. LA (or consultant) completes technical studies, and prepares technical reports and administrative Draft EA in accordance with the appropriate Caltrans Annotated Outline, provided at: http://www.dot.ca.gov/ser/forms.htm.
   LA completes the Environmental Document Review Checklist, provided at http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/ED_Checklist.doc. cross-referencing items on the checklist with the corresponding page numbers found in the Draft EA.
5. LA performs Quality Control Review of all technical reports and Draft EA in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, and completes and signs External Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc, prior to submitting the Draft EA and technical studies to DLAE.
6. LA submits five (5) copies of technical reports and Draft EA, original ED Checklist, and signed External Certifications (Environmental Document Quality Control Review Certification) form to the DLAE.
7. DLAE date stamps the Draft EA on date received, re-verifies that project is in the RTP and FSTIP, and provides a review of packet to ensure that the original fully signed External Certifications (Environmental Document Quality Control Review Certification) form, and the appropriate number of copies of the Draft EA and technical reports have been provided. If the signed Environmental Document Quality Control Review Certification form is not present, the DLAE should return packet to the LA and request Quality Control Review. If signed Environmental Document Quality Control Review Certification form is present, the DLAE forwards packet to the District SEP (or designee). The DLAE submits packet (or CD, if acceptable by district) to the District SEP (or designee) and requests for review.

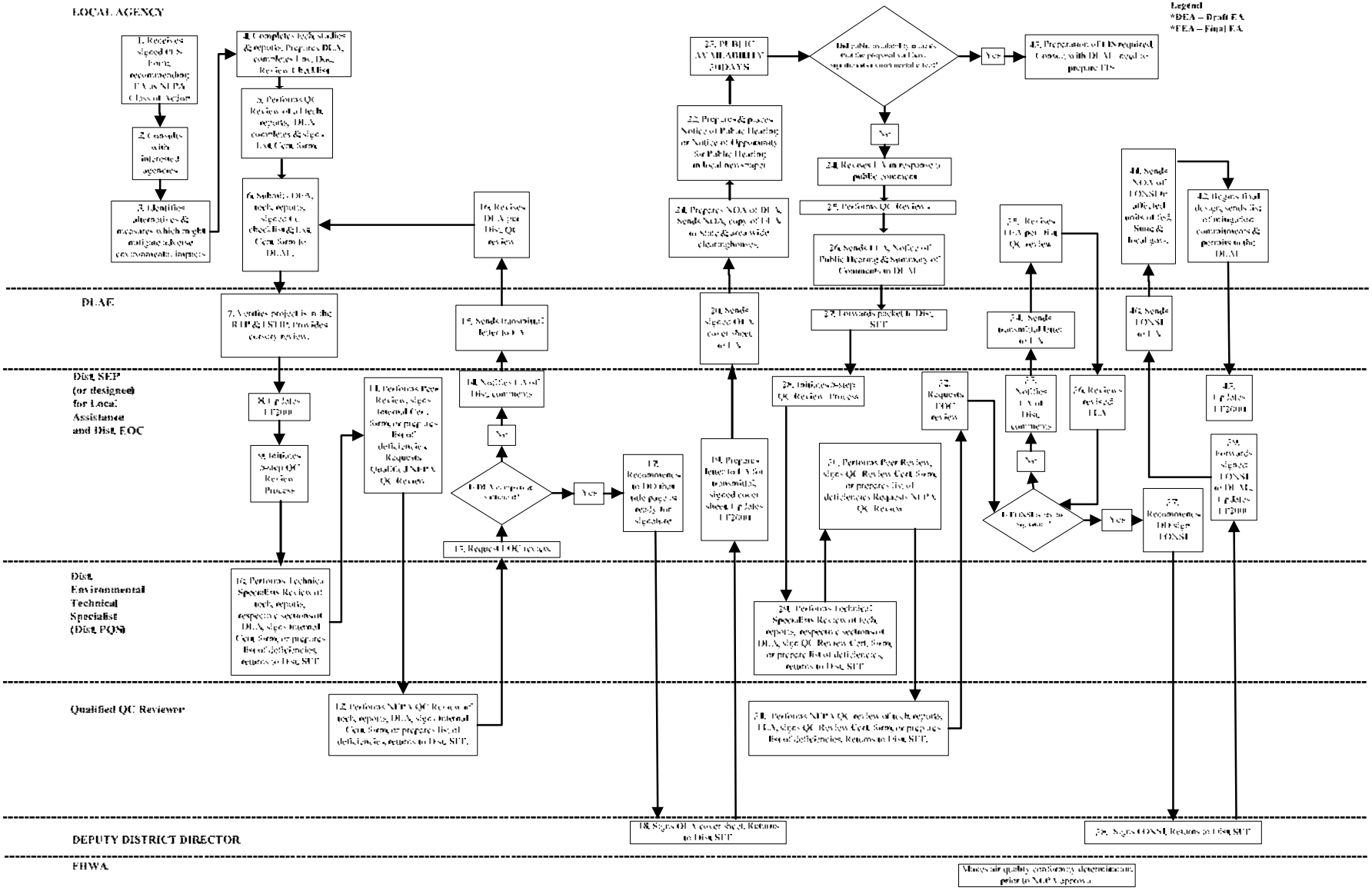
8. District SEP (or designee) completes appropriate fields in LP2000 as follows: On Environmental – Environmental Assessment (EA) Screen, (1) enter date District (DLAE or Environmental) received LA-prepared Draft EA and use comments field to *a) indicate whether a Joint NEPA/CEQA document was prepared, and if not, why not, b) document the number of iterations needed to produce an acceptable Draft EA, c) document delays at LA, d) document delays at Caltrans*, (2) indicate next to Local Agency Quality Assurance/Quality Control, whether LA submitted a completed External Certifications (Environmental Document Quality Control Review Certification) form with their Draft EA, and use drop-down arrow to select "Yes" or "No" and use comments field to note whether the LA's Quality Assurance Review was adequate
9. District SEP (or designee) initiates 5-step Quality Control Review by sending one (1) copy of the technical report and one (1) copy of the Draft EA to appropriate District environmental technical specialists and requests District technical specialists perform Quality Control Review.
10. District PQS and other environmental technical specialists review technical report(s) in their specialty area, and respective sections of Draft EA for technical accuracy and consistency between technical report and EA, and sign Internal Certifications (Environmental Document Quality Control Review Certification) form. *Note: The purpose of the Technical Specialist Review is to ensure the accuracy of specific resource studies and technical information summarized in the Environmental Document (ED). A Technical Specialist Review will be completed for each resource topic discussed in the ED as necessary.*

    The review will be conducted for those sections in each chapter that contain information about the individual resource or technical area under consideration (e.g., Summary, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures, Cumulative Impacts), and will provide comments to ensure the following:

    - *accuracy of the information in the ED*
    - *consistency between the technical study and the information as summarized in the ED*
    - *all avoidance, minimization and/or mitigation measures are appropriately characterized and are feasible to implement*
    - *all anticipated permit and/or approval actions have been accurately identified within the ED*

    The last District environmental technical specialist to review the Draft EA forwards the signed Internal Certifications (Environmental Document Quality Control Review Certification) form (if applicable) or list of deficiencies to the District SEP (or designee).
11. District SEP (or designee) performs Peer Review and generalist review of Draft EA, drafts list of deficiencies and requests District/Region Qualified NEPA Quality Control Review.
12. Qualified NEPA Quality Control Reviewer reviews Draft EA for compliance with FHWA's NEPA standards, requirements and policies, and signs the Internal Certifications (Environmental Document Quality Control Review Certification) form,

Flowchart 6-2 Routine Environmental Assessment (EA) Process Flowchart


LOCAL AGENCY
DLAE
Dist. SEP (or designee) for Local Assistance and Dist. EOC
Dist. Environmental Technical Specialist (Dist. PQS)
Qualified QC Reviewer
DEPUTY DISTRICT DIRECTOR
FHWA
Legend
*DEA – Draft EA
*FEA – Final EA
1. Receives signed CES Form recommending EA as NEPA Class of Action
2. Consults with interested agencies
3. Identifies alternatives & measures which might mitigate adverse environmental impacts
4. Completes tech studies & reports, Prepares DEA, coordinates Env. Doc. Review Dft & Req
5. Performs QC Review of tech. reports, DEA coordinates & signs Env. Doc. Cert. Form
6. Submits DEA, tech. reports, signed QC checklist & Env. Cert. Form to DLAE
7. Verifies project is in the RTIP & FSTIP, Provides cursory review.
8. Updates LP2000
9. Initiates 2-step QC Review Process
10. Reviews DEA per Dist. QC review
11. Performs Peer Review, signs Internal Cert. Form, or prepares list of deficiencies Requests Qual. QC NEPA QC Review
12. Performs NEPA QC Review of tech. reports, DEA, signs Internal Cert. Form, or prepares list of deficiencies & returns to Dist. SEP.
13. Request LOC revisions
14. Sends transmittal letter to LA
15. Notifies LA of Dist. comments
16. Reviews DEA per Dist. QC review
17. Recommends to DD right to public review ready for Signature
18. Signs OLA cover Sheet, Returns to Dist. SEP
19. Prepares letter to LA for transmittal, signed cover sheet, LP Updates LP2000
20. Sends signed OLA cover sheet to LA
21. Performs Peer Review, Signs QC Review Cert. Form, or prepares list of deficiencies Requests NEPA QC Review
22. Prepares & places Notice of Public Hearing or Notice of Opportunity for Public Hearing in local newspaper
23. PUBLIC AVAILABILITY 30DAYS
24. Prepares NOA of DEA, Sends NOA, copy of DEA to State & area wide clearinghouses.
25. Performs QC Review.
26. Sends LA, Notice of Public Hearing & Summary of Comments on DEA
27. Forwards packet to Dist. SEP
28. Initiates 2-step QC Review Process
29. Performs Peer Review, Signs QC Review Cert. Form, or prepares list of deficiencies Requests NEPA QC Review
30. Performs Technical Specialists Review of tech. reports, respective sections of DEA, Signs QC Review Cert. Form, or prepare list of deficiencies, returns to Dist. SEP
31. Performs NEPA QC review of tech. reports, DEA, signs QC Review Cert. Form, or prepares list of deficiencies, Returns to Dist. SEP.
32. Requests FOC review
33. Notifies LA of Dist. comments
34. Sends transmittal letter to LA
35. Reviews DEA per Dist. QC review
36. Reviews revised DEA
37. Recommends DD sign FONSI
38. Sends NOA of FONSI or affected units of fed, State & local govts.
39. Sends FONSI to LA
40. Forwards Signed FONSI to DLAE, LP Updates LP2000
41. Prepares final design, sends list of mitigation commitments & permits to the DLAE
42. Updates LP2000
43. Preparation of EIS required. Consult with DLAE regd to prepare EIS
Yes
No
Yes
No
Yes
No

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or prepares list of deficiencies, then provides comments to the District SEP (or designee). *Note: The NEPA Quality Control Reviewer must have the following qualifications: (1) at least two years of experience leading the development of, or performing consultant oversight for transportation environmental documents in California, (2) demonstrated experience in preparing complex environmental documents or supervisory experience in a unit that reviews EISs, and (3) Certificate of Completion in the Department's NEPA Compliance Training.*

13. District SEP requests District EOC review. If Individual Section 4(f) Evaluation is required, District SEP also requests HQ EC and Legal review the draft Individual Section 4(f) Evaluation, if applicable. Once reviewed and accepted by HQ EC, Legal and District Environmental Branch Chief/ Environmental Office Chief recommends to DDD (Environmental) that title page is ready for signature. *Note: Under the Pilot Program the DDD for Environmental is authorized to approve Individual Section 4(f) Evaluations. A stand-alone Individual Section 4(f) Evaluation and an Individual Section 4(f) Evaluation that is included with a Routine EA must be submitted to the appropriate HQ EC and Legal Office for review. No Individual Section 4(f) Evaluation may be approved until it has been reviewed and accepted by the HQ EC and a Legal review has been completed (for draft evaluation) or legal sufficiency determined (for final evaluation) by the appropriate Legal Office. The Department will coordinate with the FHWA prior to determining that any action constitutes a constructive use of land from a publicly owned park, public recreation area, wildlife refuge, waterfowl refuge, or historic site (MOU 8.1.5).*

Is Draft EA complete and sufficient? If "No," GO TO STEP #14. If "Yes," GO TO STEP #17.

14. District SEP (or designee) prepares transmittal letter to the LA, summarizing all comments received from District technical specialists and forwards the letter to the DLAE.
15. DLAE sends transmittal letter to the LA outlining any deficiencies.
16. LA modifies technical reports and/or Draft EA, in accordance with Caltrans comments, and resubmits report(s) and Draft EA to the DLAE beginning at Step #6. Steps #6 through #7 are repeated until the District determines that the document is completed and sufficient.
17. District SEP signs and transmits letters to resource and regulatory agency initiating formal consultation and recommends to DD (or DDD-Environmental or EOC, if designated) that title page is ready for signature.
    Note: Copies of the letters requesting formal consultation with resource and regulatory agencies and a copy of the letter requesting AQ Conformity Determination from FHWA shall be retained by District SEP (or designee) in order to complete the required fields in LP2000. Copies of response letters from resource and regulatory agencies are also transmitted to the DLAE and the District SEP (or designee).
18. DD (or DDD-Environmental or EOC, if designated) signs Draft EA cover sheet and returns to District SEP (or designee).
19. District SEP (or designee) prepares letter, which will transmit the signed Draft EA cover sheet to LA. Updates LP2000 as follows: On the Environmental-Environmental Assessment Screen, enter date of final signature (Chief, Environmental Branch) on the Internal Certifications (Environmental Document Quality Control Review Certification) form. On Environmental Studies – Environmental Study Milestones Screen, use "Agency" drop-down arrow to select

the Agency that the particular technical study/report was sent to for action and indicates the "Date Sent to Agency" *(Note: This will be the date on the District technical specialist's letter to the agency requesting consultation.).*When the same technical study will be sent to multiple agencies (i.e., BA or BE to USFWS and NMFS), list Study Type (BA or BE) twice in the Study Type column and then under Agency, select USFWS for one and NMFS for the second.

20. DLAE sends transmittal letter with signed Draft EA cover sheet to the LA.
21. LA prepares Notice of Availability (NOA) of EA and sends NOA and a copy of the EA to the State and area clearinghouses. If Joint IS/EA, the submissions required by CEQA fulfill the NEPA requirement.
22. LA prepares and places Notice of Public Hearing or Notice of Opportunity for Public Hearing in local newspaper. *Note: 23 CFR 771.119(e) requires that the EA be available for 15 days in advance of the public hearing.*
23. PUBLIC AVAILABILITY – 30 DAYS.

Did Public Availability indicate that the proposed action will have a significant environmental effect? If "No," GO TO STEP #24. If "Yes," GO TO STEP #43. An EIS will need to be prepared.

24. LA prepares Final EA in accordance with appropriate Caltrans Annotated Outline, provided at: http://www.dot.ca.gov/ser/forms.htm, and LA completes the Environmental Document Review Checklist, provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/ED_Checklist.doc. cross-referencing items on the checklist with the corresponding page numbers found in the Draft EA as necessary to respond to public comments received.
25. LA performs Quality Control review of the Final EA in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, and completes and signs the External Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc .
26. LA sends Final EA, Environmental Document Review Checklist, Notice of Public Hearing, and summary of comments received to the DLAE.
27. DLAE forwards packet to the District SEP (or designee).
28. District SEP sends a request for AQ Conformity Determination to FHWA and the District SEP (or designee) initiates 5-step Quality Control Review process by sending Final EA to appropriate District technical specialists and requesting a Quality Control Review. *Note: The conformity determination cannot be completed until there is a public comment period on the analysis. Most of the time the public circulation of the environmental document serves as the public circulation for the conformity analysis.*
29. District technical specialists review technical report(s) and respective sections of Final EA for technical accuracy and consistency between technical report and EA; sign the Internal Certifications (Environmental Document Quality Control Review Certification) form, and forward the signed form or (if applicable) list of deficiencies to the District SEP (or designee).

30. District SEP (or designee) performs Peer Review of Final EA and technical report(s) to ensure clarity, consistency and readability; signs the Internal Certifications (Environmental Document Quality Control Review Certification) form, or prepares list of deficiencies, and requests NEPA Quality Control Reviewer review of Final EA.

31. NEPA Quality Control Reviewer reviews technical reports and Final EA for compliance with FHWA's NEPA standards, requirements and policies; signs the Internal Certifications (Environmental Document Quality Control Review Certification) form or (if applicable) prepares list of deficiencies, and forwards to the District SEP (or designee).
32. District SEP drafts FONSI and requests EOC review of Final EA and FONSI.

Is Final EA complete and sufficient, and is a FONSI appropriate? If "No," GO TO STEP #33. If "Yes," GO TO STEP #37

33. District SEP (or designee) prepares transmittal letter to the LA outlining deficiencies, or reasons why a FONSI is not appropriate, and forwards to the DLAE.
34. DLAE sends transmittal letter to the LA.
35. LA revises Final EA accordingly and resubmits to the District SEP (or designee) via the DLA, or if an EIS must be prepared, proceed to Section 6.9.
36. District SEP reviews the revised Final EA. If still deficient GO TO Step # 33. Steps 33 through 36 are repeated until the District determines that the document is complete and sufficient. Once sufficient, District SEP drafts the FONSI.
37. District SEP request legal review if an Individual Section 4(f) Evaluation is required either stand-alone or part of ED. Once Legal has determined that the Individual Section 4(f) Evaluation is legally sufficient, the District SEP recommends to the DD (or DDD or EOC, if designated) that the FONSI is ready for signature.
38. The DD (or DDD-Environmental or EOC, if designated) signs FONSI and returns the signed FONSI to the District SEP (or designee).
39. District SEP (or designee) forwards signed FONSI to the DLAE and updates LP2000 as follows: On Environmental Studies – Environmental Study Milestones Screen (1) enter the date of resource or regulatory agency letter, documenting their final opinion/concurrence/agreement, etc., (2) use the Delay drop-down arrow to indicate "Yes" or "No." *Note: "Yes" should be used if USFWS or NMFS exceeded 135 days in issuing a Biological Opinion; if USFWS or NMFS exceeded 30 days in issuing a Concurrence Letter; if there are delays in signatures on project MOA or project PA under Section 106 (if applicable); or if excessive delays occurred during any other agency review*, (3) use the comments field to document number of iterations needed (between Caltrans and LA) to produce a complete and sufficient report and/or number of iterations needed (between Caltrans and resource and regulatory agency) to produce an acceptable report.
40. DLAE sends signed FONSI to the LA and notifies LA that they may begin final design.
41. LA sends the NOA of the FONSI to the affected units of federal, state and local government, and distributes Final ED to anyone that commented.
42. LA begins final design and provides the DLAE with each of the following:
    - a list of all Mitigation Commitments
    - a copy of all environmental permits, agreements or approvals (i.e., Coastal, 401, 404, 1602 Series, Sec 10, State or Federal Encroachment and/or Right of Entry)
43. District SEP (or designee) updates Environmental-PERMITS Screen and Mitigation Commitments Screen in LP2000 in accordance with instruction provided in July 20, 2007, DLA memo, Subject: Tracking Local Assistance NEPA Compliance Milestones.

6.8 STEP-BY-STEP PROCEDURES – COMPLEX ENVIRONMENTAL ASSESSMENT (EA)

Complex EAs are projects that involve one or more of the following

- multiple location alternatives
- debate related to purpose and need
- strong public controversy
- issues of logical termini or independent utility
- individual Section 4(f) determinations
- complex Endangered Species Act issues
- numerous cumulative impacts
- high mitigation costs

The requirement to prepare an EA in general may come about through one or more of the following situations:

- Based on information gathered during the PES, where it is clear that the proposed project will not qualify for a CE or where unusual circumstances are likely. The LA identifies the potential for significance under Sections A of the PES Form and recommends the development of an EA (under Section E of the PES Form). The DLAE and District SEP determine that an EA is the appropriate NEPA Class of Action, with e-mail concurrence of the HQ EC, and sign the PES Form.
- During or upon completion of technical studies when it becomes apparent that the proposed project will not qualify for a CE or that unusual circumstances exist, the decision to prepare an EA is made by the District SEP in collaboration with the DLAE, and with e-mail concurrence of the HQ EC, and must be clearly documented for the project file. A meeting should be conducted with the LA to discuss why the project is not a CE and to advise the LA on the requirements for an EA. The decision to follow the Complex EA process will be made by the District SEP as soon as sufficient information is available.

The Complex Environmental Assessment (EA) process is shown in Flowchart 6-3, "Complex Environmental Assessment (EA) Process Flowchart," (page 6-47). The numbers on the flowchart correlate with the step-by-step procedures within this section.

1. LA receives the signed PES Form recommending a complex EA as the NEPA Class of Action.
2. LA prepares the Scope of Work/Consultant Contract (if necessary) in accordance with the LAPM, Chapter 10 "Consultant Selection," and the requirements identified in the PES Form and policy and guidance set forth in the SER.
3. LA identifies alternatives and measures to minimize the potential for adverse environmental impacts.
4. LA completes technical studies and reports, prepares the administrative Draft EA, and completes the Environmental Document Review Checklist, provided at http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/ED_Checklist.doc , cross-referencing items on the checklist with the corresponding page numbers found in the administrative Draft EA.

5. LA performs Quality Control Review of all technical reports and administrative Draft EA in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, completes and signs the External Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc
6. LA signs administrative Draft EA title page and submits the following completed and original signed documents to the DLAE:
   - Environmental Document Review Checklist
   - External Certifications (Environmental Document Quality Control Review Certification) Form
   - Five (5) hard copies of administrative Draft EA (or an electronic copy, if requested)
   - Two (2) hard copies of each technical report
   - Electronic copy of each technical report
7. DLAE date stamps the administrative Draft EA on date received, re-verifies that the project is in the FSTIP. Provides a cursory review of packet to ensure that the original fully signed Environmental Document Review Checklist, the completed fully signed External Certifications (Environmental Document Quality Control Review Certification) form, and the appropriate numbers of copies of the administrative Draft EA and technical reports have been provided. Submits packet (or CD, if requested) to District SEP (or designee).
8. District SEP (or designee) updates LP2000 as follows: On the Environmental Assessments (EA) Screen (1) enter the date the DLAE received the LA prepared Draft EA, (2) use comments field to indicate whether a Joint NEPA/CEQA document was prepared, and if not, why, (3) indicate whether the LA submitted a "completed" Environmental Document Quality Control Review Certification form with the administrative Draft EA, by using the drop down arrow to select "Yes" or "No" (next to LA Quality Assurance/Quality Control).
9. District SEP (or designee) initiates and coordinates the 5-step Quality Control Review process of the administrative Draft EA and technical studies by distributing one (1) copy of the applicable technical report and one (1) copy of the administrative Draft EA to each appropriate District technical specialist, and requesting that each reviewer perform District Quality Control Review of the technical report(s) and the administrative Draft EA in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf
10. District technical specialists review the technical report(s) and respective sections of administrative Draft EA. *Note: The purpose of the District technical specialist review is to ensure the accuracy of specific resource studies and technical information summarized in the ED. A technical specialist review will be completed for each resource topic discussed in the ED. The review will be conducted for those sections in each chapter that contain information about the individual resource or technical area under consideration (e.g., Summary, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation*

Measures, Cumulative Impacts), and will provide comments to ensure the following:

- *accuracy of the information in the ED*
- *consistency between the technical study and the information as summarized in the ED*
- *all avoidance, minimization and/or mitigation measures are appropriately characterized and are feasible to implement*
- *all anticipated permit and/or approval actions have been accurately identified within the ED*

After reviewing the technical reports and administrative Draft EA, the District technical specialist will provide the District SEP (or designee) with either 1) a list of deficiencies, or 2) the signed Internal Certifications (Environmental Document Quality Control Review Certification) form.

11. District SEP (or designee) performs the Peer Review and signs Internal Certifications (Environmental Document Quality Control Review Certification) form, or prepares a list of deficiencies; provides administrative Draft EA to NEPA Quality Control Reviewer and requests reviewer perform District Quality Control Review of administrative Draft EA for compliance with FHWA's laws, regulations, Executive Orders and policy, and NEPA standards consistent with Caltrans NEPA Delegation Quality Control Program standards.

    Note: The Caltrans NEPA Quality Control Reviewer must have the following qualifications: 1) at least two (2) years of experience leading the development of, or performing consultant oversight for transportation environmental documents in California, 2) demonstrated experience in preparing complex environmental documents or supervisory experience in a unit that reviews EISs, and 3) Certificate of Completion in the Department's NEPA Compliance Training.

    The purpose of the NEPA Quality Control Review is to ensure that the project complies with the Council on Environmental Quality (CEQ) NEPA regulations and FHWA regulations, policies, and standards for the implementation of NEPA and all other applicable federal environmental laws. The NEPA Quality Control Review will provide comments to ensure the following:

    - adequacy of the project's purpose and need statement, logical termini, independent utility and project description
    - completeness of the alternatives analysis, including information supporting the range of alternatives selected for study in the document
    - all proposed avoidance, minimization and mitigation measures are properly identified, characterized and are reasonable and practicable to implement
    - evidence of coordination with any federal, state and local agencies necessary to comply with federal regulatory requirements
    - compliance with FHWA Environmental Impact and Related Procedures (23 CFR 771) and FHWA environmental policies and applicable guidance
    - compliance with other federal laws and regulations, such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, Section 404 of the Clean Water Act, Executive Order 11990-Protection of Wetlands, Executive Order 11988-Floodplain Management, and Section 4(f) of the Department of Transportation Act

12. The District NEPA Quality Control Reviewer reviews the administrative Draft EA and either signs the Internal Certifications (Environmental Document Quality Control Review Certification) form or prepares a list of deficiencies and forwards to the District SEP overseeing local assistance environmental documents.
13. The EOC performs District Quality Control Review of administrative Draft EA in accordance with Caltrans NEPA Delegation Quality Control Program standards and considers whether the administrative Draft EA is ready for HQ review.

Is administrative Draft EA ready for HQ review? If "No," GO TO STEP #14. If "Yes," GO TO STEP #17.

14. When administrative Draft and/or technical reports are deficient, District SEP (or designee) prepares transmittal letter to the LA outlining all deficiencies, and requests that the administrative Draft EA be revised as necessary based on the District/NEPA Quality Control Reviewer's comments and forwards to the DLAE. Comments received from all five (5) levels of review will form the basis of revisions to the administrative Draft EA.
15. DLAE sends transmittal letter to the LA.
16. LA revises administrative Draft EA per District and NEPA Quality Control Reviewer's comments and resubmits at Step #6.
17. When administrative Draft EA and technical reports are complete and sufficient, the District SEP submits the following to the HQ EC and requests a Quality Assurance Review of the administrative Draft EA:
    - Transmittal Memo signed by the District/Region SEP requesting review
    - Five (5) copies of the administrative Draft EA or CD
    - One (1) copy of each technical study (or on CD, if requested)
    - One (1) copy of LA completed Environmental Document Review Checklist
    - One (1) copy of LA completed and signed External Certifications (Environmental Document Quality Control Review Certification) form
    - One (1) copy of completed and signed Internal Certification (Environmental Document Quality Control Review Certification) form

    The Legal Office will review EAs, as time is available, at the request of the District/Region. If an Individual Section 4(f) Evaluation is required, District SEP also requests HQ EC and Legal review the draft Individual Section 4(f) Evaluation. Once reviewed and accepted by HQ EC, Legal and the District EOC recommend to DDD-Environmental that the title page is ready for signature.
18. HQ EC performs a QA Review of the environmental document to determine if the administrative Draft EA is substantively complete and ready for interdisciplinary quality assurance review.

    Review period is thirty (30) days. In making this determination, the HQ EC will confirm that the administrative environmental document follows the annotated outline and includes the following:
    - Correct title page
    - All chapters and necessary resource topics are present and complete
    - All appendices are present and complete

- All required correspondence relative to procedural and regulatory requirements
- Complete, clear, legible and logical exhibits and figures

HQ EC will lead an interdisciplinary team of HQ technical specialists to review the document. Technical specialists will review pertinent portions of the document for accuracy to ensure that regulatory requirements are appropriately addressed. The project technical studies will be used in support of the review.

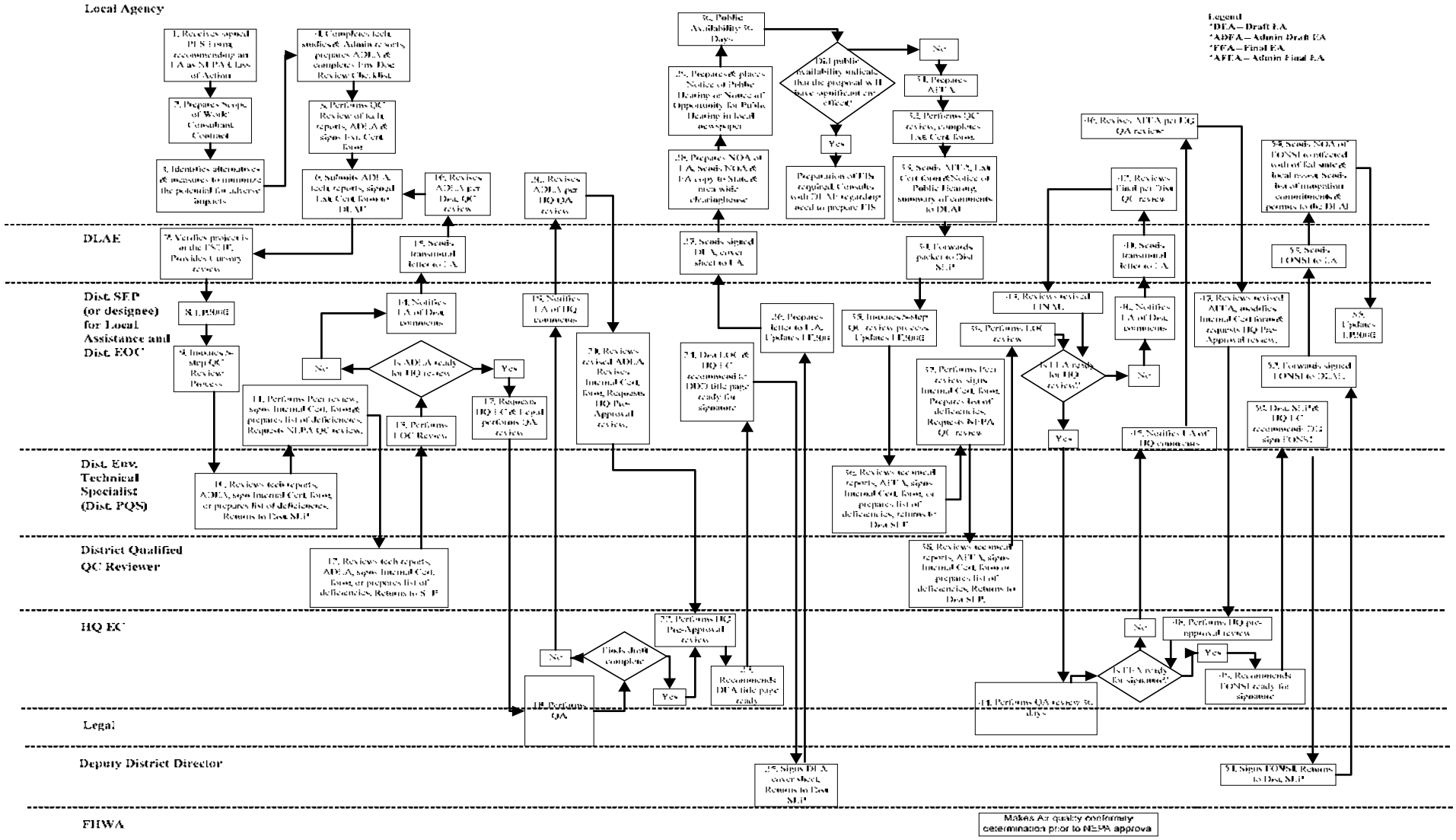
The HQ EC will review the entire environmental document and perform a NEPA Quality Assurance Review.

Did HQ EC find the administrative Draft EA complete? If "No," GO TO STEP #19. If "Yes," GO TO STEP #22.

19. When the HQ EC finds the administrative Draft EA incomplete, the HQ EC will consolidate and transmit comments on the administrative Draft EA to the District SEP (or designee), who in turn drafts a transmittal memo to the LA outlining HQ EC quality assurance comments and requesting the LA make the necessary revisions to the administrative Draft EA.
20. LA revises administrative Draft EA in response to HQ EC comments and resubmits revised Draft to District SEP (or designee).

    Note: District/Region and HQ EC staff are available to assist LA with (1) clarification regarding comments, (2) resolution of issues identified in the comments, and (3) in determining adequate response to comments, as needed. A meeting or workshop may be convened by the HQ EC or the District/Region/DLAE to facilitate this process.
21. District SEP (or designee) reviews the revised administrative Draft EA and revises the Internal Certifications (Environmental Document Quality Control Review Certification) form, as appropriate, to reflect that all comments have been appropriately addressed and submits the following materials to HQ EC for HQ Pre-Approval Review:
    - Transmittal Memo signed by the District/Region SEP stating that the document has been revised pursuant to HQ EC comments and requesting pre-approval review.
    - One (1) copy of the revised environmental document
    - One (1) copy of revised environmental document with track changes
    - One (1) copy of comments with a response key
    - One (1) copy of the completed Environmental Document Review Checklist, as revised
    - One (1) copy of the signed Internal Certifications (Environmental Document Quality Control Review Certification) form as revised
22. HQ EC reviews the revised administrative Draft EA to ensure that all comments have been adequately addressed and the administrative Draft EA is ready for signature. The review period is ten (10) days. HQ EC must concur that its comments have been addressed. At this point, the HQ EC will take one of the following actions:
    - Find that minor changes are needed and coordinate directly with the document preparer to make the changes. GO TO STEP #19

Flowchart 6-3 Complex Environmental Assessment (EA) Process Flowchart



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- Determine that substantive issues remain and inform the District SEP in writing of the deficiencies and instruct them to resubmit the document upon subsequent revision. GO TO STEP #19
- Conclude that the environmental document is adequate and ready for circulation. GO TO STEP #24

23. HQ EC recommends that the revised administrative Draft EA is ready for signature.
24. District EOC and the HQ EC will recommend to the DD (DDD- Environmental or EOC, if designated) that the title page is ready for signature.
25. DD (DDD-Environmental or EOC, if designated) signs the Draft EA cover sheet and returns the signed cover sheet to the District SEP (or designee). *Note: The DD may delegate signature authority to the DDD for Environmental or the EOC managing the environmental assessment unit that reviewed the document.*
26. District SEP (or designee) prepares a letter to the LA transmitting the signed cover sheet, informing them that they may begin public circulation, and forwards to the DLAE for transmittal to the LA. The District SEP (or designee) updates LP2000 as follows: On the Environmental Assessments (EA) Screen, (1) enter the date of final signature (EOC) on the Internal Certifications (Environmental Document Quality Control Review Certification) form, and (2) use Comments Field to document delays/concerns associated with internal reviews.
27. DLAE forwards the letter transmitting the signed Draft EA cover sheet to the LA.
28. LA prepares the NOA of the EA and sends NOA and a copy of the Draft EA to the State and area wide clearinghouses. If Joint IS/EA, the submissions required by CEQA fulfill the NEPA requirement.
29. LA prepares and places Notice of Public Hearing or Notice of Opportunity for Public Hearing in local newspaper. *Note: 23 CFR 771.119(e) requires that the EA be available for fifteen (15) days in advance of the public hearing.*
30. PUBLIC AVAILABILITY – 30 DAYS

Did Public Availability indicate that the proposal will have a significant environmental effect? If "No," GO TO STEP #31. If "Yes," discuss the need to prepare an EIS with DLAE and District SEP.

31. LA prepares administrative Final EA in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf.
    Completes and signs the External Certifications (Environmental Document Quality Control Review Certification) form provided at:
    http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/external_qc_certification.doc
33. LA drafts FONSI recommendation.
33. LA sends the administrative Final EA, Notice of Public Hearing, Summary of Comments received, and original signed External Certifications (Environmental Document Quality Control Review Certification) form to the DLAE.
34. DLAE date stamps and forwards administrative Final EA packet to the District SEP (or designee).
35. District SEP (or designee) initiates 5-step Quality Control Review of administrative Final EA by distributing the administrative Final EA to appropriate District technical specialists, and requesting Quality Control Review of the administrative Final EA,

in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at:
http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf

District SEP updates LP2000 as follows: On the Environmental Assessments (EA) Screen, next to Public Circulation, enter date DD or designee signs Draft EA cover sheet, (2) use Comments Field to document internal/external delays/concerns, substantial controversy, requests for public hearing (*Note: EA must be available for a minimum of fifteen (15) days in advance of the public hearing)*, and (3) enter date District (DLAE or District SEP [or designee]) received the administrative Final EA.

36. District technical specialists conduct Quality Control Review of administrative Final EA and either sign the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at:
http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) provide list of deficiencies to the District SEP (or designee).
37. District SEP (or designee) performs Peer Review of administrative Final EA and either prepares a list of deficiencies or signs the Internal Certifications (Environmental Document Quality Control Review Certification) form, and requests District NEPA Quality Control Review.
38. NEPA Quality Control Reviewer reviews the administrative Final EA for compliance with FHWA's laws, regulations, Executive Orders and policy and NEPA standards, signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at:
http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc and forwards the signed Internal Certifications (Environmental Document Quality Control Review Certification) form, or a list of deficiencies (if applicable) to the District EOC .
39. District EOC reviews the administrative Final EA and determines whether the administrative Final EA is ready for HQ review.

Is administrative Final EA ready for HQ review? If "No," GO TO STEP #40. If "Yes," GO TO STEP #44.

40. District SEP (or designee) drafts a letter to the LA outlining deficiencies and submits to the DLAE for transmittal to the LA.
41. DLAE sends the transmittal letter.
42. LA revises the administrative Final EA accordingly and resubmits to the District SEP (or designee) at Step #43.
43. District SEP reviews the revised administrative Final EA and determines whether the revised administrative Final EA is ready for HQ review. If "Yes," District SEP forwards the revised administrative Final EA to HQ EC and requests Quality Assurance Review. If "No," District SEP (or designee) notifies LA of deficiencies. Steps #40, #41, #42 and #43 are repeated until document is ready for review.
44. HQ EC performs Quality Assurance Review (30 days)

Is administrative Final EA ready for signature? If "No," notify District SEP (or designee) and GO TO STEP #45. If "Yes," GO TO STEP #49.

45. HQ EC (or designee) notifies the LA of deficiencies.

46. LA revises administrative Final EA per HQ Quality Assurance Review and resubmits revised administrative Final EA to the District SEP (or designee).
47. District SEP (or designee) reviews revised administrative Final EA, modifies Internal Certifications (Environmental Document Quality Control Review Certification) form, as needed, and requests HQ pre-approval review.
48. HQ EC performs HQ pre-approval review.

Is administrative Final EA ready for signature? If "No," GO TO STEP #45. If "Yes," GO TO STEP #49.

49. HQ SEP recommends FONSI ready for signature.
50. District EOC and HQ EC recommend DD sign FONSI.
51. DD signs FONSI and returns signed FONSI to District SEP.
52. District SEP forwards signed FONSI to DLAE and updates LP2000 as follows: On the Environmental Assessments (EA) Screen, next to administrative Final EA, (1) use Comments Field to document number of iterations needed to produce an acceptable Final EA, document delays at LA, document delays at Caltrans, indicate sufficiency/deficiency of quality/completeness of Local Agency's Quality Assurance/ Quality Control Environmental Document Quality Control Review Certification form, (2) next to Final Quality Assurance/Quality Control (Complex EA) enter date of final signature (Chief, Environmental Branch) on Environmental Document Quality Control Review Certification form, (3) use Comments field to document delays/concerns associated with internal reviews, (4) next to FONSI, enter date DD or designee signature appears on FONSI, (5) use comments field to document internal and external delays associated with the FONSI.
53. DLAE sends signed FONSI to the LA and notifies them that they may begin final design.
54. LA sends the NOA of the FONSI to the affected units of federal, State and local government, begins final design, and provides the DLAE with each of the following:
    - a list of all Mitigation Commitments
    - a copy of all Environmental Permits (i.e., Coastal, 401, 404, Sec 10, Encroachment and/or Right of Entry)
55. District SEP updates LP2000 as follows: On Environmental Studies – Environmental Study Milestones Screen, (1) enter the date of resource or regulatory agency letter, documenting their final opinion/concurrence/agreement, etc., (2) use the Delay drop-down arrow to indicate "Yes" or "No." Enter "Yes" if USFWS or NMFS exceeded 135 days in issuing a Biological Opinion; if USFWS or NMFS exceeded thirty (30) days in issuing a Concurrence Letter; if there are delays in signing the project MOA or Project PA resolving effects under Section 106; or if excessive delays occurred during any other agency review, (3) use the comments field to document number of iterations needed between Caltrans and LA to produce a complete and sufficient report, and/or number of iterations needed between Caltrans and resource and regulatory agency to produce an acceptable report. District SEP also updates Environmental-PERMITS Screen and Mitigation-Commitments Screen in LP2000 in accordance with instruction provided in July 20, 2007, DLA Memo, Subject: Tracking Local Assistance NEPA Compliance Milestones.

6.9 STEP-BY-STEP PROCEDURES – ENVIRONMENTAL IMPACT STATEMENT (EIS)

The requirement to prepare an EIS may come about through one or more of the following situations:

- Based on information gathered during PES, it becomes clear that the proposed project will have a significant impact, or
- Technical studies and/or CE or EA conclude that the project will cause a significant impact.

The Environmental Impact Statement process is shown in Flowchart 6-4, "Environmental Impact Statement Process Flowchart" (page 6-57). The numbers on the flowchart correlate with the step-by-step procedures within this section.

1. LA receives signed PES Form recommending EIS.
2. LA requests a meeting with DLAE, District SEP, and HQ EC (if available) to discuss the EIS process, EIS document requirements, and identify potential cooperating and participating agencies.
3. LA prepares letters to cooperating and participating agencies and inviting them to participate in the development of the environmental document. Agencies that may have an interest in the project are listed under Section C of the PES Form. FHWA's *Revised Guidance on Cooperating Agencies* provides examples of letters inviting agencies to participate in the environmental process. LA also drafts NOI. Typically, federal agencies have accepted their role (as Cooperating Agencies) prior to publication of the NOI and are listed in the NOI.
4. LA transmits NOI and invitation letters to the DLAE.
5. DLAE forwards letters and draft NOI to the District SEP (or designee).
6. District SEP sends the invitation letters to federal agencies.
7. District SEP forwards draft NOI to FHWA for publication in the FR.
8. FHWA publishes the NOI in the FR.
9. LA arranges and conducts the scoping meeting to determine the scope of issues to be addressed, and identify significant issues related to the proposed actions.
10. LA undertakes technical studies and prepares technical reports (as required) in accordance with guidance set forth in the SER.
11. LA prepares administrative Draft EIS consistent with Caltrans Annotated Outline in the SER provided at: http://www.dot.ca.gov/ser/downloads/templates/eir_eis.doc
12. LA completes the Environmental Document Review Checklist, provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/ED_Checklist.doc
13. LA performs Quality Control Review of all technical reports and administrative Draft EIS in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, and completes and signs the External Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc.

14. LA submits the following completed and original signed documents to DLAE:
    - Environmental Document Review Checklist
    - External Certifications (Environmental Document Quality Control Review Certification) Form
    - Five (5) hard copies of administrative Draft EIS
    - Electronic copy of administrative Draft EIS
    - Two (2) hard copies of each Technical Report
    - Electronic copy of each Technical Report
15. DLAE (1) date stamps administrative Draft EIS on date received, (2) re-verifies that project is in the FSTIP, (3) provides cursory review of packet to ensure that the original fully signed External Certifications (Environmental Document Quality Control Review Certification) form and the appropriate number of copies of the administrative Draft EIS and technical reports have been provided, and (4) submits packet (or CD, if requested) to District SEP (or designee).
16. District SEP (or designee) updates the LP2000 as follows: On EIS Screen, (1) enter the date the NOI is published in the FR, use comments field to indicate date Caltrans sent the NOI to FHWA for publication in the FR, (2) enter date administrative Draft EIS received by the district (either the DLAE or Environmental); use comments field to indicate whether a Joint CEQA/NEPA document was prepared, and if not, why not; (3) next to LA Quality Control/Quality Assurance, indicate whether LA submitted a "completed" External Certifications (Environmental Document Quality Control Review Certification) form with the administrative Draft EIS, by selecting "Yes" or "No."
17. District SEP initiates and coordinates 5-step Quality Control Review process of administrative Draft EIS and technical studies by distributing one (1) copy of the applicable technical report and one (1) copy of the administrative Draft EIS to each appropriate District technical specialist, and request that each reviewer perform District Quality Control Review of the technical report(s) and the administrative Draft EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-July07.pdf
18. District technical specialists conduct Quality Control Review of technical report(s) and respective sections of the administrative Draft EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf

    After reviewing the technical report and the administrative Draft EIS, the technical specialist signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, and forwards the signed form or list of deficiencies (if applicable) to the District SEP.

    Note: The purpose of the Technical Specialist Review is to ensure the accuracy of specific resource studies and technical information summarized in the administrative draft EIS. A Technical Specialist Review will be completed for each resource topic discussed in the ED. The review will be conducted for those sections in each chapter that contain information about the individual resource or technical area under

consideration (e.g., Summary, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures, Cumulative Impacts), and will provide comments to ensure the following:

- *accuracy of the information in the ED*
- *consistency between the technical study and the information as summarized in the ED*
- *all avoidance, minimization and/or mitigation measures are appropriately characterized and are feasible to implement*
- *all anticipated permit and/or approval actions have been accurately identified within the ED*

After reviewing the technical reports and administrative Draft EIS, District technical specialist(s) provides District SEP with either (1) a list of deficiencies, or (2) the signed Internal Certifications (Environmental Document Quality Control Review Certification) form.

19. District SEP performs Peer Review of administrative Draft EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf. Signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc or (if applicable) prepares list of deficiencies. District SEP (or designee) requests NEPA Quality Control Review of administrative Draft EIS and technical studies.
20. District NEPA Quality Control Reviewer reviews the administrative Draft EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf . Signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) prepares list of deficiencies and forwards signed form or list of deficiencies to the District SEP.

    Note: The Caltrans NEPA Quality Control Reviewers must have the following qualifications: (1) at least two (2) years of experience leading to the development of, or performing consultant oversight for transportation environmental documents in California, (2) demonstrated experience in preparing complex environmental documents or supervisory experience in a unit that reviews EISs, and (3) Certificate of Completion in the Department's NEPA Compliance Training.

    The purpose of the NEPA Quality Control Review is to ensure that the project complies with the Council of Environmental Quality (CEQ) NEPA regulations and FHWA regulations, policies and standards for the implementation of NEPA, and all other applicable federal environmental laws. The NEPA Quality Control Review will provide comments to ensure the following:

    - adequacy of the project's purpose and need statement, logical termini, independent utility and project description
    - completeness of the alternatives analysis, including information supporting the range of alternatives selected for study in the document

- all proposed avoidance, minimization and mitigation measures are properly identified, characterized and are reasonable and practicable to implement
- evidence of coordination with any federal, State and local agencies necessary to comply with federal regulatory requirements
- compliance with FHWA Environmental Impact and Related Procedures (23 CFR 771) and FHWA environmental policies and applicable guidance
- compliance with other federal laws and regulations, such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, Section 404 of the Clean Water Act, Executive Order 11990-Protection of Wetlands, Executive Order 11988-Floodplain Management, and Section 4(f) of the Department of Transportation Act

21. District SEP requests Environmental Branch Chief perform District Quality Control Review of administrative Draft EIS.
22. Environmental Branch Chief performs District Quality Control Review in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf. Signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) prepares list of deficiencies (if applicable) and forwards signed form or list of deficiencies to the District SEP.
23. District SEP reviews Internal Certifications (Environmental Document Quality Control Review Certification) form and considers all comments received during District Quality Control Review.

Is administrative Draft EIS complete and sufficient from the District's perspective? If "No," GO TO STEP #24. If "Yes," GO TO STEP #26.

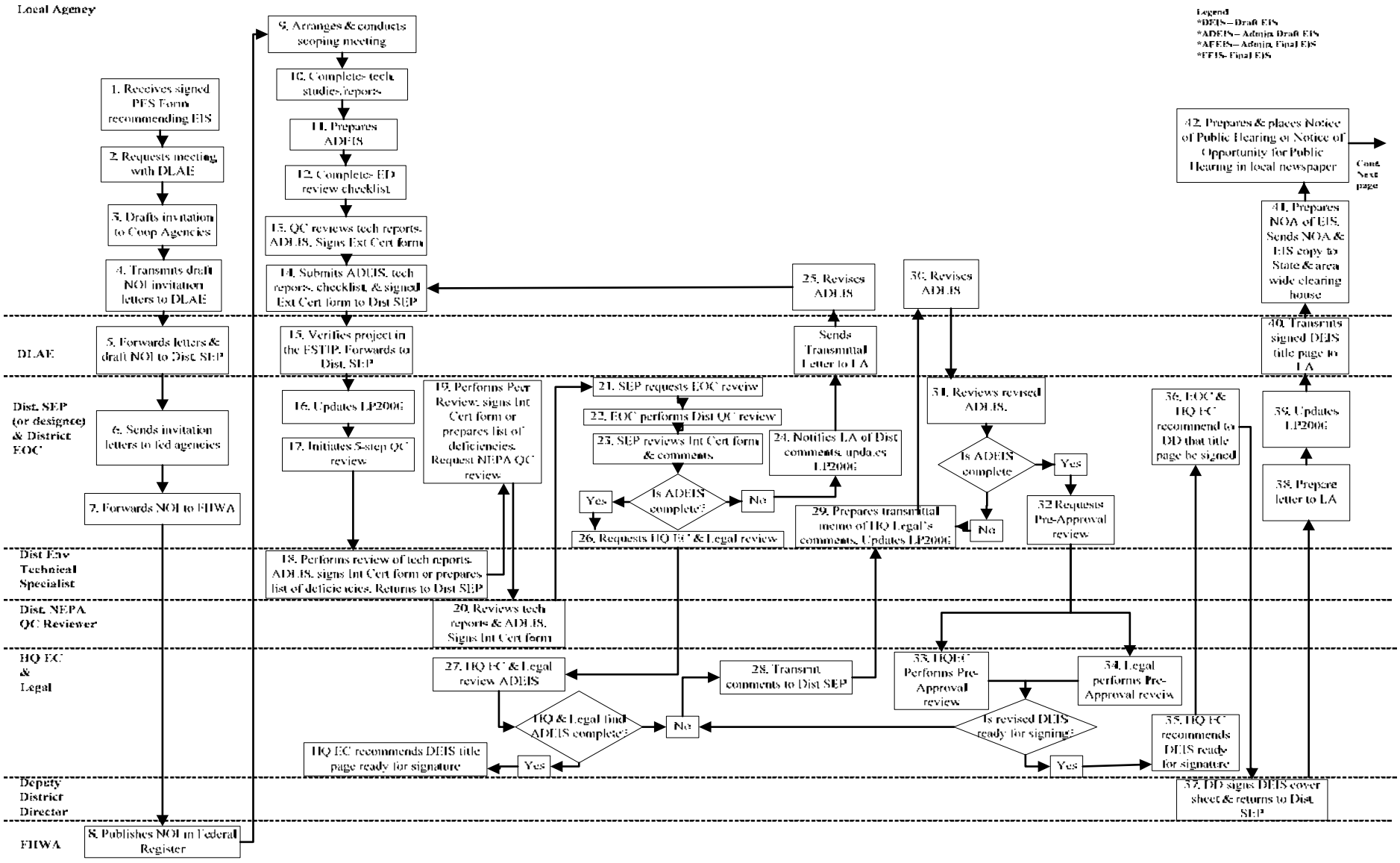
24. When administrative Draft EIS and/or technical reports are deficient, the District SEP (or designee) prepares a transmittal letter to the LA outlining all deficiencies and requests that the administrative Draft EIS be revised as necessary, based on the District Quality Control Review. Comments received from all five levels of review will form the basis of revisions to the administrative environmental document.

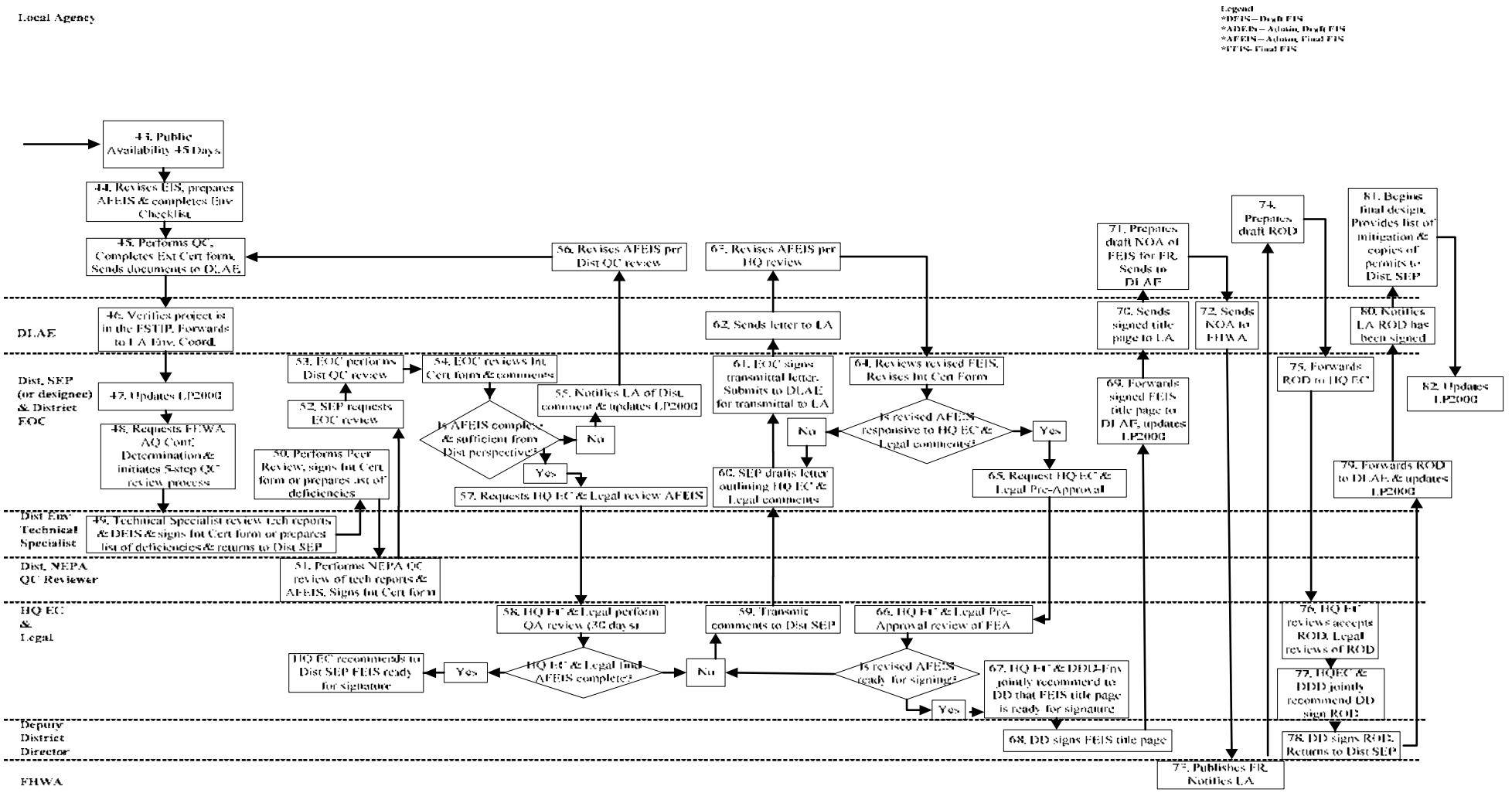
    The District SEP sends the letter to the LA via the DLAE and updates appropriate fields in LP2000.
25. The LA revises the administrative Draft EIS in accordance with comments received and resubmits the draft from STEP #14.
26. When the administrative Draft EIS and technical reports are complete and sufficient, the District SEP notifies HQ EC and the Legal Office that an administrative Draft EIS will be submitted for their review in one week. To initiate HQ EC review, District SEP submits the following to the HQ EC and requests a Quality Assurance Review of administrative Draft EIS:

    - Transmittal Memo signed by the District SEP, requesting review
    - Five (5) copies of the administrative Draft EIS (on CD, if requested)
    - Two (2) copies of each technical study or technical study on CD
    - Two (2) copy of LA completed Environmental Document Review Checklist
    - One (1) copy of LA completed and signed External Quality Control Certification Sheet

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Flowchart 6-4 Environmental Impact Statement (EIS) Process Flowchart




Local Agency
Legend
*DFEIS – Draft FEIS
*ADEIS – Admin. Draft FEIS
*AFEIS – Admin. Final FEIS
*FFEIS- Final FEIS
43. Public Availability 45 Days
44. Revises EIS, prepares AFEIS & completes Env Checklist
45. Performs QC, Completes Ext Cert form, Sends documents to DLAE
56. Revises AFEIS per Dist QC review
63. Revises AFEIS per HQ review
71. Prepares draft NOA of FEIS for FR. Sends to DLAE
74. Prepares draft ROD
81. Begins final design. Provides list of mitigation & copies of permits to Dist. SEP
DLAE
46. Verifies project is in the FSTIP, Forwards to LA Env. Coord.
62. Sends letter to LA
70. Sends signed title page to LA
72. Sends NOA to FHWA
80. Notifies LA ROD has been signed
Dist. SEP (or designee) & District EOC
47. Updates LP2000
48. Requests FHWA AQ Conf. Determination & initiates 5-step QC review process
53. EOC performs Dist QC review
54. EOC reviews Int. Cert form & comments
55. Notifies LA of Dist. comments & updates LP2000
52. SEP requests EOC review
Is AFEIS complete & sufficient from Dist perspective?
No
Yes
50. Performs Peer Review, signs Int Cert form or prepares list of deficiencies
57. Requests HQ EC & Legal review AFEIS
61. EOC signs transmittal letter. Submits to DLAE for transmittal to LA
64. Reviews revised FEIS. Revises Int Cert Form
Is revised AFEIS responsive to HQ EC & Legal comments?
No
Yes
69. Forwards signed FEIS title page to DLAE, updates LP2000
75. Forwards ROD to HQ EC
82. Updates LP2000
60. SEP drafts letter outlining HQ EC & Legal comments
65. Request HQ EC & Legal Pre-Approval
79. Forwards ROD to DLAE & updates LP2000
Dist Env Technical Specialist
49. Technical Specialist review tech reports & DEIS & signs Int Cert form or prepares list of deficiencies & returns to Dist SEP
Dist. NEPA QC Reviewer
51. Performs NEPA QC review of tech reports & AFEIS. Signs Int Cert form
HQ EC & Legal
58. HQ EC & Legal perform QA review (30 days)
59. Transmit comments to Dist SEP
66. HQ EC & Legal Pre-Approval review of FEA
76. HQ EC reviews accepts ROD. Legal reviews of ROD
HQ EC recommends to Dist SEP FEIS ready for signature
Yes
HQ EC & Legal find AFEIS complete?
No
Is revised AFEIS ready for signing?
67. HQ EC & DDLP-Env jointly recommend to DD that FEIS title page is ready for signature
Yes
77. HQEC & DDD jointly recommend DD sign ROD
Deputy District Director
68. DD signs FEIS title page
78. DD signs ROD. Returns to Dist SEP
FHWA
73. Publishes FR. Notifies LA

- One (1) copy of completed and signed Internal Quality Control Certification Sheet

To initiate Legal Division review, the District SEP submits the following to HQ Legal and requests a legal review on the administrative Draft EIS.

- Transmittal Memo signed by the District SEP, requesting review
- One (1) copy of the administrative Draft EIS
- One (1) electronic copy of the administrative Draft EIS
- One (1) electronic copy of each technical study
- One (1) copy of the LA completed Environmental Document Review Checklist
- One (1) copy of the completed and signed Internal Certification Form
- One (1) copy of the LA completed and signed External Certification Form

27. HQ EC performs a quality assurance review of the administrative Draft EIS to determine if the administrative Draft EIS is substantively complete and ready for interdisciplinary quality assurance review. The review period is thirty (30) days. In making this determination, the HQ EC will confirm that the administrative environmental document follows the annotated outline and includes the following:

    - Correct title page
    - All chapters and necessary resource topics are present and complete
    - All appendices are present and complete
    - All required correspondence relative to procedural and regulatory requirements
    - Complete, clear, legible and logical exhibits and figures

    HQ EC will then lead an interdisciplinary team of HQ technical specialists to review the administrative Draft EIS. HQ technical specialists will review pertinent portions of the administrative Draft EIS for accuracy to ensure that regulatory requirements are appropriately addressed. The project technical studies will be used in support of the review. HQ EC will review the entire administrative Draft EIS, perform the NEPA Quality Assurance Review in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf. Signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc or (if applicable) prepares list of deficiencies. HQ EC will also request HQ Legal review of the administrative Draft EIS.

    The responsible Legal Office performs a legal review of the administrative Draft EIS, concurrently and independently of HQ review, to determine if significant environmental issues are being appropriately addressed. The Legal Office will provide its legal review comments to the District SEP with a copy to HQ EC. Comments from the Legal Office are independent from HQ EC comments.

Did HQ EC and Legal find the administrative Draft EIS complete? If "Yes," HQ EC will recommend to the District SEP that the administrative Draft EIS title page is ready for signature. If "No," GO TO STEP #28.

28. When HQ EC and/or HQ Legal find administrative Draft EIS incomplete, HQ EC will consolidate all comments received from the interdisciplinary team and transmit comments on administrative Draft EIS to the District SEP for local assistance. A copy of HQ EC comments will be provided to the responsible Legal Office. The Legal Office will also transmit its comments to the District SEP for local assistance with a copy to HQ EC. Comments from Legal are independent from HQ EC comments.
29. District SEP (or designee) for local assistance prepares a transmittal memo to the LA summarizing HQ EC and HQ Legal's comments and requests LA make the necessary revisions to the administrative Draft EIS. District SEP (or designee) provides the DLAE with a copy of the letter and updates LP2000.

    Note: HQ Legal comments remain internal to Caltrans. Only a summary of HQ Legal comments shall be provided to the LA. District and HQ EC staff should assist the LA with (1) clarification regarding comments, (2) resolution of issues identified in the comments, and (3) in determining adequate response to comments, as needed. A meeting or workshop may be convened by the HQ EC or the District/Region/DLAE to facilitate this process.
30. LA revises administrative Draft EIS in response to all comments received and resubmits revised administrative Draft EIS to the DLAE/District SEP.
31. District SEP (or designee) reviews revised administrative Draft EIS and revises Internal Certifications (Environmental Document Quality Control Review Certification) form, as appropriate, to reflect that all comments have been appropriately addressed.

Is revised administrative Draft EIS responsive to HQ comments and ready for HQ EC pre-approval review? If "No," GO TO STEP #29. Steps #29 through #31 are repeated until all comments are adequately addressed. If "Yes," GO TO STEP #32.

32. District SEP submits the following materials to the HQ EC and requests HQ Pre-Approval Review:
    - Transmittal Memo signed by the District/SEP stating that the administrative Draft EIS has been revised pursuant to HQ EC comments and requesting pre-approval review
    - One (1) copy of the revised ED
    - One (1) copy of revised ED with track changes
    - One (1) copy of comments with a response key
    - One (1) copy of the completed Environmental Document Review Checklist, as revised
    - One (1) copy of the completed and signed Internal Certifications (Environmental Quality Control Review Certification) form, as revised

    District SEP also submits the following materials to the Legal Office:
    - Transmittal memo signed by the District SEP stating that the document has been revised pursuant to the legal review and requested Pre-Approval Review
    - One (1) copy of the revised ED
    - One (1) copy of the revised ED with track changes
    - One (1) copy of the comments with a response key
    - One (1) copy of the completed Environmental Document Checklist, as revised

- One (1) copy of the signed Internal Certifications (Environmental Document Quality Control Review Certification) form, as revised

33. HQ EC performs Pre-Approval Review of revised administrative Draft EIS to ensure that all comments have been adequately addressed and that administrative Draft EIS is ready for signature. Review period is ten (10) working days. *(Note: Ten (10) working day review period is a goal. Actual review time may vary depending upon complexity of issues and current workload.)*
34. HQ Legal performs Pre-Approval Review of the revised administrative Draft EIS concurrently and independently of HQ EC, to ensure all comments have been adequately addressed and that administrative Draft EIS is ready for signature. Review period is ten (10) working days. *(Note: Ten (10) working day review period is a goal. Actual review time may vary depending upon complexity of issues and current workload.)*

    Both HQ EC and Legal must concur that their comments have been addressed. At this point, HQ EC will take one of the following actions:

    - Find that minor changes are needed and coordinate directly with the document preparer to make the changes.
    - Determine that substantive issues remain and inform the District in writing of the deficiencies and instruct them to resubmit the document upon subsequent revision.
    - Conclude that the ED is adequate and ready for circulation.

    No approval action may be taken until both HQ EC quality assurance and legal review are satisfied.

Did HQ EC and Legal find revised administrative Draft EIS complete and ready for signature? If "No," HQ EC prepares a memorandum for the District detailing deficiencies requiring correction. GO TO STEP #29. Steps #29 through #34 will be repeated until document is ready for signature. If "Yes," Go to Step #35.

35. HQ EC recommends in writing to the District SEP that administrative Draft EIS is ready for signature. An Administrative Draft EIS may not be signed until the ready for signature recommendation is received by District.
36. When HQ EC recommends that revised administrative Draft EIS is ready for signature, the District Environmental Branch Chief and HQ EC jointly recommend to the DD that title page should be signed.
37. DD signs Draft EIS title page and returns the signed Title Sheet to the District SEP.
38. District SEP (or designee) prepares letter to the LA transmitting the signed Draft EIS title page and informing the LA that they may begin public circulation. District SEP (or designee) forwards the letter to the DLAE for transmittal to the LA.
39. District SEP updates LP2000 as follows: On the EIS Screen, next to Draft HQ Quality Control/Quality Assurance, (1) enter the date of final signature (Chief, Environmental Branch) on Environmental Document Quality Control Review Certification Form, (2) use Comments Field to document delays/concerns associated with internal reviews; (3) next to Draft Legal Sufficiency, enters date of Legal's letter of sufficiency, and (4) use comments field to document delays/concerns associated with Legal's review of administrative Draft EIS.
40. DLAE transmits letter with signed Draft EIS title page to the LA.

41. Following receipt of the signed Draft EIS title page and notification to begin public circulation, the LA prepares the NOA of Draft EIS and sends the NOA and a copy of the administrative Draft EIS to the State and area wide clearinghouses. If Joint EIS/EIR, the submissions required by CEQA fulfill the NEPA requirement.
42. LA prepares and places the Notice of Public Hearing or Notice of Opportunity for Public Hearing in local newspaper. (*Note: 23 CFR 771.123(h) requires that the draft be available for a minimum of 15 days prior to the public hearing.)*
43. PUBLIC AVAILABILITY – 45 DAYS.
44. LA responds to public comments, revises the EIS (as needed), prepares the administrative Final EIS consistent with Caltrans Annotated Outline in the SER at: http://www.dot.ca.gov/ser/downloads/templates/eir_eis.doc, and completes the Environmental Document Review Checklist, provided at http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/ED_Checklist.doc
45. LA performs Quality Control review of all technical reports and administrative Final EIS in accordance with Caltrans standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf

    LA completes and signs the External Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc

    LA submits the following completed and original signed documents to the DLAE:

    - One (1) hardcopy and CD of the administrative Final EIS
    - Notice of Public Hearing
    - Summary of comments received
    - Original signed External Certifications (Environmental Document Quality Control Review Certification) form
46. DLAE re-verifies that project is in the FSTIP and forwards packet to the District SEP (or designee).
47. District SEP updates LP2000 as follows: On EIS Screen, next to Public Circulation, enter date DD or designee signed cover of administrative Draft EIS, and use comment field to record beginning and ending date of public availability/comment (not less than 45 days), any internal/external delays concerns, and any substantial controversies over the project. Next to Public Hearing, enter date Public Hearing is conducted (if applicable) *(Note: EIS must be available for a minimum of fifteen (15) days in advance of the public hearing)*. Use comments field to document whether there is a substantial controversy over the project and the nature of the controversy.
48. District SEP sends a request for Air Quality Conformity Determination to the FHWA and the District SEP initiates and coordinates the 5-step Quality Control Review process of the administrative Final EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf

    (*Note: The conformity determination cannot be completed until there is a public comment period on the analysis. Most of the time the public circulation of the environmental document serves as the public circulation for the conformity analysis.)*

49. District technical specialists conduct Quality Control Review of technical report(s) and respective sections of the administrative Final EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, sign the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, and forward the signed form or list of deficiencies to the District SEP (if applicable).
50. District SEP performs Peer Review of administrative Final EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, and signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) prepares list of deficiencies, and requests NEPA Quality Control Review of administrative Final EIS and technical studies.
51. NEPA Quality Control Reviewer reviews administrative Final EIS in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, and signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc , or (if applicable) prepares list of deficiencies and forwards signed form or list of deficiencies to the District SEP (or designee).
52. District SEP requests the District EOC for local assistance to perform the District Quality Control Review of administrative Final EIS.
53. Environmental Branch Chief performs District Quality Control Review in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf, signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) prepares list of deficiencies and forwards signed form or list of deficiencies to the District SEP (or designee.)
54. District SEP reviews Internal Certifications (Environmental Document Quality Control Review Certification) form and considers all comments received during District Quality Control Review.

Is administrative Final EIS complete and sufficient from the District's perspective? If "No," GO TO STEP #55. If "Yes," GO TO STEP #57.

55. When administrative Final EIS and/or technical reports are deficient, the District SEP prepares a transmittal letter to the LA outlining all deficiencies and requesting that the administrative Final EIS be revised as necessary, based on the District Quality Control Review. Comments received from all five (5) levels of review will form the basis of revisions to the administrative Final EIS document. The District SEP sends the letter to the LA with a copy to the DLAE, and updates appropriate fields in LP2000.
56. LA revises the administrative Final EIS and resubmits document from Step #45.

57. District SEP notifies the HQ EC and Legal Office that the administrative Final EIS will be submitted for their review and determination of legal sufficiency, respectively, in one week.

    To initiate HQ review, District SEP submits the following to the HQ EC and requests a Quality Assurance Review of the administrative Final EIS: *(DLAE shall be copied on all correspondence between the District, HQ EC and Legal).*

    - Transmittal Memo signed by the District SEP requesting review of Final EIS
    - Five (5) hardcopies of the Final EIS and one (1) CD
    - One (1) hardcopy of revised technical reports and one (1) CD
    - One (1) copy of LA completed Environmental Document Review Checklist (for Final)
    - One (1) copy of LA completed and signed External Certifications (Environmental Document Quality Control Review Certification) form
    - One (1) copy of completed and signed Internal Certifications (Environmental Document Quality Control Review Certification) form

    District SEP will also request the Legal Office to conduct a Legal Sufficiency Review of the administrative Final EIS. The HQ EC Review and the Legal Sufficiency Review typically occur in parallel.

    To initiate Legal Sufficiency Review, District SEP submits the following to the Legal Office and requests determination of legal sufficiency:

    - Transmittal Memo signed by the District SEP, requesting review
    - One (1) copy of the administrative Draft EIS
    - One (1) electronic copy of the administrative Draft EIS
    - One (1) electronic copy of each technical study
    - One (1) copy of the LA completed Environmental Document Review Checklist
    - One (1) copy of the completed and signed Internal Certifications (Environmental Document Quality Control Review Certification) Form
    - One (1) copy of the LA completed and signed External Certifications (Environmental Document Quality Control Review Certification Form

58. HQ EC performs a Quality Assurance Review of the administrative Final EIS to determine if the document is substantively complete and ready for interdisciplinary quality assurance review.

    The review period is thirty (30) days. In making this determination, the HQ EC will confirm that the Final EIS follows the annotated outline and includes the following:

    - Correct title page
    - All chapters and necessary resource topics are present and complete
    - All appendices are present and complete
    - All required correspondence relative to procedural and regulatory requirements
    - Complete, clear, legible and logical exhibits and figures

    HQ EC will then lead an interdisciplinary team of HQ technical specialists to review the administrative Final EIS. HQ technical specialists will review pertinent portions of the administrative Final EIS for accuracy and to ensure that regulatory

requirements are appropriately addressed. The project technical studies will be used in support of the review. The HQ EC will review the entire administrative Final EIS, performing the NEPA Quality Assurance Review in accordance with Caltrans NEPA Delegation Quality Control Program standards provided at: http://www.dot.ca.gov/hq/env/nepa_pilot/pdf/policies/NEPADelegationQCProgram-2July07.pdf. Signs the Internal Certifications (Environmental Document Quality Control Review Certification) form provided at: http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc, or (if applicable) prepares list of deficiencies.

The Legal Office performs a Legal Sufficiency Review of the revised administrative EIS. The Legal Office will provide its Legal Sufficiency Review comments to the District SEP with a copy to the HQ EC. Comments from the Legal Sufficiency Review are independent from HQ EC comments.

Did HQ EC and Legal find the administrative Final EIS complete? If "Yes," HQ EC will recommend to the District SEP that the Final EIS title page is ready for signature. The title page may not be signed until the ready-for-signature recommendation is received by the District/Region. If "No," GO TO STEP #59.

59. If HQ EC and/or HQ Legal find administrative Final EIS incomplete, the HQ EC will transmit comments on the environmental document to the District SEP with a copy to the DLAE and to the responsible Legal Office. Legal Office will transmit its Legal Sufficiency Review comments to the District SEP and DLAE if applicable, with a copy to the HQ EC.
60. District SEP (or designee) prepares memo summarizing HQ EC and Legal's comments and requests LA make the necessary revisions to the administrative Final EIS.

    Note: Legal's comments remain internal to Caltrans. Only summarized version is sent to the LA. The District staff and HQ EC should assist LA with (1) clarification regarding comments, (2) resolution of issues identified in the comments, and (3) in determining adequate response to comments, as needed. A meeting or workshop may be convened by the HQ EC or the District/Region/DLAE to facilitate this process.
61. District EOC signs and forwards the letter to the DLAE for transmittal to the LA.
62. DLAE (or designee) sends transmittal letter to the LA.
63. LA revises administrative Final EIS in response to all HQ comments and resubmits revised administrative Final EIS to the District SEP (or designee).
64. District SEP (or designee) reviews the revised administrative Final EIS and revises the Internal Certifications (Environmental Document Quality Control Review Certification) form, as appropriate, to reflect that all comments have been appropriately addressed.

Is revised administrative Final EIS responsive to HQ EC and Legal comments? If "No," GO TO STEP #60. Steps #60 through #64 shall be repeated until document is adequate. If "Yes," GO TO STEP #65.

65. To initiate HQ EC Pre-Approval Review, District SEP submits the following materials to HQ EC and requests HQ Pre-Approval Review.
    - Transmittal Memo signed by the District SEP stating that the administrative Final EIS has been revised pursuant to HQ EC comments and requested pre-approval review
    - One (1) copy of the revised administrative Final EIS

- One (1) copy of revised administrative Final EIS with track changes
- One (1) copy of comments with a response key
- One (1) copy of the completed Environmental Document Review Checklist, as revised
- One (1) copy of the signed Quality Review Certification Sheet (Final)

To initiate Pre-Approval Legal Sufficiency Review, the District SEP submits the following materials to the Legal Office:

- Transmittal memo signed by the District SEP stating that the document has been revised pursuant to the legal review and requested pre-approval review
- One (1) copy of the revised environmental document
- One (1) copy of the revised environmental with track changes
- One (1) copy of the comments with a response key
- One (1) copy of the completed Environmental Document Checklist, as revised
- One (1) copy of the signed Internal Certifications (Environmental Document Quality Control Review Certification) Form, as revised

66. HQ EC and Legal Office review revised administrative Final EIS to ensure that all comments have been adequately addressed and that administrative Final EIS is ready for signature. Review period is ten (10) days. Both HQ EC and Legal Office must concur that their comments have been addressed. At this point, the HQ EC will take one of the following actions:

    - Find that minor changes are needed and coordinate directly with the document preparer to make the changes
    - Determine that substantive issues remain and inform the District in writing of the deficiencies and instruct them to resubmit the document upon subsequent revision
    - Conclude that the environmental document is adequate and ready for circulation

    No approval action may be taken until both HQ EC quality assurance and Legal Office review or legal sufficiency are satisfied.

    The Legal Office will provide Pre-Approval Legal Sufficiency comments to the District SEP with a copy to the HQ EC.

Is the revised administrative Final EIS ready for signature? If "No," GO TO STEP #59. Steps #59 through #66 are repeated until HQ determines document is ready for signature. If "Yes," GO TO STEP #67.

67. When HQ EC and Legal Office find revised administrative Final EIS complete, the HQ EC and DDD (Environmental) jointly recommend (in writing) to the DD that the Final EIS title page is ready for signature.

68. DD signs the Final EIS title page and returns the signed Final EIS title sheet to the District SEP.

69. District SEP (or designee) forwards the signed Final EIS title page to the DLAE, and updates LP2000 as follows: On the EIS Screen, next to Final EIS, enter date stamp received by either the DLAE or District SEP (or designee); use comments field to identify preferred alternative, document number of iterations needed to produce an acceptable Final EIS; document delays at LA; document delays at Caltrans; indicate

sufficiency/deficiency of quality/completeness of the External Certifications (Environmental Document Quality Control Review Certification) form. Next to Final HQ Quality Control/Quality Assurance, enter date of final signature (EOC) on the Internal Certifications (Environmental Document Quality Control Review Certification) form, use comments field to document any delays/concerns. Next to Final Legal Sufficiency, enter date of Legal's letter of sufficiency, and use comments field to document delays/concerns associated with Legal's review of Final EIS. Next to Public Circulation of Final EIS, enter date DD or designee signed cover of Final EIS. Use comments field to document date request sent to the FHWA to publish Final EIS in FR, actual date of publication in FR, the beginning and ending date of public availability/comment (not less than 45 days), any internal/external delays/concerns, and whether there is continuing substantial controversy over the project.

70. DLAE sends the signed Final EIS title page to the LA.
71. LA prepares NOA of the Final EIS to affected units of federal, State and local government and sends to the DLAE.
72. DLAE sends NOA to the FHWA.
73. FHWA published NOA in the FR.
74. LA prepares draft ROD and sends to the District SEP (or designee).
75. District SEP forwards draft ROD to the HQ EC for review and acceptance.
76. HQ EC and Legal Office review ROD.
(Note: The ROD shall be reviewed and accepted by the HQ EC before it is approved by the District. While Legal Office review of the ROD is not required by regulation, it is recommended.)
77. When HQ EC determines that the ROD is ready for signature, the HQ EC and DDD (environmental) jointly recommend to the DD that ROD is ready for signature.
78. DD signs ROD and returns to the District SEP. *(Note: This signature may not be delegated.)*
79. District SEP forwards signed ROD to the DLAE, ensures environmental files are in Uniform Environmental File System, and updates LP2000 as follows: On the EIS Screen, next to Approval of ROD, enter date DD signature appears on the ROD. *(Note: Date of ROD should be no sooner than thirty (30) days after publication of the Final EIS notice in the FR or ninety (90) days after publication of a notice for the Draft EIS, whichever is later.)* The comments field should be used to document internal and external delays associated with bringing about the ROD.
80. DLAE notifies the LA that ROD has been signed and that they may begin final design.
81. LA begins final design and provides the DLAE with each of the following:
    - a list of all Mitigation Commitments
    - a copy of all environmental permits , agreements, or approvals (i.e., Coastal, 401, 404, 1602 Series, Sec 10, State or Federal Encroachment and/or Right of Entry)
82. District SEP updates Environmental-PERMITS Screen and Mitigation-Commitments Screen in LP2000 in accordance with instruction provided in July 20, 2007, DLA Memo, Subject: Tracking Local Assistance NEPA Compliance Milestones.

6.10 REFERENCES

- National Environmental Policy Act of 1969, as amended (42 USC, 4321-4347)
- Council of Environmental Quality (CEQ), 40 CFR Part 1500, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act," November 29, 1978
- U.S. DOT Order 5610.1C, September 18, 1979, Considering Environmental Impacts by Agencies within the U.S. DOT
- 23 CFR 771, Environmental Impact and Related Procedures (April 1, 1994)
- FHWA Technical Advisory T6640.8A, October 30, 1987 re: Guidance on Environmental and Section 4(f) Documents
- Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Office, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California (Section 106 PA) effective January 1, 2004
- http://www.arb.ca.gov/bluebook/bb06/40cfr/40cfr93_126.htm
- http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_2004/julqtr/40cfr93.127.htm
- http://www.dot.ca.gov/ser/downloads/ce/CE-CECheklist.doc
- http://www.dot.ca.gov/ser/downloads/ce/CE-CE-form.doc
- http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/External_QC_Certification.doc
- http://www.dot.ca.gov/ser/vol1/sec6/ch38nepa/Internal_QC_Certification.doc

Exhibit 6-A Preliminary Environmental Study (PES) Form

Federal Project No.: _____ *(Federal Program Prefix-Project No., Agreement No.)* **Final Design:** _____ *(Expected Start Date)*

To: _____ *(District Local Assistance Engineer)* **From:** _____ *(Local Agency)*

_____ *(District)* _____ *(Project Manager's Name and Telephone No.)*

_____ *(Address)* _____ *(Address)*

_____ *(E-mail Address)* _____ *(E-mail Address)*

Is this Project "ON" the State Highway System? ☐ Yes ☐ No **IF YES, STOP HERE** and contact the District Local Assistance Engineer regarding the completion of other environmental documentation.

Federal State Transportation Improvement Program (FSTIP) http://www.dot.ca.gov/hq/transprog/fedpgm.htm**:** _____ *(Currently Adopted Plan Date)* _____ *(Page No.___ attach to this form)*

Programming for FSTIP:

Preliminary Engineering		**Right of Way**		**Construction**	
_____ *(Fiscal Year)*	$ _____ *(Dollars)*	_____ *(Fiscal Year)*	$ _____ *(Dollars)*	_____ *(Fiscal Year)*	$ _____ *(Dollars)*

Project Description as Shown in RTP and FSTIP:

Detailed Project Description: *(Describe the following, as applicable: purpose and need, project location and limits, required right of way acquisition, proposed facilities, staging areas, disposal and borrow sites, construction activities, and construction access.)*

(Continue description on "Notes" sheet, last page of this Exhibit, if necessary)

Preliminary Design Information:

Does the project involve any of the following? Please check the appropriate boxes and delineate on an attached map, plan, or layout including any additional pertinent information.

Yes	No		Yes	No		Yes	No	
☐	☐	Widen existing roadway	☐	☐	Ground disturbance	☐	☐	Easements
☐	☐	Increase number of through lanes	☐	☐	Road cut/fill	☐	☐	Equipment staging
☐	☐	New alignment	☐	☐	Excavation: anticipated maximum depth _____	☐	☐	Temporary access road/detour
☐	☐	Capacity increasing—other (e.g., channelization)				☐	☐	Utility relocation
						☐	☐	Right of way acquisition (if yes, attach map with APN)
			☐	☐	Drainage/culverts			
☐	☐	Realignment	☐	☐	Flooding protection			
☐	☐	Ramp or street closure	☐	☐	Stream channel work	☐	☐	Disposal/borrow sites
☐	☐	Bridge work						
			☐	☐	Pile driving	☐	☐	Part of larger adjacent project
☐	☐	Vegetation removal						
☐	☐	Tree removal	☐	☐	Demolition	☐	☐	Railroad

Required Attachments:

☐ Regional map ☐ Project location map ☐ Project footprint map (existing/proposed right of way)
☐ Engineering drawings (existing and proposed cross sections), if available ☐ Borrow/disposal site location map, if applicable
(Note: all maps (except project location map and regional maps) should be consistent with the project description (minimum scale: 1" = 200').)
☐ Notes to support the conclusions of this checklist/project description continuation page (attached)

Examine the project for potential effects on the environment, direct or indirect and answer the following questions. The "construction area," as specified below, includes all areas of ground disturbance associated with the project, including staging and stockpiling areas and temporary access roads.

Each answer must be briefly documented on the "Notes" pages at the end of the PES Form.

A. Potential Environmental Effects	Yes	To Be Determined	No
General			
1. Will the project require future construction to fully utilize the design capabilities included in the proposed project?	☐	☐	☐
2. Will the project generate public controversy?	☐	☐	☐
Noise			
3. Is the project a Type I project as defined in 23 CFR 772.5(h); "construction on new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes"?	☐	☐	☐
4. Does the project have the potential for adverse construction-related noise impact (such as related to pile driving)?	☐	☐	☐
Air Quality			
5. Is the project in a NAAQS non-attainment or maintenance area?	☐	☐	☐
6. Is the project exempt from the requirement that a conformity determination be made? (If "Yes," state which conformity exemption in 40 CFR 93.126, Table 2 applies): _____	☐	☐	☐
7. Is the project exempt from regional conformity? (If "Yes," state which conformity exemption in 40 CFR 93.127, Table 3 applies): _____	☐	☐	☐
8. If project is not exempt from regional conformity, (If "No" on Question #7)			
Is project in a metropolitan non-attainment/maintenance area?	☐	☐	☐
Is project in an isolated rural non-attainment area?	☐	☐	☐
Is project in a CO, PM10 and/or PM2.5 non-attainment/maintenance area?	☐	☐	☐
Hazardous Materials/Hazardous Waste			
9. Is there potential for hazardous materials (including underground or aboveground tanks, etc.) and/or hazardous waste (including oil/water separators, waste oil, asbestos-containing material, lead-based paint, ADL, etc.) within or immediately adjacent to the construction area?	☐	☐	☐
Water Quality/Resources			
10. Does the project have the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area?	☐	☐	☐
11. Is the project within a designated sole-source aquifer?	☐	☐	☐
Coastal Zone			
12. Is the project within the State Coastal Zone, San Francisco Bay, or Suisun Marsh?	☐	☐	☐
Floodplain			
13. Is the construction area located within a regulatory floodway or within the base floodplain (100-year) elevation of a watercourse or lake?	☐	☐	☐
Wild and Scenic Rivers			
14. Is the project within or immediately adjacent to a Wild and Scenic River System?	☐	☐	☐
Biological Resources			
15. Is there a potential for federally listed threatened or endangered species, or their critical habitat or essential fish habitat to occur within or adjacent to the construction area?	☐	☐	☐
16. Does the project have the potential to directly or indirectly affect migratory birds, or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work, etc.)?	☐	☐	☐

17. Is there a potential for wetlands to occur within or adjacent to the construction area?	☐	☐	☐
18. Is there a potential for agricultural wetlands to occur within or adjacent to the construction area?	☐	☐	☐
19. Is there a potential for the introduction or spread of invasive plant species?	☐	☐	☐
Sections 4(f) and 6(f)			
20. Are there any historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4[f]) within or immediately adjacent to the construction area?	☐	☐	☐
21. Does the project have the potential to affect properties acquired or improved with Land and Water Conservation Fund Act (Section 6[f]) funds?	☐	☐	☐
Visual Resources			
22. Does the project have the potential to affect any visual or scenic resources?	☐	☐	☐
Relocation Impacts			
23. Will the project require the relocation of residential or business properties?	☐	☐	☐
Land Use, Community, and Farmland Impacts			
24. Will the project require any right of way, including partial or full takes? Consider construction easements and utility relocations.	☐	☐	☐
25. Is the project inconsistent with plans and goals adopted by the community?	☐	☐	☐
26. Does the project have the potential to divide or disrupt neighborhoods/communities?	☐	☐	☐
27. Does the project have the potential to disproportionately affect low-income and minority populations?	☐	☐	☐
28. Will the project require the relocation of public utilities?	☐	☐	☐
29. Will the project affect access to properties or roadways?	☐	☐	☐
30. Will the project involve changes in access control to the State Highway System (SHS)?	☐	☐	☐
31. Will the project involve the use of a temporary road, detour, or ramp closure?	☐	☐	☐
32. Will the project reduce available parking?	☐	☐	☐
33. Will the project construction encroach on state or federal lands?	☐	☐	☐
34. Will the project convert any farmland to a different use or impact any farmlands?	☐	☐	☐
Cultural Resources			
35. Is there National Register listed, or potentially eligible historic properties, or archaeological resources within or immediately adjacent to the construction area? *(Note: Caltrans PQS answers question #35)*	☐	☐	☐
36. Is the project adjacent to, or would it encroach on Tribal land?	☐	☐	☐

For Sections B, C, and D, check appropriate box to indicate required technical studies, coordination, permits, or approvals.

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☐ **Traffic**		
Check one:		
☐ Traffic Study	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Noise**		
Check as applicable:		
☐ Traffic Related		
☐ Construction Related		
Check one:		
☐ Noise Study Report	☐ Caltrans	☐ Approval
☐ NADR	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Air Quality**		
Check as applicable:		
☐ Traffic Related		
☐ Construction Related		
Check one:		
☐ Air Quality Report	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
	☐ FHWA	☐ Conformity Finding (6005 CEs, EAs, EISs)
	☐ Caltrans	☐ Conformity Finding (6004 CEs)
	☐ Regional Agency	☐ PM10/PM2.5 Interagency Consultation
☐ **Hazardous Materials/ Hazardous Waste**		
Check as applicable:		
☐ Initial Site Assessment (Phase 1)	☐ Caltrans	☐ Approval
☐ Preliminary Site Assessment (Phase 2)	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
	☐ Cal EPA DTSC	☐ Review Database
	☐ Local Agency	☐ Review Database
☐ **Water Quality/Resources**		
Check as applicable:		
☐ Water Quality Assess. Report	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Sole-Source Aquifer (Districts 5, 6 and 11)**	☐ EPA (S.F. Regional Office)	☐ Approval of Analysis in ED
☐ **Coastal Zone**	☐ CCC	☐ Coastal Zone Consistency Determination

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☐ **Floodplain**		
Check as applicable:		
☐ Location Hydraulic Study	☐ Caltrans	☐ Approval
☐ Floodplain Evaluation Report	☐ Caltrans	☐ Approval
☐ Summary Floodplain Encroachment Report	☐ Caltrans	☐ Approval
	☐ Caltrans	☐ Only Practicable Alternative Finding
	☐ FHWA	☐ Approves significant encroachments and concurs in Only Practicable Alternative Findings
☐ **Wild and Scenic Rivers**	☐ River Managing Agency	☐ Wild and Scenic Rivers Determination
☐ **Biological Resources**		
Check as applicable:		
☐ NES, Minimal Impact	☐ Caltrans	☐ Approval
☐ NES		
☐ BA	☐ Caltrans	☐ Approves for Consultation
	☐ USFWS ☐ NOAA Fisheries	☐ Section 7 Informal/Formal Consultation
☐ EFH Evaluation	☐ NOAA Fisheries	☐ MSA Consultation
☐ Bio-Acoustic Evaluation	☐ NOAA Fisheries	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ **Wetlands**		
Check as applicable:		
☐ WD and Assessment	☐ Caltrans	☐ Approval
	☐ ACOE	☐ Wetland Verification
	☐ NRCS	☐ Agricultural Wetland Verification
	☐ Caltrans	☐ Wetlands Only Practicable Alternative Finding
☐ **Invasive Plants**		
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Section 4(f)**		
Check as applicable:		
	☐ Caltrans	☐ Determine Temporary Occupancy
☐ De minimis	☐ Caltrans	☐ De minimis finding
☐ Programmatic 4(f) Evaluation Type: _____	☐ Caltrans	☐ Approval
☐ Individual 4(f) Evaluation	☐ Caltrans	☐ Approval
	☐ Agency with Jurisdiction ☐ SHPO ☐ DOI ☐ HUD ☐ USDA	

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/Approvals
☐ **Section 6(f)**	☐ Agency with Jurisdiction ☐ NPS	☐ Determines Consistency with Long-Term Management Plan
	☐ NPS	☐ Approves Conversion
☐ **Visual Resources**		
Check one:		
☐ Visual Impact Assessment	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Relocation Impacts**		
Check one:		
☐ Relocation Impact Memo	☐ Caltrans	☐ Approval
☐ Relocation Impact Study	☐ Caltrans	☐ Approval
☐ Relocation Impact Report	☐ Caltrans	☐ Approval
☐ **Land Use and Community Impacts**		
Check one:		
☐ CIA	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
☐ **Construction/Encroachment on State Lands**		
Check as applicable:		
☐ SLC Jurisdiction	☐ SLC	☐ SLC Lease
☐ Caltrans Jurisdiction	☐ Caltrans	☐ Encroachment Permit
☐ SP Jurisdiction	☐ SP	☐ Encroachment Permit
☐ **Construction/Encroachment on Federal Lands**	☐ Federal Agency with Jurisdiction	☐ Encroachment Permit
☐ **Construction/Encroachment On Indian Trust Lands**	☐ Bureau of Indian Affairs	☐ Right of Way Permit
☐ **Farmlands**		
Check one:		
☐ CIA	☐ Caltrans	☐ Approval
☐ Technical Memorandum	☐ Caltrans	☐ Approval
☐ Discussion in ED Only	☐ Caltrans	☐ Approval
Check as applicable:		
☐ Form AD 1006	☐ NRCS	☐ Approves Conversion
	☐ CDOC	☐ Approves Conversion
☐ Conversion to Non-Agri Use	☐ ACOE	

B. Required Technical Studies and Analyses	C. Coordination	D. Anticipated Actions/Permits/ Approvals
☐ **Cultural Resources** (PQS completes this section) ***Check as applicable:***	☐ Caltrans PQS	☐ Screened Undertaking
☐ APE Map	☐ Caltrans PQS and DLAE	☐ Approves APE Map
	☐ Local Preservation Groups and/or Native American Tribes	☐ Provides Comments Regarding Concerns with Project
☐ HPSR ☐ ASR ☐ HRER	☐ Caltrans	☐ Approves for Consultation
☐ Finding of Effect Report	☐ Caltrans	☐ Concurs on No Effect, No Adverse Effect with Standard Conditions
	☐ SHPO	☐ Letter of Concurrence on Eligibility, No Adverse Effect without Standard
☐ MOA	☐ Caltrans	☐ Approves MOA
	☐ SHPO	☐ Approves MOA
	☐ ACHP (if requested)	☐ Approves MOA
☐ **Permits** Copies of permits and a list of mitigation commitments are mandatory submittals following NEPA approval.	☐ ACOE	☐ Section 404 Nationwide Permit
	☐ ACOE	☐ Section 404 Individual Permit
	☐ Caltrans/ACOE/EPA ☐ USFWS ☐ NOAA Fisheries	☐ NEPA/404 Integration MOU
	☐ ACOE	☐ Rivers and Harbors Act Section 10 Permit
	☐ USCG	☐ USCG Bridge Permit
	☐ RWQCB	☐ Section 401 Water Quality Certification
	☐ CDFG	☐ Section 1602 Streambed Alteration Agreement
	☐ RWQCB	☐ NPDES Permit
	☐ CCC ☐ Local Agency	☐ Coastal Zone Permit
	☐ BCDC	☐ BCDC Permit

Notes: Additional studies may be required for other federal agencies.

ACHP = Advisory Council on Historic Preservation
ACOE = U.S. Army Corps of Engineers
ADL = Aerially Deposited Lead
APE = Area of Potential Effect
APN = Assessor Parcel Number
ASR = Archaeological Survey Report
BA = Biological Assessment
BCDC = Bay Conservation and Development Commission
BE = Biological Evaluation
BO = Biological Opinion
Cal EPA = California Environmental Protection Agency
CCC = California Coastal Commission
CDFG = California Department of Fish and Game
CDOC = California Department of Conservation
CE = Categorical Exclusion
CIA = Community Impact Assessment
CWA = Clean Water Act
DLAE = District Local Assistance Engineer
DOI = U.S. Department of Interior
DTSC = Department of Toxic Substances Control
EA = Environmental Assessment
ED = Environmental Document
EFH = Essential Fish Habitat
EIS = Environmental Impact Statement
EPA = U.S. Environmental Protection Agency
FEMA = Federal Emergency Management Agency
FHWA = Federal Highway Administration
FONSI = Finding of No Significant Impacted
FTIP = Federal Transportation Improvement Program
HPSR = Historic Property Survey Report
HRER = Historical Resources Evaluation Report
HUD = U.S. Housing and Urban Development
MOA = Memorandum of Agreement
MSA = Magnuson-Stevens Fishery Conservation and Management Act
NEPA = National Environmental Policy Act
NADR = Noise Abatement Decision Report
NES = Natural Environment Study
NHPA = National Historic Preservation Act
NOAA = National Oceanic and Atmospheric Administration
NMFS National Marine Fisheries Service
NPDES = National Pollutant Discharge Elimination System
NPS = National Park Service
NRCS = Natural Resources Conservation Service
PM10 = Particulate Matter 10 Microns in Diameter or Less
PM2.5 = Particulate Matter 2.5 Microns in Diameter or Less
PMP = Project Management Plan
PQS = Professionally Qualified Staff
ROD = Record of Decision
RTIP = Regional Transportation Improvement Program
RTP = Regional Transportation Plan
RWQCB = Regional Water Quality Control Board
SER = Standard Environmental Reference
SEP = Senior Environmental Planner
SHPO = State Historic Preservation Officer
SLC = State Lands Commission
SP = State Parks
TIP = Transportation Improvement Program
USCG = U.S. Coast Guard
USDA = U.S. Department of Agriculture
USFWS = U.S. Fish and Wildlife Service
WD = Wetland Delineation

E. Preliminary Environmental Document Classification (NEPA)

Based on the evaluation of the project, the environmental document to be developed should be:

Check one:

☐ Environmental Impact Statement (*Note: Engagement with participating agencies in accordance with SAFETEA-LU Section 6002 required)*

☐ Compliance with SAFETEA-LU Section 6002 regarding Participating Agencies required

☐ Complex Environmental Assessment

☐ Routine Environmental Assessment

☐ Categorical Exclusion without required technical studies.

☐ Categorical Exclusion with required technical studies

(if Categorical Exclusion is selected, check one of the following):

☐ Section 6004

☐ 23 CFR 771 activity (c)(_____)

☐ 23 CFR 771 activity (d) (_____)

☐ Activity _____ listed in the Section 6004 MOU

☐ Section 6005

F. Public Availability and Public Hearing

Check as applicable:

☐ Not Required

☐ Notice of Availability of Environmental Document

☐ Public Meeting

☐ Notice of Opportunity for a Public Hearing

☐ Public Hearing Required

G. Signatures

Local Agency Staff and/or Consultant Signature

_____ _____ _____
(Signature of Preparer) *(Date)* *(Telephone No.)*

_____
(Name)

Local Agency Project Engineer Signature

This document was prepared under my supervision, in accordance with the *Local Assistance Procedures Manual*, Exhibit 6-B, "Instructions for Completing the Preliminary Environmental Study Form."

_____ _____ _____
(Signature of Local Agency) *(Date)* *(Telephone No.)*

Caltrans District Professionally Qualified Staff (PQS) Signature

☐ Project does not meet definition of an "undertaking"; no further review is necessary under Section 106 ("No" Section A, #35).

☐ Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA and based on the information provided in the PES Form, the project does not have the potential to affect historic properties ("No" Section A, #35).

☐ Project is limited to the type of activity listed in Attachment 2 of the Section 106 PA, but the following additional procedures or information is needed to determine the potential for effect ("To Be Determined" Section A, #35):
☐ Records Search ☐ _____ ☐ _____ ☐ _____

☐ Project meets the definition of an "undertaking"; all properties in the project area are exempt from evaluation per Attachment 4 of the Section 106 PA ("No" Section A, #35).

☐ The proposed undertaking is considered to have the potential to affect historic properties; further studies for 106 compliance are indicated in Sections B, C, and D of this PES Form ("Yes" Section A, #35).

_____ _____ _____
(Signature of Professionally Qualified Staff) *(Date)* *(Telephone No.)*

The following signatures are required for all CEs, routine and complex EAs, and EISs:

Caltrans District Senior Environmental Planner (or Designee) and DLAE Signatures

I have reviewed this Preliminary Environmental Study (PES) Form and determined that the submittal is complete and sufficient. I concur with the studies to be performed and the recommended NEPA Class of Action.

_____ _____ _____
(Signature of Senior Environmental Planner or Designee) *(Date)* *(Telephone No.)*

_____
(Name)

_____ _____ _____
(Signature of District Local Assistance Engineer or Designee) *(Date)* *(Telephone No.)*

_____
(Name)

☐ HQ DEA Environmental Coordinator concurrence _____. E-mail concurrence attached.
(*date*)

Preliminary Environmental Investigation
Notes to Support the Conclusions of the PES Form
(May Also Include Continuation of Detailed Project Description)

Brief Explanation of How Project Complies, or Will Comply with Applicable Federal Mandate (Part A):

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Distribution 1) Original - DLAE, 2) Local Agency Project Manager, 3) DLA Environmental Coordinator
4) Senior Environmental Planner (or designee), 5) District PQS

Updated: 05/15/08

EXHIBIT 6-B INSTRUCTIONS FOR COMPLETING THE PRELIMINARY ENVIRONMENTAL STUDY (PES) FORM

A Preliminary Environmental Study (PES) Form must be completed for **all** local agency federal-aid projects "**off**" the State Highway System (SHS). If a local agency desires federal reimbursement for National Environmental Protection Act (NEPA) compliance, then the local agency must submit a "Request for Authorization to Proceed with Preliminary Engineering" form (*Local Assistance Procedures Manual* (LAPM), Chapter 3, "Project Authorization" Exhibit 3-A) to the DLAE prior to commencing with the PES Form. The local agency may not proceed with any reimbursable activities prior to the project's inclusion in a federally approved Federal Statewide Transportation Improvement Program (FSTIP) and receipt of "Authorization to Proceed" notification from Caltrans. (See LAPM, Chapter 3, "Project Authorization," Section 3.2)

Detailed instructions for completing the Preliminary Environmental Study (PES) Form are provided below.

Federal-Aid Project No: (Federal Program Prefix-Project No., Agreement No.) Example: RPSTPLE 5017(020). Obtain federal-aid project number from your District Local Assistance Engineer (DLAE). This number is required in order for the District SEP (or designee) to process PES Form.

Final Design: Indicate the date the local agency expects to begin final design. The 23 CFR 771.113 (Timing of Administration activities) prohibits final design activities until NEPA approval has been obtained; this is the date by which NEPA clearance is needed.

To: (Self explanatory)

From: (Self explanatory)

Is the Project "ON" the SHS? Check "Yes" or "No." If Yes, **STOP**, and contact the DLAE regarding the Departmental policy on local agency projects "on" the SHS.

Note: The current and long-standing policy is for the Department to be California Environmental Quality Act (CEQA) lead agency for improvement projects "on" the SHS. The Department's practice of acting as CEQA Lead for projects on the SHS is based on the Department's statutory obligation to plan, design, construct, operate and maintain the SHS as well as its actual ownership of the SHS. Further, as owner of the right of way, the Department is the entity ultimately responsible for property stewardship of all resources within State right of way. This stewardship obligation cannot be delegated to others. This applies even if the project is financed by others. See Departmental policy memo provided at:

http://www.dot.ca.gov/ser/downloads/memos/CEQA_Lead_Agency_24Jun04.pdf

Based on information contained in the above referenced policy memo, local agency projects "**on**" the SHS are processed as State Highway Projects in accordance with procedures set forth in the *Caltrans Project Development Procedures Manual*.

Federal Statewide Transportation Improvement Program (FSTIP): Enter the currently adopted FSTIP date and page number on which project is identified, and attach a copy of the FSTIP page (showing the project) to the PES Form. The FSTIP is available at:

http://www.dot.ca.gov/hq/transprog/fedpgm.htm

Note: The California FSTIP is a multi-year, statewide, intermodal program of transportation projects that is consistent with the statewide transportation plan and planning processes, metropolitan plans, and Federal Transportation Improvement Programs (FTIPs) and processes. The FSTIP is prepared by Caltrans in cooperation with the Metropolitan Planning Organizations (MPOs) and the Regional Transportation Planning

Agencies (RTPAs). The FTIPs/FSTIP contains all capital and non-capital transportation projects, or identified phases of transportation projects proposed for funding under the Federal Transit Act and Title 23 of the United States Code including federally funded projects.

Programming for FSTIP: Identify the fiscal year and dollar amount programmed in the FSTIP for each phase of the project (preliminary engineering, right of way, and construction).

Project Description as Shown in FSTIP: Enter the project description exactly as it appears in the FSTIP.

Detailed Project Description: Describe all aspects of the project including project location and limits, proposed facilities, and required right of way acquisition. Discuss the main transportation problem or problems that point to the need for the project and describe how the project will solve the identified problem or need (i.e., is the project necessary in order to correct existing roadway deficiencies, such as substandard geometry or lane width?). How will the project correct these deficiencies? Describe any design deficiencies, such as substandard cross section or horizontal or vertical alignment. Is the new or upgraded facility needed to serve a new housing development, or shopping complex? Discuss the logical termini of the project.

Note: 23 CFR 771.111(f) requires that federal-aid projects:

- *Connect logical termini and be of sufficient length to address environmental matters on a broad scope;*
- *Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and*
- *Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.*

Provide as much detail as possible for all boxes checked "Yes" under Preliminary Design Information.

Preliminary Design Information: Check all applicable boxes and provide as much pertinent information on engineering drawings and maps as possible. If project will involve excavation, delineate location of excavation on map and indicate maximum depth of excavation. If right of way will be acquired, provide a map of the project area with the location of each parcel to be acquired. Provide Assessor Parcel Numbers for all parcels.

Required Attachments: Please note that all of the maps listed on the PES Form are **required**. Maps should be consistent with the project description and at a minimum scale of 1" = 200'.

A. Potential Environmental Effects:

Section A of the PES Form should not be completed until after the local agency has completed Steps 1 through 4 in the LAPM, Chapter 6, Section 6.7, Step-by-Step Procedures, as follows:

- Develop Complete Project Description and Detailed Map
- Review Relevant Literature Maps and Inventories
- Request Technical Information from Resource and Regulatory Agencies
- Verify Research Findings in the Field (Site Visit)

Following completion of Steps #1 through #4, answer each of the following questions. For "No" response, explain in the "Preliminary Investigation Notes to Support the Conclusions of the PES Form" how the mandate of federal law has been met (i.e., The Preliminary Environmental Investigation [Steps #1- 4 above] concluded that the resource is not present within the project area or that the resource is present, but will not be affected by the project. A technical memo explaining how the project will not affect the resource in question is attached, or a "No Effect" determination by a Caltrans Biologist is attached, etc.).

For "No" response, check the "No" box next to the appropriate question in Section A of the PES Form, and in the "Preliminary Investigation Notes to Support the Conclusions of the PES Form" briefly discuss how the mandates of federal law have been met.

For "Yes" response, indicate in Section B whether a technical study, technical memo or discussion in the ED will be prepared to comply with the federal requirements. Local Agency should consult the DLAE and District SEP (or designee) when determining the appropriate level of analysis. Required technical reports shall be prepared in accordance with guidance and procedures set forth in the *Standard Environmental Reference* (SER). Local agency shall not commence with technical studies until after the PES Form is fully signed by local agency and Caltrans staff.

All environmental contracts shall be prepared in accordance with guidance and procedures set forth in the LAPM, Chapter 10, "Consultant Selection." The contract shall be consistent with requirements set forth in the PES Form and shall direct the preparation of reports in accordance with guidance set forth in the SER.

http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_p/p10consult.pdf.

General

1. Will the project require future construction to fully utilize the design capabilities included in the proposed project?

Note: This question is designed to address independent utility and segmentation. The Council on Environmental Quality (CEQ) regulations (40 CFR 1502.13) are directed at avoiding improper segmentation, wherein the significance of the environmental impact of an action as a whole would not be evident, if the action were to be broken into component parts and the impact of those parts analyzed separately.

If "No," check the "No" box next to Question #1 in Section A of the PES Form. In the "Preliminary Investigation Notes to Support the Conclusions of the PES Form," briefly discuss the transportation problem, traffic and transportation conditions that the project is intended to address and clearly state the rationale supporting the project's end points.

If "Yes," or "To Be Determined," check the appropriate box next to Question #1 in Section A of the PES Form. *(Note: Projects must satisfy the provisions of 23 CFR 771.111[f] in order to be eligible for federal reimbursement.)* Under Section B of the PES Form, indicate whether a Traffic Study, Technical Memorandum, or Discussion in ED Only will be prepared to clearly show how the action shall:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made.
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

2. Will the project generate any public controversy?

Consider whether there is any public controversy associated with the project and if so, on what grounds.

If "No," check the "No" box next to Question #2 in Section A of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate what steps were taken to determine the potential for public controversy.

If "Yes," or "To Be Determined," check the appropriate box next to Question #2 in Section A of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate the grounds on which the controversy exists.

Note: Projects involving substantial public controversy on environmental grounds require additional environmental study (23 CFR 771.117[b] [2]).

If the basis for controversy is environmental, complete Section F of the PES Form as appropriate.

Consult with the DLAE and District SEP or designee when determining the extent of public involvement that may be necessary.

Noise:

3. Is the project a Type 1 project as defined in 23 CFR 772.5(h)… "construction on new location or the physical alteration of an existing highway, which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes"?

Note: Federal law and state policy require that every project that adds through-lanes or significantly realigns roadways must receive a noise evaluation.

If "No," check the "No" box next to Question #3 in Section A of the PES Form. Check all applicable boxes under Preliminary Design Information (i.e., widen existing roadway, increase number of through-lanes, new alignment, capacity increasing, etc). In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form," briefly discuss the scope of the project and how this type of work will not result in significant changes in the horizontal or vertical alignment nor increase the number of through-traffic lanes.

If "Yes," or "To Be Determined," check the appropriate box next to Question #3 in Section A of the PES Form. Indicate under Section B of the PES Form that a Noise Study Report, Technical Memorandum or Discussion in the ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining which level of analysis will be necessary based on project scope and potential for impact.

The Noise Study Report shall be completed in accordance with guidance set forth at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch12noise/chap12noise.htm

If a sound wall is needed, a Noise Abatement Decision Report will be required.

4. Does the project have the potential for adverse construction-related noise impacts (such as related to pile driving)?

Consider whether the construction of the project will involve pile driving, structure demolition, blasting, etc. Will the project have the potential for adverse construction-related noise impacts either on land or underwater?

If "No," check the "No" box next to Question #4 in Section A of the PES Form. Check all applicable boxes under Preliminary Design Information (i.e., bridge work, equipment staging, excavation, pile driving road cuts, stream channel work, etc.) that could result in excessive noise. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" briefly discuss how these types of activities will not result in excessive construction noise or generate underwater noise.

If "Yes," or "To Be Determined," check the "Yes" or "To be Determined" box as appropriate, next to Question #4 in Section A of the PES Form. Under Section B of the PES Form indicate whether a Technical Memorandum or Discussion in the ED will be prepared. Consult with the DLAE and District SEP (or designee) when determining which level of analysis will be necessary based on the potential for impact.

"Guidance on Transportation and Construction-Induced Vibration" is provided in the SER at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch12noise/chap12noise.htm.

5. Is the project in a National Ambient Air Quality Standard (NAAQS) non-attainment or maintenance area?

Check the Table of Conformity Areas provided at:

http://www.dot.ca.gov/hq/env/air/pages/conftable.htm

Is the county that the project is located in, listed in the Table of Conformity Areas?

If "Yes," check the "Yes" box as appropriate, next to Question #5 in Section A of the PES Form and proceed to Question #6.

If "No," no further Air Quality (AQ) studies are needed because transportation conformity only applies in federal non-attainment and maintenance areas. Check the "No" box next to Question #5 in Section A of the PES Form and proceed to Question #9.

6. Is the project exempt from the requirement that a conformity determination be made?

Review the list of project types in 40 CFR Part 93, Sec. 93.126, Table 2 Exempt Projects, provided as Exhibit 6-C of this chapter, or electronically at:

http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_2004/julqtr/pdf/40cfr93.126.pdf

Is project one of the project types included in the 40 CFR 93.126, Table 2?

If "Yes," no conformity determination is required. Check the "Yes" box next to Question #6 in Section A of the PES Form, and state which conformity exemption in Table 2 applies. Skip Questions #7 & #8.

If "No," a project level conformity determination may be required. Continue with Question #7.

7. Is the project exempt from regional conformity?

Review list of project types listed in 40 CFR Section 93.127, Table 3 Projects Exempt from Regional Analysis, provided as Exhibit 6-D of this chapter, or electronically at:

http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_2004/julqtr/pdf/40cfr93.127.pdf.

Is project one of the project types included in 40 CFR 93.127, Table 3?

If **"Yes," and project is located in a non-attainment/maintenance area for ONLY ozone**, no project-level conformity determination is required. Check the "Yes" box next to Question #7 under Section A of the PES Form, and state which conformity exemption in Table 3 applies. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" state: "A regional emissions analysis is not required because project is one of the project types included in Table 3, and a localized hot spot analysis is not required because project is located in an area that is attainment/unclassified for ALL of CO, PM10 and PM2.5. Skip to Question #9.

If **"Yes," and the project is located in an area that is non-attainment/attainment-maintenance for CO, PM10 and/or PM2.5, a project-level conformity determination is required.** Check the "Yes" box next to Question #7 under Section A of the PES Form and state which conformity exemption in Table 3 applies. Under Section B of the PES Form check Air Quality Report, Technical Memorandum, or Discussion in ED Only. Consult with the District SEP (or designee) to determine the appropriate level of analysis and documentation needed. Indicate coordination with and approval by Caltrans under Sections C and D of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" state: "A regional emissions analysis is not required because project is one of the project types included in Table 3, however, a localized hot spot analysis is required because project is located in an area that is non-attainment/maintenance for CO, PM10 and PM2.5 (indicate which)." Guidance on conducting a Localized Hotspot Analysis is provided at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm#Conformity.
Do not begin technical studies until after the PES Form is fully signed. Skip to Question #9.

If "**No**," **a project-level conformity determination is required including both a regional emissions analysis and hot spot analysis regional level conformity analysis (e.g. dispersion modeling).** Check the "No" box next to Question #7 in Section A of the PES Form. In Section B of the PES Form, check Air Quality Report, Technical Memorandum, or Discussion in ED Only. Consult with the District SEP (or designee) to determine the appropriate level of analysis and documentation needed. Indicate coordination with and approval by Caltrans under Sections C and D of the PES Form. Guidance on project-level conformity determinations and regional emissions analysis and hot spot analysis is provided at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm#Conformity.
Do not begin technical studies until after the PES Form is fully signed. Continue with Question #8.

8. If project is <u>not exempt</u> (i.e., if "No" on Question #6 and Question #7) a project-level conformity determination is required. The project-level conformity determination would include both the regional emissions analysis and a hot spot analysis (in PM2.5, PM10 and CO non-attainment and/or maintenance areas).

For the regional emissions analysis **in a metropolitan non-attainment/maintenance area**, the project needs to be included in the MPOs currently conforming Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP). To be "included" in the currently conforming RTP and TIP, there must be no significant changes in the project's design concept and scope from those assumed in regional emissions analysis. Additionally, the assumed open-to-traffic date must be correct. On the first page of the PES Form identify the date of the currently adopted RTP and FTIP within which the project is included and provide the page numbers wherein the project is specifically listed.

For regional emissions in **an "isolated rural" non-attainment area** (non-attainment area with no MPO within the non-attainment area boundaries), a regional emissions analysis would be performed as part of the project-level conformity determination. Refer to 40 CFR 93.109 for guidance on projects not included in a conforming RTP and TIP. Specific Isolated Rural area requirements are in 40 CFR 93.109(1). Under Section B of the PES Form, check Air Quality Study and under Section C and D, check coordination with and approval by Caltrans respectively. Guidance on project-level conformity determinations and Regional Emissions analysis is provided at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm#Conformity.
Do no begin technical studies under after the PES Form is fully signed.

For projects in **CO, PM10, and/or PM2.5 non-attainment/maintenance areas**, a localized hot spot analysis also needs to be completed. Check Air Quality Study, Technical Memorandum, or Discussion in ED Only. Consult with the District SEP (or designee) to determine the appropriate level of analysis and documentation needed. Indicate coordination with and approval by Caltrans under Sections C and D of the PES Form. Guidance on conducting a localized hot spot analysis is provided at:

http://www.dot.ca.gov/ser/vol1/sec3/physical/ch11air/chap11.htm#Conformity.
Do not begin technical studies until after the PES Form is fully signed.

<u>Hazardous Materials/Hazardous Waste</u>

9. Is there a potential for hazardous materials (including underground or aboveground tanks, etc.) and/or hazardous waste (including oil/water separators, waste oil, asbestos-containing material, lead-based paint, ADL, etc.) within or immediately adjacent to the construction area?

Conduct screening in accordance with the procedures set forth in the SER, provided at:

http://www.dot.ca.gov/ser/vol1/vol1.htm

Note: Screening typically includes a review of local records of prior land uses and local and state-maintained databases of hazardous materials sites and underground tanks. During the site visit, note existing land uses (i.e., gas stations, auto wrecking yards, railroad yard or tracks, landfills, etc.) and any evidence of past land uses (i.e., above ground tanks, stained soil, 50-gallon drums, etc.).

Are there any signs of past or present hazardous materials or waste uses, or any known hazardous materials within or immediately adjacent to the construction area?

If "No," check the "No" box next to Question #9 in Section A of the PES Form. On the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" include the steps taken to determine whether any hazardous materials or wastes could potentially occur within or immediately adjacent to the construction area. Include field notes from site visit, documenting observations, (i.e., surrounding land uses [current and historic], general characteristics of area/soil, absence of staining on soil, proximity to gas station, landfill or rail yard, etc.)

If "Yes," or "To Be Determined," check the appropriate box next to Question #9 in Section A of the PES Form. Further study will be required. Check ISA (Phase I) in Section B of the PES Form and indicate coordination and permit requirements under Sections C and D of the PES Form.

The ISA (Phase I) shall be undertaken in accordance with guidance set forth in the SER, Chapter 10, "Hazardous Wastes," provided at: http://www.dot.ca.gov/ser/vol1/vol1.htm

Water Quality/Resources

10. Does the project have the potential to impact water resources (rivers, streams, bays, inlets, lakes, drainage sloughs) within or immediately adjacent to the project area?

Review maps to determine if there are water resources (i.e., rivers, streams, lakes, reservoirs, impoundments, bays, inlets, estuaries, wetlands, drainage sloughs, vernal pools, swales, CWA Section 303d impaired water bodies, etc.) within or immediately adjacent to the project area. Confirm and note presence or absence on the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form." Are there water resources in the immediate project vicinity that may be affected by the project?

If "No," check the "No" box next to Question #10 under Section A of the PES Form. Under "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" briefly discuss the project's potential for impacting water quality. Include a vicinity map (clearly showing project's proximity to water resources) and a copy of the field notes confirming the absence of water resources.

If "Yes," or "To Be Determined," check the appropriate box next to Question #10 in Section A of the PES Form. Check "Yes" next to "Bridge Work," "Stream Channel Work" or "Flooding," as appropriate. Under Preliminary Design Information on the first page of the PES Form, check "Water Quality Assessment Report," "Technical Memorandum," "Analysis in ED or Permit Only," (as applicable). Under Section B of the PES Form and under "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" specifically identify the water resources that may be affected by the project.

The technical report shall be prepared in accordance with guidance set forth in the SER, Chapter 9, "Hydrology, Water Quality and Stormwater," provided at:

http://www.dot.ca.gov/ser/vol1/vol1.htm

Projects involving the dredging or filling in of waters of the US (including wetlands) will require coordination with the U.S. Army Corps of Engineers (ACOE) and may require water quality permits, such as Section 404 Individual or Nationwide Permit, Section 401 from Regional Water Quality Control Board (RWQCB), and/or 1600 permit from the California Department of Fish and Game (CDFG).

Projects involving work in navigable waters, such as the demolition or construction of bridges or docks and bulkheads, or that result in obstructions to navigation, or in the dumping of trash, or sewage into navigable waterways (Rivers & Harbors Act [Section 10]) will also require a Section 10 Permit.

Projects involving the construction of a bridge over a Navigable River will require coordination with the U.S. Coast Guard (USCG) and may require a USCG Bridge Permit. Check USCG (bottom of Section C of the PES Form) indicating that coordination with the USCG is required during the environmental and design phases of the project and check USCG Bridge Permit (bottom of Section D of PES Form) indicating that a Coast Guard Bridge Permit may be needed.

Since two to three months is normally required to process a routine application involving a public notice, local agencies should apply for permits as early as possible to allow sufficient time to obtain all necessary approvals prior to beginning construction. For large or complex projects, local agencies should request a "pre-application consultation" or informal meeting with the ACOE during the early planning phase of your project to minimize the potential for delays later.

Projects with five (5) acres or more of permanent impacts to waters of the US and processed with an EIS, will require an Individual Section 404 Permit. Local agency should consult with the DLAE (or designee) as early

as possible to ensure compliance with all provisions of the Memorandum of Understanding, among the FHWA, California Department of Transportation(Caltrans), United States Environmental Protection Agency (US EPA), United States Army Corps of Engineers (USACOE), United States Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service(NMFS), National Environmental Policy Act (NEPA) and Clean Water Act Section 404 Integration Process for Federal Aid Surface Transportation Projects in California (April 2006) AKA: NEPA/404 MOU. MOU provided at: http://www.dot.ca.gov/ser/downloads/MOUs/NEPA404/nepa404_2006_final_mou.pdf.

11. Is the project within a designated Sole-Source Aquifer?

A Sole-Source Aquifer is an aquifer upon which a community depends exclusively for its fresh water supply. The U.S. Environmental Protection Agency's Sole-Source Aquifer Program was established under Section 1424(e) of the U.S. Safe Drinking Water Act (SDWA) in 1977 to help prevent contamination of groundwater from federally funded projects. The Sole-Source Aquifer Program allows for EPA environmental review of any project which is financially assisted by federal funds to determine whether the project has the potential to contaminate a Sole-Source Aquifer. If there is such a potential, the project would need to be modified to reduce or eliminate the risk, or federal (FHWA) financial support may be withdrawn.

Four (4) aquifers in California have been designated as "Sole-Source Aquifers" by the EPA. These include:

- Santa Margarita Aquifer, Scotts Valley, Santa Cruz County
- Fresno Aquifer, Fresno County
- Ocotillo-Coyote Wells Aquifer, Imperial County
- Campo/Cottonwood Creek Aquifer, San Diego County

Consider if the project is located within or near one of the four EPA-designated Sole-Source Aquifers. Additional information regarding each aquifer is provided at:

http://www.epa.gov/region09/water/groundwater/ssa.html

If "No," check the "No" box next to Question #11 under Section A of the PES Form. No further study is needed. If the project is proposed within Santa Cruz, Fresno or Imperial Counties, or where proximity is questionable, state distance of project from Sole-Source Aquifer in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" and attach map showing project's relation to Sole-Source Aquifer boundary.

If "Yes," or "To Be Determined," check the appropriate box next to Question #11 under Section A of the PES Form. Additional study will be needed. Check Sole-Source Aquifer box under Section B of the PES Form. If the project is being processed with an EA or an EIS, EPA review of the NEPA document will be required prior to the public availability period. Check EPA box under Section C of the PES Form. If the project is being processed with a CE, and the project will involve a well or sewage disposal, or result in a threat of aquifer contamination or hazard to public health, EPA review will also be required prior to Caltrans approval of the CE. Check Sole-Source Aquifer under Section C of the PES Form, and check Coordination with EPA under Section C of the PES Form.

If the project is within a designated Sole-Source Aquifer, but does not involve a well or sewage disposal, or result in a threat of aquifer contamination or hazard to public health and will be processed with a CE, project is exempt from a project-by-project review by EPA. Documentation of research and impacts on the aquifer shall be prepared in accordance with guidance set forth in the SER, Chapter 9, "Hydrology, Water Quality and Stormwater," provided at:

http://www.dot.ca.gov/ser/vol1/vol1.htm

Coastal Zone

12. Is the project within the State Coastal Zone, San Francisco Bay or Suisun Marsh?

If "No," check the "No" box next to Question #12 under Section A of the PES Form. Reiterate location of project in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form."

Where proximity is questionable, state distance of project (in miles) from State Coastal Zone jurisdiction. Attach a regional map showing location of project relative to State Coastal Zone.

If "Yes," or "To Be Determined," check the appropriate box next to Question #12 under Section A of the PES Form. Check Coastal Zone under Section B of the PES Form. Preparation of a separate technical report for coastal resources is not required. However, other technical reports may be needed to confirm project's consistency with the State Coastal Zone Management Plan. As part of the permitting process, the following technical reports are often used to support the permit application: **water quality reports**, **visual assessments**, **community impact assessments**, **natural environment studies**, **biological assessments**, and **geotechnical reports**. In addition, the permitting agencies will require a copy of the approved final ED as well as documentation of consultation with resource and regulatory agencies including permits and approvals from these agencies.

Local agencies are responsible for obtaining a Coastal Consistency Determination or Waiver (required under the Federal Coastal Zone Management Act) from the California Coastal Commission (CCC). However, in order to obtain the consistency determination/waiver, the local agency must demonstrate that the project is consistent with the California Coastal Act and any Local Coastal Plan (LCP). The CCC Consistency Office will require a Coastal Development Permit (CDP) from the Local Coastal Agency (LCA), or at least a letter documenting consistency with the LCP before they will provide a consistency determination/waiver. Check Coordination boxes next to LCA and CCC (Federal Consistency Office) under Section C and check Action/Permit/Approval box next to CDP and Coastal Zone Consistency Determination under Section D of the PES Form.

Projects located within the San Francisco Bay Area and involving the construction, remodel or repair of structures, or the dredging or extraction of materials from within the San Francisco Bay, or in certain tributaries that flow into the Bay will also need to obtain a Bay Conservation and Development Commission (BCDC) permit prior to commencing any work within BCDC's jurisdiction. Check Coordination with BCDC under Section C of the PES Form and check BCDC Permit under Section D of the PES Form.

Projects located within coastal areas outside San Francisco Bay will need to obtain a Coastal Zone Permit from the CCC prior to commencing any work within CCC's jurisdiction. Check Coordination with CCC under Section C of the PES Form and check Coastal Zone Permit under Section D of the PES Form.

Consult with the DLAE and District SEP (or designee) to determine the best course of action.

Refer to the SER, Chapter 18, for additional guidance on compliance in Coastal Zone areas, at:

http://www.dot.ca.gov/ser/vol1/sec3/special/ch18coastal/chap18.htm

Floodplain

13. Is the construction area located within a regulatory floodway or within the base floodplain (100-year) elevation of a watercourse or lake?

Check current Federal Management Agency (FEMA) maps and current National Flood Insurance Program (NFIP) maps available from public libraries, State Department of Water Resources, city and county flood control managers, or public works departments.

Will the project encroach on the base (100 year) floodplain? If "No," check the "No" box next to Question #13 in Section A of the PES Form. Attach a copy of relevant FEMA or NFIP map, showing location of project. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form," cite FEMA and/or NFIP map number and date. Also indicate whether or not all work will occur within existing right of way.

If "Yes," or "To Be Determined," check the appropriate box next to Question #13 in Section A of the PES Form. Further study will be required to determine if the action would support base floodplain development and/or if the action will involve any work permanently encroaching on a regulatory floodway, or if the action

will involve any work affecting the base floodplain (100-year) elevations of a watercourse or lake. Check Location Hydraulic Study under Section B of the PES Form. The conclusion of the Location Hydraulic Study will determine whether a Floodplain Evaluation Report or a Summary of Floodplain Encroachment Report will be needed.

The Location Hydraulic Study shall be prepared in accordance with guidance set forth in the SER, Chapter 17, "Floodplains," provided at:

http://www.dot.ca.gov/ser/vol1/sec3/special/ch17flood/chap17.htm

Wild and Scenic Rivers

14. Is the project within or immediately adjacent to a Wild and Scenic River System?

Look up the river on the following web site to determine if it is designated wild and scenic. Consider the project's proximity to these rivers. *(Note: Designation protects river and a 0.25-mile corridor from development. Consider whether the action involves any construction in, across, or adjacent to a river, designated as a component of, or proposed for inclusion in the National System of Wild and Scenic Rivers published by the U.S. Department of the Interior/U.S. Department of Agriculture.)*

If "No," check the "No" box next to Question #14 in Section A of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate in miles of closest designated Wild and Scenic River. When the project is in the general vicinity of a Wild and Scenic River, indicate that the project is not within the 0.25-mile protected corridor. Attach Regional Map showing project's relation to river in question.

If "Yes," or "To Be Determined," check the appropriate box next to Question #14 in Section A of the PES Form. Further study will be required to determine if the construction, operation or maintenance of the project will affect the river and whether the effect will be significant. Check Wild and Scenic Rivers Study under Section B, coordination with River Managing Agency under Section C, and Wild and Scenic Rivers Determination under Section D of the PES Form.

Consult with the DLAE and District SEP (or designee) to determine the level of analysis that will be necessary based on the potential for impact.

The Wild and Scenic River Studies shall be undertaken in accordance with guidance set forth in the SER, Chapter 19, "Wild and Scenic Rivers," provided at:

http://www.dot.ca.gov/ser/vol1/sec3/special/ch19wsrivers/chap19.htm

Early coordination with the River Managing Agency is strongly encouraged to expedite the Wild and Scenic Rivers Determination.

Biological Resources

15. Is there a potential for federally listed threatened or endangered species or their designated critical habitat to occur within or adjacent to the construction area? Note: The Federal Endangered Species Act, Sections 7, 9 and 10 protect federally listed threatened and endangered species and their designated critical habitat.

Consult the U.S Fish and Wildlife Service (USFWS), Division of Endangered Species web site (http://www.fws.gov/endangered/listdata.html) to determine whether there are any federally listed threatened or endangered species, or their designated critical habitat in the county within which the project is located.

If "No," check the "No" box next to Question #15 in Section A of the PES Form and request the Caltrans District Biologist prepare a finding of "No Effect" for the project file.

If "To Be Determined," check the "To Be Determined" box next to Question #15 in Section A of the PES determining if there is a potential for federally listed plant and animal species and/or their critical habitat to occur within the project area. *Note: Caltrans staff assistance will depend on current workload and staff availability. When Caltrans District Biologists are not available, the local agency will need to retain a qualified biologist to survey the project area and prepare a Technical Memo summarizing the following:*

- Description of project setting
- USFWS list of the federally listed plant and animal species and their critical habitat occurring within the county
- Brief discussion of the habitat needs of each species on the list
- General reconnaissance survey notes and conclusion as to whether or not any of the species on the USFWS list exist or could occur within the project area
- Caltrans District Biologists will review the Technical Memo, when appropriate, make a finding of "No Effect"

If "Yes," or "To Be Determined," check the appropriate box next to Question #15 in Section A of the PES Form. Further study will be required. Check the appropriate technical report (NES or BA) under Section B of the PES Form. Consult with the DLAE and the District SEP (or designee) to determine the appropriate study based on the potential for impact(s). When a NES or NES (Minimal Impacts) is required, encircle the appropriate one in Section B, check coordination with Caltrans under Section C, and check Approval by Caltrans under Section D. When a BA is required, encircle the appropriate study under Section B, check coordination with Caltrans under Section C, and check approval for consultation by Caltrans under Section D. For BAs and BEs for federal-listed plants, animals or their critical habitat, check coordination with USFWS under Section C and Section 7 Informal/Formal Consultation under Section D. For BAs for federal-listed species protected by the NOAA, NMFS, check coordination with NOAA Fisheries under Section C.

Consult the following web sites to determine if the project has the potential to affect fish species covered by a Fisheries Management Plan at:

http://www.nmfs.noaa.gov/habitat/efh/Consultation/TOC.html

http://www.nmfs.noaa.gov/sfa/magact/

If the project has the potential to affect fish species covered by a Fisheries Management Plan, an Essential Fish Habitat (EFH) Evaluation will be required. Check EFH Evaluation under Section B, coordination with NOAA under Section C, and Magnuson-Stevens Fishery Conservation and Management Act (MSA) Consultation under Section D of the PES Form.

If the project will involve pile driving, structure demolition, explosives, or blasting, or will generate other forms of underwater noise, a Bio-Acoustic Evaluation, to assess the effects of this noise or sound pressure levels on fish, diving birds and other underwater species, will be required. Check Bio-Acoustic Evaluation under Section B, coordination with NOAA Fisheries under Section C, and approval by Caltrans under Section D of the PES Form. The NES (Minimal Impacts), NES or BA shall be prepared in accordance with guidance set forth in the SER, Chapter 14, "Biological Resources," provided at:

http://www.dot.ca.gov/ser/vol1/sec3/natural/Ch14Bio/ch14bio.htm

Templates for the NES (Minimal Impacts), NES and BA and Quality Control guidance for Standard Biological Technical Documents and Reports are provided at:

http://www.dot.ca.gov/ser/forms.htm

16. Does the project have the potential to directly or indirectly affect migratory birds or their nests or eggs (such as vegetation removal, box culvert replacement/repair, bridge work etc.)?

Note: The Migratory Bird Treaty Act implements various treaties between the United States and Canada, Mexico, former Soviet Union, Japan protecting migratory birds by making it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill said species. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season.

If "No," check the "No" box next to Question #16 in Section A of the PES Form. No further study is required.

If "Yes," or "To Be Determined," check the appropriate box next to Question #16 in Section A of the PES Form and indicate under Section B of the PES Form that a NES (Minimal Impacts), NES, BA or BE will be prepared.

Coordinate with Caltrans District Biologist under Sections C & D.

The NES (Minimal Impacts), NES, BE or BA shall be prepared in accordance with guidance set forth in the SER, Chapter 14, "Biological Resources," provided at:

http://www.dot.ca.gov/ser/vol1/sec3/natural/Ch14Bio/ch14bio.htm

17. Is there a potential for wetlands to occur within or adjacent to the construction area?

Begin by reviewing National Wetland Inventory (NWI) maps available through the appropriate Natural Resource Conservation Service (NRCS) field office(s). Where NWI maps indicate a potential for wetlands, a biologist, or someone with knowledge of wetlands should field review the project area. If a biologist is not available, photos of the project area should be taken and submitted with the completed PES Form. Is there potential for wetlands?

If "No," check the "No" box next to Question #17 in Section A of the PES Form. No further study is needed. Indicate the soil classification in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form." Attach a copy of the relevant NWI map, showing location of project relative to wetland designations and include any field notes from the site visit and photographs of project area with project limits delineated.

If "Yes," or "To Be Determined," check the appropriate box next to Question #17 in Section A of the PES Form. Further study will be required to determine the exact boundary of the wetland (based on the ACOE three-parameter definition 330 CFR 323.2[c]), and to quantify the project related impacts on the wetland. Check Wetlands and Wetland Delineation (WD) and Assessment under Section B, check coordination with Caltrans and USACE under Section C, and check approval of assessment by Caltrans, Wetland Verification by USACE, and Wetlands Only Practicable Alternative Finding by Caltrans under Section D.

The Wetland Delineation shall be prepared in accordance with guidance set forth in the SER, Chapter 15, "Wetlands and Other Waters of the U.S.," provided at:

http://www.dot.ca.gov/ser/vol1/sec3/natural/ch15wetland/ch15wet.htm

18. Is there a potential for agricultural wetlands to occur within or adjacent to the construction area?

Note: The 404 Regulatory Program covers discharges of dredged or fill material to wetlands on agricultural lands and requires authorization by the ACOE (either an individual permit or NWP) unless the activity has a CWA statutory exemption, or the area is prior converted cropland. Field staff of the NRCS determines whether an agricultural site is a wetland.

Review relevant maps and information available from the appropriate National Resources Conservation Service field office to determine if any agricultural wetlands are present within the project area.

If "No," check the "No" box next to Question #18 in Section A of the PES Form. No further study is needed. Indicate the types of land uses immediately surrounding the project area and whether all work will occur

within existing right of way, etc., in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form." Attach a copy of any field notes from the site visit and/or any photographs of project area with project limits delineated.

If "Yes," or "To Be Determined," check the appropriate box next to Question #18 in Section A of the PES Form. Further study will be required to determine the exact boundary of the agricultural wetland (based on the ACOE three-parameter definition 33 CFR 323.2[c]) and to quantify the project related impacts on the agricultural wetland. Check Wetlands and Wetland Delineation (WD) and Assessment under Section B, check coordination with Caltrans and NRCS under Section C, check approval of the WD and Assessment by Caltrans and Agricultural Wetland Verification by NRCS under Section D.

The WD shall be prepared in accordance with guidance set forth in the SER, Chapter 15, Wetlands and Other Waters of the U.S., provided at:

http://www.dot.ca.gov/ser/vol1/sec3/natural/ch15wetland/ch15wet.htm

19. Is there a potential for the introduction or spread of invasive plant species?

Note: Presidential Executive Order 13112 prohibits the use of federal-aid for construction, revegetation or landscaping activities that purposely include the use of known invasive plant species. This Order is concerned with plant material being used in revegetation, and with the spread of invasive from or to a project area. If the project area is infested with Star Thistle, for example, the project needs to include measures to ensure that material is not being spread to other areas by disposal off-site or by tracking seed on equipment. Also, if equipment/material is being brought in from areas of invasive plants, this must be identified to ensure that invasive plants are not inadvertently being spread to the project area.

Review the California official noxious weed list and the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory at: http://www.cal-ipc.org/ to determine if invasive plants are in the project area, or if any plants proposed for project landscaping are included on the list.

If "No," check the "No" box next to Question #19 in Section A of the PES Form. No further action regarding invasive plants is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" clearly state that the project will not involve construction, revegetation or landscaping activities that use known invasive plant species. If landscaping is proposed, list plant species proposed for use, or if invasive plants exist within the project area, list those plants in the "Preliminary Environmental Investigations Notes to Support the Conclusions of the PES Form."

If "Yes," or "To Be Determined," check the appropriate box next to Question #19 in Section A of the PES Form. Check "Invasive Species" and "Discussion in ED Only" under Section B, check coordination with Caltrans in Section C, and check "Approval" (of Discussion in ED) under Section D. If an NES is being prepared for impacts to biological species, noxious weed management and invasive species would be addressed in the NES. An NES template is provided at:

http://www.dot.ca.gov/ser/vol1/sec3/natural/Ch14Bio/files/nes_10_4_05.doc

Sections 4(f) and 6(f)

20. Are there any historic sites or publicly owned public parks, recreation areas, wildlife or waterfowl refuges (Section 4(f)) within or immediately adjacent to the construction area?

Review right of way and parcel maps prior to conducting a site visit to determine property ownership. During the site visit note all land uses surrounding the project limits. If "No," check the "No" box next to Question #20 in Section A of the PES Form. No further study is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES" list all surrounding land uses. Attach Project Footprint Map.

If "Yes," or "To Be Determined," check the appropriate box next to question #20 in Section A of the PES Form. Further study will be required. Check Section 4(f) in Section B and write in specific Programmatic Section 4(f) Evaluation, if applicable. Consult with the DLAE and District SEP (or designee) to determine

whether a Programmatic Section 4(f) Evaluation, or an Individual Section 4(f) Evaluation is appropriate, or if the action constitutes a Temporary Occupancy, or qualifies for a de minimis finding. Programmatic and Individual Section 4(f) Evaluations shall be prepared.

Do not begin the Section 4(f) Evaluation until after the PES Form is fully signed. The consultant contract for the Evaluation shall be prepared in accordance with guidance and procedures set forth in the LAPM, Chapter 10, "Consultant Selection," provided at:

http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_p/p10consult.pdf

Guidance on determining de minimis impacts to Section 4(f) properties, or on preparing an Individual Section 4(f), or one of the five (5) Programmatic Section 4(f) Evaluations:

- Parklands, Recreation Areas and Wildlife and Waterfowl Refuges
- Minor Involvement with Historic Sites
- Historic Bridges
- Bikeways and Walkways
- Projects that have a Net Benefit to Section 4(f) properties

Refer to SER, Chapter 20, Section 4(f) and Related Requirements, at:

http://www.dot.ca.gov/ser/vol1/sec3/special/ch204f/chap20.htm

21. Does the project have the potential to affect properties acquired or improved with Land and Water Conservation Fund Act (Section 6(f)) funds?

Review right of way and/or parcel maps prior to conducting a site visit to determine if there are any parks adjacent to, or that would be affected by the project. In order to determine whether Land and Water Conservation Fund (L&WCF) were involved in the acquisition or improvement of a 4(f) property, the park authority having jurisdiction over the property should be interviewed.

If "No," check the "No" box next to Question #21 in Section A of the PES Form. No further study is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" list all surrounding land uses. When one of the surrounding land uses is a park, identify ownership.

If "Yes," *(L&WCF funds were utilized for acquisition or improvement),* further study will be needed and all practical alternatives to the proposed conversion must be evaluated.

Check the "Yes," or "To Be Determined," box next to Question #21 in Section A of the PES Form. Check Section 6(f) in Section B, check coordination with Agency with Jurisdiction under Section C, and if the project will result in the conversion of the Section 6(f) property, check coordination with National Park Service (NPS) under Section C, and check Approves Conversion under Section D. The NPS Regional Office must concur that all environmental review requirements related to the proposed project have been met.

Section 6(f) study procedures are outlined in the SER, Chapter 20, provided at:

http://www.dot.ca.gov/ser/vol1/sec3/special/ch204f/chap20.htm#consider

Approval of a Section 6(f) conversion/replacement property shall be documented in the Section 4(f) Evaluation and Environmental Document.

Visual Resources

22. Does the project have the potential to affect any visual or scenic resources?

Refer to the Visual Impact Assessment (VIA) Guide in the SER, provided at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/VIAChecklistGuidefinal.doc

Consider each of the ten (10) questions and select the response that most closely applies to the project in question. *Refer to Preliminary Design Information provided on the first page of the PES Form when answering questions.* Each response has a corresponding point value. After the checklist is completed the total

score will indicate the potential for impact and the level of detail needed to adequately address visual impacts in the PES Form.

Note: This scoring system should only be used as a preliminary guide and should not be used as a substitute for objective analysis on the part of the user. Although the collective score may direct the user toward a certain level of analysis, circumstances associated with any one of the ten question-areas may necessitate elevating the VIA to a greater level of detail.

Scores between 10-14 indicate a low potential for the project to affect a visual or scenic resource. If this is the case, check the "No" box next to Question #22 in Section A of the PES Form. No further study is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" briefly summarize the outcome of the ten (10) questions or attach a copy of the questions.

If "Yes," or "To Be Determined," check the appropriate box next to Question #22 in Section A of the PES Form and indicate under Section B of the PES Form whether a VIA Technical Memorandum or Discussion in the ED will be prepared. Refer to the scores from the ten (10) questions when determining which level of analysis is appropriate based on the potential for impact.

- Score 20-30 – potentially high adverse impacts, prepare VIA
- Score 15-19 – potential impacts, prepare abbreviated VIA
- Score 10-14 – little or no potential for impacts, prepare Technical Memorandum or Discussion in the ED.

When a VIA is needed, indicate Coordination with Caltrans in Section C of the PES Form, and Approval by Caltrans under Section D of the PES Form.

The VIA shall be prepared in accordance with guidance provided in the SER, Chapter 27, "Visual and Aesthetics Review," at:
http://www.dot.ca.gov/ser/vol1/sec3/community/ch27via/chap27via.htm#eval

Keep in mind that the Administration has determined (23 CFR 771.135, Section 4[f] [49 U.S.C. 303]) that a Section 4(f) Constructive Use occurs when: (ii) The proximity of the proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. Examples of substantial impairment to visual or aesthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting.

Relocation Impacts

23. Will the project require the relocation of residential or business properties?

Note: The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 provides important protections and assistance for people affected by federally funded projects. This law was enacted by Congress to ensure that people whose real property is acquired, or who move as a result of projects receiving federal funds, will be treated fairly and equitably and will receive assistance in moving from the property they occupy. Responsibility for the enforcement of this Act has been delegated to the FHWA and is carried out by the Office of Real Estate Services. Title 49: Transportation, Part 24—Uniform Relocation Assistance And Real Property Acquisition For Federal and Federally Assisted Programs, Section 24.205, Relocation Planning, Advisory Services and Coordination, requires that during the early stages of development, an agency shall plan federal and Federally Assisted Programs or projects in such a manner that recognizes the problems associated with the displacement of individuals, families, businesses, farms, and nonprofit organizations and develop solutions to minimize the adverse impacts of displacement. Such planning, where appropriate, shall precede any action by an agency which will cause displacement, and should be scoped to the complexity and nature of the anticipated displacing activity including an evaluation of program resources available to carry out timely and orderly relocations.

Will the project require the relocation of residential or business properties?

If "No," check the "No" box next to Question #23 in Section A of the PES Form. No further study is needed.

If "Yes," or "To Be Determined," check the appropriate box next to Question #23 in Section A of the PES Form. Under Section B of the PES Form indicate whether a Relocation Impact Memo, Relocation Impact Study or Relocation Impact Report will be prepared. Consult with the DLAE and District SEP (or designee) when determining which level of analysis will be necessary based on the scope of the project. Indicate coordination with and approval by Caltrans under Section C and P of the PES Form.

The Relocation Impact Study or Report shall be prepared in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

Land Use, Community and Farmland Impacts

24. Will the project require any right of way, including partial or full takes? Consider construction easements and utility relocations.

Note: As mentioned earlier, the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 provides important protections for people whose real property is acquired as a result of projects receiving federal funds.

If "No," check the "No" box next to Question #24 in Section A of the PES Form. Also check "No" next to Right of Way Acquisition under Preliminary Design Information on the first page of the PES Form.

In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate that "all work (i.e., trenching, slope stabilization, etc.), if applicable, will occur within existing right of way" next to #23.

If "Yes," or "To Be Determined," check the appropriate box next to Question #24 in Section A of the PES Form. Further study will be needed. Indicate under Section B of the PES Form whether a Community Impact Assessment (CIA), Technical Memorandum, or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining which level of analysis is appropriate based on scope of project and potential for impacts. Under Sections C & D of the PES Form indicate that coordination with and approval by Caltrans will be required.

On the first page of the PES Form, under Preliminary Design Information, check the "Yes" box next to Right of Way Acquisition and attach a map showing all affected APNs. On the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate the total acreage to be acquired and the purpose for the acquisition next to Question #23.

The Relocation Impact Study or Report shall be prepared in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

Note: 23 CFR 771.111(h)(2)(iii) requires one or more public hearings or the opportunity for a public hearing for any federal-aid project which requires significant amounts of right of way, substantially changes the layout or functions of connecting roadways, or if the facility being improved has a substantial adverse impact on abutting properties.

25. Is the project inconsistent with plans and goals adopted by the community?

Note: NEPA requires that when a proposed federal action, normally classified as a CE, involves an unusual circumstance, such as "…likely to cause substantial division or disruption of an established community, disrupt orderly and planned development, or is likely to be not reasonably consistent with plans or goals that have been adopted by the community…," the project shall be the subject of an EA or EIS.

Check comprehensive development plan, general plan and/or community plan and goals adopted by the community. Is project inconsistent?

If "No," check the "No" box next to Question #25 in Section A of the PES Form. No further study is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" indicate steps taken to ensure consistency with local plans.

If "Yes," or "To Be Determined," check the appropriate box next to Question #25 in Section A of the PES Form. Additional study will be needed. Under Section B, Land Use and Community Impacts, indicate whether a CIA, Technical Memorandum, or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining which level of analysis will be necessary based on the scope of the project and potential for impact.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

26. Does the project have the potential to divide or disrupt neighborhoods/communities?

Note: The U.S. DOT Order clarifies and reinforces Title VI responsibilities as well as addresses effects on low-income populations. The goal of the U.S. DOT Order is to ensure that programs, policies, and other activities do not have a disproportionately high and adverse effect on minority or low-income populations. This goal is to be achieved, in part, by implementing both Title VI and NEPA during the development and implementation of transportation activities. All reasonably foreseeable adverse social, economic, and environmental effects on minority populations and low-income populations must be identified and addressed. As defined in the Appendix of the DOT Order, adverse effects include, but are not limited to the "destruction or disruption of community cohesion or a community's economic vitality."

Consult demographic data (i.e., age, ethnicity, and income) from most recent census, consider:

- sense of neighborhood and community cohesion relative to project
- community resources (parks, churches, shopping, schools, emergency services, libraries) travel patterns
- types of housing and businesses
- employment and tax base

Does the project have the potential to divide or disrupt neighborhoods?

If "No," check the "No" box next to Question #26 in Section A of the PES Form. No further study is needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" briefly describe the steps taken to support a "No" answer and briefly describe surrounding land uses.

If "Yes," or "To Be Determined," check the appropriate box next to Question #26 in Section A of the PES Form. Additional study will be needed. Under Section B, Land Use and Community Impacts, indicate whether a CIA, Technical Memorandum, or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining the most appropriate level of analysis based on the scope of the project and potential for impact.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, Community Impacts, at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

27. Does the project have the potential to disproportionately affect low-income or minority populations?

Note: The U.S. DOT Order clarifies and reinforces Title VI responsibilities as well as addresses effects on low-income populations. The goal of the U.S. DOT Order is to ensure that programs, policies, and other activities do not have a disproportionately high and adverse effect on minority or low-income populations. This goal is to be achieved, in part, by implementing both Title VI and NEPA during the development and implementation of transportation activities. When the project will affect a Minority or Low-Income

Community, Presidential E.O. 12898 (on Environmental Justice) requires federal agencies to assure that their actions do not result in disproportionate adverse environmental impacts on minority or low-income populations.

Check the Census to see which census tracts the project goes through and see if they are identified as "minority" or "low-income".

If the project does not go through "minority" or "low-income" census tracts, no further study will be needed. Check the "No" box next to Question #27 in Section A of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" state the date of the Census consulted.

If the project does go through "minority" or "low-income" census tracts, then further study may be required. Check the "Yes" or "To Be Determined" box next to Question #27 in Section A of the PES Form and consult with the DLAE and District SEP (or designee) to determine the appropriate level of analysis needed based on the scope of the project and the potential for impact. Under Sections C and D of the PES Form, indicate that coordination with Caltrans and approval by Caltrans is required.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

28. Will the project require the relocation of public utilities?

Note: Relocation of public utilities can disrupt public services to an established community. NEPA requires consideration of impacts associated with disruption of established communities. Additionally, the LAPM, Chapter 14, "Utility Relocations," requires that the E-76 include a list of every utility facility anticipated to be adjusted along with the utility company name and best available estimate of the total local agency costs involved.

Review public services and utilities presently available to the project area and determine whether relocation will be necessary.

If "No," check the "No" box next to Question #28 in Section A of the PES Form. If "Yes," or "To Be Determined," check the appropriate box next to Question #28 in Section A of the PES Form. Under Section B indicate whether a CIA, Technical Memorandum or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining the appropriate level of analysis based on the scope of the project and the potential for impact. Under Sections C and D of the PES Form, indicate that coordination with Caltrans and approval by Caltrans is required.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

29. Will the project affect access to properties or roadways?

Note: 23 CFR 771.111(h)(2)(iii) requires consideration of potential impacts associated with any federal-aid project which substantially changes the layout or functions of connecting roadways or of the facility being improved, or has a substantial adverse impact on abutting properties. One or more public hearings of the opportunity for a public hearing may be required when substantial adverse impacts result.

If "No," check the "No" box next to Question #29 in Section A of the PES Form. No further study will be needed. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form," briefly list adjacent land uses and proposed access to those land uses during project construction.

If "Yes," or "To Be Determined," check the appropriate box next to Question #29 in Section A of the PES Form. Under Section B, indicate whether a CIA, Technical Memorandum or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining the appropriate level of

analysis based on the scope of the project and the potential for impact. Under Sections C and D of the PES Form, indicate that coordination with Caltrans and approval by Caltrans is required.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at: http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

Keep in mind that the Administration has determined (23 CFR 771.135, Section 4[f][49 U.S.C. 303]) that a Section 4(f) Constructive Use occurs when: (iii) the project results in a ***restriction on access,*** *which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site.*

30. Will the project involve changes in access control to the State Highway System?

Note: 23 CFR 771.117 includes in the definition of an "Action" activities such as joint and multiple use permits and changes in access control which may or may not involve a commitment of federal funds.

A change in access control can come about from either:

- New connection to mainline freeway lanes.
- Addition of entrance or exit ramps that complete basic existing interchange.
- Major reconstruction where existing interchanges are being modified and/or dislocated ramps are being added or deleted.
- Removal of existing connection points.

Where the change in access control occurs on an interstate, FHWA concept approval will be needed. Where the change in access control occurs on a non-interstate, no FHWA involvement is needed.

If the project will not involve a change in access control to the SHS, check the "No" box next to Question #30 in Section A of the PES Form. No further study is needed. Briefly discuss project's location relative to the SHS in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form." Include a Vicinity Map to showing the project's relationship to the SHS.

If the project will involve a change in access control, check the "Yes" or "To Be Determined" box next to Question #30 as appropriate in Section A of the PES Form and consult the DLAE regarding the process for obtaining FHWA concept approval.

31. Will the project involve the use of a temporary road, detour, or ramp closure?

If "No," check the "No" box next to Question #31 in Section A of the PES Form. No further study is needed.

If "Yes," or "To Be Determined," check the appropriate box next to Question #31 in Section A of the PES Form. Additional study will be needed to determine whether:

- Provisions have been made for access by local traffic.
- Through-traffic dependent business will be adversely affected.
- The detour or ramp closure will interfere with a local special event or festival.
- The temporary road, detour or ramp closure will substantially change the environmental consequences of the action.
- There is a substantial controversy associated with the temporary road, detour or ramp closure.

Under Section B of the PES Form, indicate whether a CIA, Technical Memorandum or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining the appropriate level of analysis based on the scope of the project and the potential for impact. Under Sections C and D of the PES Form indicate that coordination with Caltrans and approval by Caltrans is required.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws

Keep in mind that the Administration has determined (23 Section 4[f] [49 U.S.C. 303]) that a Section 4(f) Constructive Use occurs when: (iii) the project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site.

32. Will the project reduce available parking?

If "No," check the "No" box next to Question #32 in Section A of the PES Form. In the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" briefly describe parking within the construction area and quantify the number of parking spaces that will be temporarily impacted during project construction. Delineate location of parking spaces on Project Footprint Map.

If "Yes," or "To Be Determined," check the appropriate box next to Question #32 in Section A of the PES Form. Further study will be required. Under Section B of the PES Form, indicate whether a CIA, Technical Memorandum or Discussion in ED Only will be prepared. Consult with the DLAE and District SEP (or designee) when determining the appropriate level of analysis based on the scope of the project and the potential for impact. Under Sections C and D of the PES Form, indicate that coordination with Caltrans and approval by Caltrans is required.

The CIA shall be undertaken in accordance with guidance provided in the SER, Chapter 24, "Community Impacts," at:

http://www.dot.ca.gov/ser/vol1/sec3/community/ch24cia/chap24cia.htm#laws Section 4-6.7 of the *Environmental Handbook Volume 4*, "Community Impact Assessment" provides guidance on Parking Impacts at: http://www.dot.ca.gov/ser/vol4/envhb4.pdf

33. Will the project construction encroach on state or federal lands?

If "No," check the "No" box next to Question #33 in Section A of the PES Form.

If "Yes," or "To Be Determined," check the appropriate box next to Question #33 in Section A of the PES Form. For Construction/Encroachments on State Lands, check the box next to State Lands under Section B of the PES Form and indicate the agency with jurisdiction (i.e., SLC, Caltrans, or SP), check coordination with the respective agency under Section C, and mark the appropriate box under Section D indicating the action that the agency will take.

For Construction/Encroachments on Federal Lands, check the box next to Federal Lands under Section B of the PES Form. Under Section C, check the box next to Federal Agency with Jurisdiction, indicating the need for ongoing coordination throughout the NEPA process. Under Section D check the box beside Encroachment Permits, indicating the action the federal agency with jurisdiction will take.

Note: Early and continued coordination with other agencies is crucial for smoothing the process of completing projects in a timely and efficient manner. Chapter 16 of the FHWA, Office of Real Estate Services Project Development Guide, provides guidance on coordination with other state and federal agencies. The guide is provided at:

http://www.fhwa.dot.gov/realestate/coordnt.pdf

34. Will the project convert any farmland to a different use or impact any farmlands?

Consult maps provided at: http://www.consrv.ca.gov/DLRP/fmmp/pubs/Order%20Form_1-4-07.pdf

If "No," check the "No" box next to Question #34 in Section A of the PES Form. No further study will be needed. List surrounding land uses in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form" or attach field notes from site visit, indicating surrounding land uses (i.e., farmlands).

If "Yes," or "To Be Determined," check the appropriate box next to Question #34 in Section A of the PES Form. Further study will be required. Check the appropriate study to be undertaken (i.e., CIA, Technical Memorandum, Discussion in ED Only, Form AD 1006). Consult with the DLAE and District SEP (or designee) when determining the appropriate level of analysis.

No technical reports are mandated by state or federal law concerning farmlands. However, it may be appropriate to prepare a separate CIA if any farmland will be affected by the proposed project. Guidance on preparing the farmland section of a CIA is provided at: http://www.dot.ca.gov/ser/vol1/sec3/community/ch23farm/chap23farm.htm. Otherwise, a Technical Memorandum and/or Discussion in the ED Only addressing the following should suffice: (1) Identification of impacts on agricultural lands and on prime or unique farmland in the project area; (2) Form AD-1006 evaluation, if appropriate; (3) Evidence of coordination with USDA and/or California Department of Conservation (CDOC), as appropriate; and (4) Identification of possible mitigation measures for significant impacts. Under Section C of the PES Form check coordination with Caltrans, NRCS or CDOC and under Section D check action the respective agency will take.

Local agency should complete Parts I and III of U.S. Department of Agriculture Form AD 1006, "Farmland Conversion Impact Rating," and submit it with maps showing location of alternatives to the appropriate Natural Resources Conservation Service field office for verification of prime and unique farmlands.

Are lands subject to the Farmland Protection Policy Act? If "No," no further study will be required. If "Yes," any conversions to non-agricultural use will require coordination with the ACOE. Check coordination with ACOE under Section C of the PES Form. Document results of the Form AD 1006 in the "Preliminary Environmental Investigation Notes to Support the Conclusions of the PES Form."

Note: Regarding the Farmland Conversion Impact Rating Form (AD–1006), sites with the highest combined scores are regarded as most suitable for protection and sites with the lowest scores, least suitable. Sites receiving a total score of less than 160 need not be given further consideration for protection and no additional sites need to be evaluated. Sites receiving scores totaling 160 or more shall be given increasingly higher levels of consideration for protection.

Cultural Resources

35. Is there National Register listed or potentially eligible historic properties or archaeological resources within or immediately adjacent to the construction area?

All federal-aid transportation projects require screening by a District Professionally Qualified Staff (PQS) in order to satisfy the requirements of Section 106 Programmatic Agreement, which became effective on January 1, 2004.

For this reason, there is no need for local agencies to undertake any research on the potential presence of historic or cultural resources unless advised to do so by the District PQS. A completed PES Form (including a detailed Project Description, Preliminary Design Information and Sections A and B) is needed by the PQS in order to perform the Section 106 screening.

The District PQS will indicate on the PES Form whether a record search, an APE map or technical studies are needed. The local agency should not initiate cultural studies until such time that the District PQS has determined the appropriate study areas for archaeology and historic architecture. The APE must be finalized and signed by the DLAE and District PQS prior to the completion and submittal of the Section 106 documentation. The local agency should request the DLAE to schedule an Early Coordination Meeting to discuss required format and content of required cultural reports.

36. Is the project adjacent to, or would it encroach on Tribal Land?

Note: In accordance with the 6004 MOU and Section 106 PA, the FHWA reserves any responsibility for all government-to-government consultation with Indian tribes as defined in 36 CFR 800.16(m). However, notice from the State to an Indian tribe advising the tribe of a proposed activity is not considered "government-to-government consultation" within the meaning of this MOU.

If the State adequately resolves any project-specific tribal issues or concerns, then the FHWA's role in the environmental process shall be limited to carrying out any government-to-government consultation process, if needed.

If "No," check the "No" box next to Question #36 in Section A of the PES Form. No further coordination is needed.

If "Yes," or "To Be Determined," check the appropriate box next to Question #36 in Section A of the PES Form and consult with the DLAE, District SEP (or designee) and District PQS on the most current procedures/guidance pertaining to encroachments on Tribal Land. Provide to the FHWA any information necessary in order for the FHWA to carry out its consultation, evaluation, or decision-making activities stipulated in the 6004 MOU, Section II(B)(1).

Sections B, C, & D

Section B: Section C: Section D: Check action, approval or permit coordinating agency will provide.

B. Required Technical Studies and Analyses

Local agency considers the results of the preliminary environmental investigation and the responses to the questions under Section A of the PES Form. Additional technical studies or documentation will be necessary for each "Yes" or "To Be Determined" response in Section A. Consult with the DLAE and District SEP (or designee) when determining the appropriate level of analysis under Section B.

C. Coordination

Local agency checks appropriate Coordinating Agency for each required study.

D. Anticipated Actions/Permits/Approvals

The local agency checks action, approval or permit needed. Note that a list of permits is provided at the bottom of Section D. The permit issuing agency will be the Coordinating Agency (in Section C) listed adjacent to the permit (in Section D). Consult the *California Permit Handbook*.

E. Preliminary Environmental Document Classification (for NEPA)

Based on the answers provided in Section A through D of the PES Form, the local agency makes a preliminary recommendation as to the appropriate NEPA class of action.

Environmental Impact Statement: When the action has the potential to significantly affect the environment an EIS should be prepared. Examples of actions that normally require an EIS include:

- a new controlled access freeway
- a highway project of four or more lanes on a new location
- new construction or extension of fixed rail transit facilities
- new construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility

Complex Environmental Assessment: An action involving one or more of the following should be classified as a Complex EA:

- multiple location alternatives
- debate related to purpose and need
- strong public controversy
- issues of logical termini or independent utility
- individual Section 4(f) determinations
- complex Endangered Species Act issues
- numerous cumulative impacts
- high mitigation costs

Routine Environmental Assessment: An action that cannot be classified as a CE and yet it does not clearly require preparation of an EIS, or an action in which the significance of the environmental impact is not clearly established.

Categorical Exclusion with or without required technical studies: Review the list of activities provided at 23 CFR 771 (c), 23 CFR 771 (d) and Appendix A of the Section 6004 MOU to find the activity most closely resembling the project. Place a check mark next to the list that contains the similar activity and indicate the specific activity number.

Section 6005

The Section 6005 Pilot Program MOU, in addition to assigning Caltrans the authority to approve EISs and EAs, also assigned Caltrans approval of those CE activities not covered under the provisions of the Section 6004 MOU. The District SEP will ultimately determine the applicable MOU under which the CE determination shall be made.

Public Hearing and Public Availability

Local agency indicates whether a Public Hearing or Public Availability may be required. When determining whether a public hearing is necessary, note that all draft EISs require a public hearing, and NEPA requires a public hearing on EDs when there is:

- Substantial environmental controversy concerning the proposed action.
- Substantial interest in holding a hearing.
- A request for hearing by another agency with jurisdiction over the action.

Public Involvement for other federal environmental processes includes:

- Section 106 - notification to potentially interested parties if the project will affect a historic property
- E.O. 11990 (Wetlands) - a public notice, if the project will affect a wetland
- E.O. 11998 (Floodplain) - a public notice, if the project involves a of floodplain encroachment
- E.O. 12898 (Environmental Justice) - a public notice, if the project will adversely affect a minority or low-income community

G. Signatures:

Local Agency Staff and/or Consultant Signature: This is the name and telephone number of the person that performed the preliminary environmental investigation and completed the PES Form.

Local Agency Project Engineer Signature: This is the name of the local agency representative (typically the person having responsible charge for the project, i.e., Public Works Director or City Engineer). They sign the PES Form when they are satisfied that the form and all supporting documentation is "complete and sufficient."

Caltrans District Professionally Qualified Staff (PQS) Signature: The District PQS will indicate the results of their screening in the PQS signature block of the PES Form, indicate appropriate response to Question 35 under Section B of the PES Form, complete Sections C, D, and E, (regarding Section 106), and sign the PES Form for all projects.

Caltrans District Senior Environmental Planner (or Designee) and DLAE (or Designee) Signatures: A Caltrans District Environmental signature is required on the PES Forms for all projects. Their signature means the submittal is complete and sufficient and that they concur with the studies to be performed and the recommended NEPA Class of Action. The DLAE or designee must also sign all PES Forms when they are satisfied that the form and supporting documentation are complete and sufficient, and when they concur with the studies to be performed and the recommended NEPA Class of Action.

Headquarters Environmental Coordinator Signature: The Headquarters (HQ) DEA (Regional) Environmental Coordinator concurrence is a required attachment to the PES Form when the recommended NEPA Class of Action is an EA or an EIS. The HQ DEA Environmental Coordinator concurrence means that

they have reviewed the PES Form and concur with the recommended NEPA Class of Action. The HQ DEA Environmental Coordinator will concur via e-mail to the District SEP (or designee), who shall attach the e-mail to the PES Form and check the box below and enter the date of concurrence on the PES Form.

Distribution: The original signed PES Form and appropriate guidance memo shall be maintained in the DLAE's project file. A copy of the signed PES Form shall be retained by the Local Agency Project Manager, and the District SEP (or designee). Additional copies of the PES Form may be retained by the District SEP (or designee) and the District PQS.

Updated: 05/15/08

EXHIBIT 6-C TABLE 2 -EXEMPT PROJECTS

CODE OF FEDERAL REGULATIONS

TITLE 40 -- PROTECTION OF ENVIRONMENT

§ 93.126 Exempt projects.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 2 of this section is not exempt if the MPO in consultation with other agencies (see § 93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation. Table 2 follows:

TABLE 2. -- EXEMPT PROJECTS

SAFETY

Railroad/highway crossing.
Hazard elimination program.
Safer non-Federal-aid system roads.
Shoulder improvements.
Increasing sight distance.
Safety improvement program.
Traffic control devices and operating assistance other than signalization projects.
Railroad/highway crossing warning devices.
Guardrails, median barriers, crash cushions.
Pavement resurfacing and/r rehabilitation.
Pavement marking demonstration.
Emergency relief (23 U.S.C. 125).
Fencing.
Skid treatments.
Safety roadside rest areas.
Adding medians.
Truck climbing lanes outside the urbanized area.
Lighting improvements.
Widening narrow pavements or reconstructing bridges (no additional travel lanes).
Emergency truck pullovers.

MASS TRANSIT

Operating assistance to transit agencies.
Purchase of support vehicles.
Rehabilitation of transit vehicles fn1.
Purchase of office, shop, and operating equipment for existing facilities.
Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).
Construction or renovation of power, signal, and communications systems.
Construction of small passenger shelters and information kiosks.

Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights of way.
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet **fn1**.
Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR Part 771.

Air Quality

Continuation of ride-sharing and van-pooling promotion activities at current levels.
Bicycle and pedestrian facilities.

Other

Specific activities which do not involve or lead directly to construction, such as:
- Planning and technical studies.
- Grants for training and research programs.
- Planning activities conducted pursuant to titles 23 and 49 U.S.C.
- Federal-aid systems revisions.

Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.
Noise attenuation.
Emergency or hardship advance land acquisitions (23 CFR 710.503).
Acquisition of scenic easements.
Plantings, landscaping, etc.
Sign removal.
Directional and informational signs.
Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities).
Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes.

fn1 In PM [10] nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable implementation plan.

[58 FR 62246, Nov. 24, 1993; 62 FR 43780, 43816, Aug. 15, 1997; 69 FR 40004, 40081, July 1, 2004]

[EFFECTIVE DATE NOTE: 69 FR 40004, 40081, July 1, 2004, amended Table 2, effective Aug. 2, 2004.]

EXHIBIT 6-D TABLE 3 - EXEMPT PROJECTS

[Code of Federal Regulations]
[Title 40, Volume 19]
[Revised as of July 1, 2004]
From the U.S. Government Printing Office via GPO Access
[CITE: 40CFR93.127]

[Page 583]

TITLE 40--PROTECTION OF ENVIRONMENT

CHAPTER I--ENVIRONMENTAL PROTECTION AGENCY (CONTINUED)

PART 93_DETERMINING CONFORMITY OF FEDERAL ACTIONS TO STATE OR FEDERAL IMPLEMENTATION PLANS--Table of Contents

Subpart A_Conformity to State or Federal Implementation Plans of

Sec. 93.127 Projects exempt from regional emissions analyses.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 3 of this section are exempt from regional emissions analysis requirements. The local effects of these projects with respect to CO or PM10 concentrations must be considered to determine if a hot-spot analysis is required prior to making a project-level conformity determination. These projects may then proceed to the project development process even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 3 of this section is not exempt from regional emissions analysis if the MPO in consultation with other agencies (see Sec. 93.105(c)(1)(iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potential regional impacts for any reason. Table 3 follows:

Table 3--Projects Exempt From Regional Emissions Analyses

Intersection channelization projects.
Intersection signalization projects at individual intersections.
Interchange reconfiguration projects.
Changes in vertical and horizontal alignment.
Truck size and weight inspection stations.
Bus terminals and transfer points.

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EXHIBIT 6-E - CATEGORICAL EXCLUSION CHECKLIST

District/Co/Route/P.M.	Fed.-Aid No.:	EA:

1. Project is a CE under Section 6004 of 23 U.S.C. 326 Yes ☐ No ☐ If " yes," check applicable activity below.

Activity Listed in 23 CFR 771.117(c)			
☐ 1	Activities which do not involve or lead directly to construction.	☐ 11	Determination of payback under 23 CFR part 480 for property previously acquired with federal-aid participation.
☐ 2	Utility installations along or across a transportation facility.	☐ 12	Improvements to existing rest areas and truck weigh stations.
☐ 3	Bicycle and pedestrian lanes, paths, and facilities.	☐ 13	Ridesharing activities.
☐ 4	Activities included in the State's *highway safety plan* under 23 U.S.C. 402.	☐ 14	Bus and rail car rehabilitation.
☐ 5	Transfer of Federal lands pursuant to 23 U.S.C. 317 when the subsequent action is not an FHWA action.	☐ 15	Alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons.
☐ 6	Installation of noise barriers or alterations to existing publicly owned buildings to provide for noise reduction.	☐ 16	Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet routine changes in demand.
☐ 7	Landscaping.	☐ 17	Purchase of vehicles by the applicant where the use of these vehicles can be accommodated by existing facilities or by new facilities which themselves are within a CE.
☐ 8	Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur.	☐ 18	Track and railbed maintenance and improvements when carried out within the existing right of way.
☐ 9	Emergency repairs under 23 U.S.C. 125.	☐ 19	Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant impacts off the site.
☐ 10	Acquisition of scenic easements.	☐ 20	Promulgation of rules, regulations, and directives.

Activity Listed in Examples in 23 CFR 771.117(d)			
☐ 1	Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).	☐ 7	Approvals for changes in access control.
☐ 2	Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.	☐ 8	Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes, not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
☐ 3	Bridge rehabilitation, reconstruction or replacement or the construction of grade separation to replace existing at-grade railroad crossings.	☐ 9	Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
☐ 4	Transportation corridor fringe parking facilities.	☐ 10	Construction of bus transfer facilities when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
☐ 5	Construction of new truck weigh stations or rest areas.	☐ 11	Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.
☐ 6	Approvals for disposal of excess right of way or for joint or limited use of right of way, where the proposed use does not have significant adverse impacts.	☐ 12	Acquisition of land for hardship or protective purposes; advance land acquisition loans under section 3(b) of the UMT Act.

Activity Listed in Appendix A of the MOU for State Assumption of Responsibilities for Categorical Exclusions			
☐ 1	Construction, modification, or repair of storm water treatment devices, protection measures such as slope stabilization, and other erosion control measures.	☐ 5	Routine seismic retrofit of facilities to meet current seismic standards and public health and safety standards without expansion of capacity.
☐ 2	Replacement, modification, or repair of culverts or other drainage facilities.	☐ 6	Air space leases that are subject to Subpart D, Part 710, Title 23, Code of Federal Regulations.
☐ 3	Projects undertaken to assure the creation, maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife.	☐ 7	Drilling of test bores/soil sampling to provide information for preliminary design and for environmental analyses and permitting purposes.
☐ 4	Routine repair of facilities due to storm damage, including permanent repair to return the facility to operational condition that meets current standards of design and public health and safety without expanding capacity (e.g., slide repairs, construction or repair of retaining walls).		

2. Project is a CE for a highway project under Section 6005 of 23 U.S.C. 327. **Yes** ☐ **No** ☐ *(Use only if project does not qualify under Section 6004.)*

3. Unusual Circumstances (23 CFR 771.117[b]). Project does not include any:

☐	Significant environmental impacts.
☐	Substantial controversy on environmental grounds.
☐	Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act.
☐	Inconsistencies with any federal, state, or local law, requirement or administrative determination relating to the environmental aspects of the action.

4. Air Quality. (SER Chapter 38)

A. Air Quality Checklist is complete and project meets all applicable air quality requirements. ☐
Identify who completed the Air Quality Checklist and the date it was completed.

B. Project is exempt from regional air quality conformity. (40 CFR 93.127, Table 3) **Yes** ☐ **No** ☐
If "no", list the current RTP and RTIP including dates and page numbers that contain the project.

C. For Section 6005 CE, FHWA determination of air quality conformity is complete. ☐
Provide name of FHWA contact and date of determination letter here:

Attach FHWA conformity determination letter.

5. Project complies with all other federal environmental laws, regulations, and executive orders on the PES form.

Environmental Statutory or Regulatory Compliance	Does Project Trigger Statute or Regulation?	Date and type of Technical Study or Memo to File or Field Survey	Outcome of Agency Coordination (Concurrence Type and Date)	Notes, Documentation Reference &/or Explanation
Historic Preservation (Section 106)	Yes ☐ No ☐			
Executive Order on Floodplains	Yes ☐ No ☐			
Wetland Protection	Yes ☐ No ☐			
Coastal Zone	Yes ☐ No ☐			
Wild and Scenic Rivers	Yes ☐ No ☐			
Farmland Protection	Yes ☐ No ☐			
Noise (23 CFR 772)	Yes ☐ No ☐			
Hazardous Waste/Material	Yes ☐ No ☐			
Environmental Justice	Yes ☐ No ☐			
Project-Level Air Quality (CO, PM Hot spot and MSAT)	Yes ☐ No ☐			
Water Quality	Yes ☐ No ☐			
Relocation	Yes ☐ No ☐			
Land Use	Yes ☐ No ☐			
Other (i.e., Visual)	Yes ☐ No ☐			

5. Project complies with all other federal environmental laws, regulations, and executive orders on the PES Form.*(Continued)*

Environmental Statutory or Regulatory Compliance	**Does Project Trigger Statute or Regulation?**	**Date and type of Technical Study or Memo to File or Field Survey**	**Outcome of Agency Coordination (Concurrence Type and Date)**	**Notes, Documentation Reference &/or Explanation**
Section 4(f) (23 CFR 774) ☐ De minimis ☐ Programmatic _____*(type)* ☐ Individual. Legal sufficiency complete: Yes ☐ No ☐	Yes ☐ No ☐			
Section 6(f) ☐ De minimis ☐ Programmatic _____*(type)* ☐ Individual. Legal sufficiency complete: Yes ☐ No ☐	Yes ☐ No ☐			
Endangered Species (Section 7 FESA) Effect Determination: ☐ No effect ☐ Not likely to adversely affect ☐ Likely to adversely affect	Yes ☐ No ☐			
Essential Fish Habitat (Section 7 FESA) Effect Determination				

Based on all of the above, the project is determined to be a categorical exclusion pursuant to the National Environmental Policy Act and all other applicable federal environmental laws, regulations and executive orders have been complied with.

Prepared by: _____ Date: _____

_____
Signature

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EXHIBIT 6-F CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM

Revised September 6, 2007

Dist.-Co.-Rte. (or Local Agency)	P.M/P.M.	E.A. (State project)	Federal-Aid Project No. (Local project)/ Proj. No.

PROJECT DESCRIPTION: (Briefly describe project, purpose, location, limits, right of way requirements, and activities involved.)

Enter project description in this text box. Use Continuation Sheet, if necessary.

CEQA COMPLIANCE *(for State Projects only)*

Based on an examination of this proposal, supporting information, and the following statements (See 14 CCR 15300 et seq.):

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 ("Cortese List").
- This project does not cause a substantial adverse change in the significance of a historical resource.

CALTRANS CEQA DETERMINATION

☐ **Exempt by Statute.** (PRC 21080[b]; 14 CCR 15260 et seq.)

Based on an examination of this proposal, supporting information, and the above statements, the project is:

☐ **Categorically Exempt**. **Class ___**. (PRC 21084; 14 CCR 15300 et seq.)

☐ **Categorically Exempt**. **General Rule exemption.** (This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment CCR 15061[b][3]).

Signature: Environmental Branch Chief	Date	Signature: Project Manager	Date

NEPA COMPLIANCE

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

- Does not individually or cumulatively have a significant impact on the environment as defined by NEPA and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS).
- Has considered unusual circumstances pursuant to 23 CFR 771.117(b) (http://www.fhwa.dot.gov/hep/23cfr771.htm#sec.771.117)

In non-attainment or maintenance areas for Federal Air Quality Standards, the project is either exempt from all conformity requirements, or conformity analysis has been completed pursuant to 42 USC 7506(c) and 40 CFR 93.

CALTRANS NEPA DETERMINATION

☐ **Section 6004:** The State has been assigned and hereby certifies that it has carried out the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding (MOU) dated June 7, 2007, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

- 23 CFR 771 activity (c)(___)
- 23 CFR 771 activity (d)(___)
- Activity ___ listed in the MOU between FHWA and the State

☐ **Section 6005:** Based on an examination of this proposal and supporting information, the State has determined that the project is a CE under Section 6005 of 23 U.S.C. 327.

_____	_____	_____	_____
Signature: Environmental Branch Chief	Date	Signature: Project Manager/DLA Engineer	Date

Briefly list mitigation commitments on continuation sheet. Reference additional information, as appropriate (e.g., air quality studies, documentation of conformity exemption, FHWA conformity determination if Section 6005 project; §106 commitments; § 4(f); § 7 results; Wetlands Finding; Floodplain Finding; additional studies; and design conditions). **Revised September 6, 2007**

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM
Continuation Sheet

Distribution: 1) District Local Assistance Engineer-Original copy
2) District Senior Environmental Planner (for Local Assistance) - copy
3) Local Agency Project Files

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EXHIBIT 6-G NEPA/CEQA REVALIDATION FORM

DIST./CO./RTE.	*Enter District, County & Route (State projects) or the County & Route (Local projects) here.*
PM/PM	*Enter the beginning and ending postmiles here (State projects).*
E.A. or Fed-Aid Project No.	*Enter the Expenditure Authorization (State projects) or Federal-Aid Project # (Local projects) here.*
Other Project No. (specify)	*Enter any other project number here, and specify the type.*
PROJECT TITLE	*Enter project title here.*
ENVIRONMENTAL APPROVAL TYPE	*Enter type of original environmental document/CE Determination here.*
DATE APPROVED	*Enter date that environmental document/CE Determination was originally approved here.*
REASON FOR CONSULTATION (23 CFR 771.129)	*Check reason for consultation:* ☐ *Project proceeding to next major federal approval* ☐ *Change in scope, setting, effects, mitigation measures, requirements* ☐ *3-year timeline (EIS only)*
DESCRIPTION OF CHANGED CONDITIONS	*Briefly describe the changed conditions or new information on page 2. Append continuation sheet(s) as necessary. Include a revised Environmental Commitments Record (ECR) when applicable.*

NEPA CONCLUSION - VALIDITY

Based on an examination of the changed conditions and supporting information: (*Check ONE of the three statements below, regarding the validity of the original document/determination [23 CFR 771.12]). If document is no longer valid, indicate whether additional public review is warranted and whether the type of environmental document will be elevated.*

_____ The original environmental document or CE remains valid. No further documentation will be prepared.

_____ The original environmental document or CE is in need of updating; further documentation has been prepared and ☐ is included on the continuation sheet(s) or ☐ is attached.

_____ (Yes/No) Additional public review is warranted (23 CFR 771.111[h][3])

_____ The original document or CE is no longer valid.

_____ (Yes/No) Additional public review is warranted (23 CFR 771.111[h][3])

_____ (Yes/No) Supplemental environmental document is needed.

_____ (Yes/No) New environmental document is needed. (If "Yes," specify type: _____)

CONCURRENCE WITH NEPA CONCLUSION

I concur with the NEPA conclusion above.

_____	_____	_____	_____
Signature: Environmental Branch Chief	Date	Signature: Project Manager/DLAE	Date

CEQA CONCLUSION : *(Only mandated for projects on the State Highway System.)*

Based on an examination of the changed conditions and supporting information (Check ONE of the three statements below, regarding the validity of the original document/determination [23 CFR 771.129]. If document is no longer valid, indicate whether additional public review is warranted and whether the type of environmental document will be elevated.)

_____ **Original document remains valid. No further documentation is necessary.**

_____ **Only minor technical changes or additions to the previous document are necessary. An addendum has been or will be ☐ prepared and is ☐ included on the continuation sheets or ☐ will be attached. It need not be circulated for public review. *(CEQA Guidelines, §15164)***

_____ **Changes are substantial, but only minor additions or changes are necessary to make the previous document adequate. A Supplemental environmental document will be prepared, and it will be circulated for public review. *(CEQA Guidelines, §15163)***

_____ **Changes are substantial and major revisions to the current document are necessary. A subsequent environmental document will be prepared, and it will be circulated for public review. *(CEQA Guidelines, §15162)***
(Specify type of subsequent document, e.g., subsequent FEIR:)
_____

CONCURRENCE WITH CEQA CONCLUSION

I concur with the CEQA conclusion above.

_____	_____	_____	_____
Signature: Environmental Branch Chief	Date	Signature: Project Manager	Date

CONTINUATION SHEET(S)

Address only substantial changes or substantial new information since approval of the original document and only those areas that are applicable. Use the list below as section headings as they apply to the project change(s). Use as much or as little space as needed to adequately address the project change(s) and the associated impacts, minimization, avoidance and/or mitigation measures, if any.

Changes in project design, e.g., substantial scope change; a new alternative; change in project alignment.

Changes in environmental setting, e.g., new development affecting traffic or air quality.

Changes in environmental circumstances, e.g., a new law or regulation; change in the status of a listed species.

Changes to environmental impacts of the project, e.g., a new type of impact, or a change in the magnitude of an existing impact.

Changes to avoidance, minimization, and/or mitigation measures since the environmental document was approved.

Changes to environmental commitments since the environmental document was approved, e.g., the addition of new conditions in permits or approvals. When this applies, append a revised Environmental Commitments Record (ECR) as one of the Continuation Sheets.

Distribution: 1) District Local Assistance Engineer - Original copy
2) District Senior Environmental Planner (for Local Assistance) – copy
3) Local Agency Project Files

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EXHIBIT 6-H EXTERNAL CERTIFICATIONS ENVIRONMENTAL DOCUMENT QUALITY CONTROL REVIEWS

Project Name: _____ ☐ **Local Assistance** ☐ **SHS**

DIST-CO-RTE-PM: _____ **EA:** _____

Federal-Aid No.: _____

Document Type: ☐ EA ☐ EIS ☐ IS ☐ EIR ☐ Draft ☐ Final

District Local Assistance Engineer (DLAE): _____

Local Agency: _____ **Contact:** _____ **Phone No:** _____

Caltrans Oversight Coordinator: _____

Environmental Consultant: _____ **Contact:** _____ **Phone No:** _____

I have performed the quality control review required by Caltrans and hereby find that this environmental document satisfactorily meets State and federal requirements, as applicable, in my area of expertise and is consistent with the applicable technical study (State "NA" if the technical area is not applicable).

Type of Review	Reviewer (Print Name)	Reviewer's Signature	Verification Date
Technical Specialist Reviewers:			
o Biology			
o Cultural			
o CIA			
o Visual			
o Hazardous Waste			
o Floodplain			
o Water Quality			
o Air Quality			
o Noise			
o Traffic			
o Section 4(f)			
o Other: _____			
Technical Edit Reviewer			

Required signatures may appear on multiple versions of this form to allow concurrent reviews by specialists and technical editor.

I have reviewed this environmental document and hereby find that it is internally consistent and was prepared consistent with Caltrans and FHWA requirements and guidance and the applicable SER annotated environmental document outline.

Environmental Consultant: _____ **Date:** _____

I have reviewed this environmental document and hereby find that the required quality control reviews shown above have been satisfactorily completed and that the environmental document meets all Caltrans and FHWA requirements.

Local Agency: _____ **Date:** _____

Date form sent to project file: _____

Distribution: 1) District Senior Environmental Planner (for Local Assistance) - Original copy
2) District Local Assistance Engineer - copy
3) Local Agency Project Files

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EXHIBIT 6-I INSTRUCTIONS FOR COMPLETING THE EXTERNAL CERTIFICATIONS (ENVIRONMENTAL DOCUMENT QUALITY CONTROL REVIEW CERTIFICATION) FORM

The following quality control review process is required by the local agency/consultant for all draft and final EA and EIS documents.

Technical Specialist Reviewers:

The purpose of the technical specialist review is to ensure the accuracy of specific resource studies and technical information summarized in the environmental document. A technical specialist review will be completed for each resource topic discussed in the environmental document. The review will be conducted for those sections in each chapter that contain information about the individual resource or technical area under consideration (e.g., Summary, Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures; Cumulative Impacts).

The local agency's or consultant's technical specialists who are responsible for conducting the technical studies and preparing the technical reports shall review the technical report(s) to ensure that:

- the technical reports were required in the fully signed PES form
- the format and content of each technical report is consistent with the format and content requirements set forth in the SER
- the qualifications of the preparer of the technical report are consistent with the qualifications set forth in the SER
- technical report is accurate and regulatory requirements are appropriately addressed
- the technical report clearly summarizes/concludes how the mandates of the applicable federal law have been met
- there is consistency between the technical study and the information as summarized in the environmental document
- all mitigation commitments are appropriately characterized and are feasible to implement
- all anticipated permit and/or approval actions have been accurately identified within the environmental document

The technical specialist signs the External Certifications (Environmental Document Quality Control) form certifying that they have performed the quality control review and the environmental document meets State and federal requirements in their area of expertise and is consistent with the applicable technical study.

Technical Edit Reviewer:

The local agency or consultant (environmental project manager), responsible for preparing, or overseeing the preparation of the NEPA document, shall review the technical reports and the NEPA document to ensure that:

- the NEPA document prepared is consistent with the NEPA class of action identified in the PES Form
- the format and content of the NEPA document is consistent with the applicable Annotated Outline:
    - Correct Title Page
    - All chapters and necessary resource topics are present and complete
    - All appendices are present and complete
    - All required correspondence relative to procedural and regulatory requirements
    - Complete, clear, legible and logical exhibits and figures
- the conclusions of the technical reports are consistently stated in the NEPA document
- the NEPA document is written in a clear and concise manner
- grammar, punctuation and spelling are correct

- the Environmental Document Review Checklist is complete, providing cross-referenced page numbers on the checklist
- the External Certifications (Environmental Document Quality Control) form is signed, certifying that the document is adequate within his or her area of expertise

The technical edit reviewer signs the External Certifications (Environmental Document Quality Control) form certifying that they have performed the quality control review and the environmental document meets State and federal requirements in their area of expertise and is consistent with the applicable technical study.

Environmental Consultant:

The local agency (principal engineer/project manager) shall review the technical reports and NEPA document to ensure that:

- the reports and NEPA document meet the requirements set forth in the Scope of Work
- the reports/document prepared are consistent with the PES Form
- the content and format of the reports and document is consistent with guidance set forth in the SER/annotate outline
- adequacy of the project's purpose and need statement, logical termini independent utility and project description
- completeness of the alternative analysis, including information supporting the range of alternatives selected for study in the document
- all proposed mitigation commitments are properly identified, characterized and are reasonable and practicable to implement
- correspondence from resource and regulatory agencies is included and clearly indicates that the mandates of law have been met
- compliance with FHWA Environmental Impact and Related Procedures (23 CFR 771) and FHWA environmental policies and applicable guidance
- compliance with other federal laws and regulations, such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, Section 404 of the Clean Water Act, Executive Order 11990-Protection of Wetlands, Executive Order 11988-Floodplain Management, and Section 4(f) of the Department of Transportation Act
- the consultant's technical specialist and environmental project manager have signed the External Certifications form
- a copy of the complete Environmental Review Checklist with cross-referenced page numbers has been provided

The environmental consultant signs the External Certifications (Environmental Document Quality Control) form certifying that the document is internally consistent and was prepared consistent with Caltrans and FHWA requirements and guidance and the applicable SER annotated environmental document outline.

Local Agency:

The local agency (principal engineer/project manager) reviews the technical reports and environmental document to ensure that:

- the technical reports and environmental document prepared are consistent with the information required in the approved and signed PES Form and meet the requirements set forth in the scope of work
- the content and format of the technical reports and environmental document is consistent with guidance set forth in the SER/annotated outline:
    - all chapters and necessary resource topics are present, complete and the NEPA document is written in a clear and concise manner

  - adequacy of the project's purpose and need statement, logical termini independent utility and project description
  - completeness of the alternative analysis
  - all proposed mitigation commitments are properly identified, characterized and are reasonable and practicable to implement
  - correspondence from resource and regulatory agencies is included and clearly indicates that the mandates of law have been met
  - compliance with FHWA Environmental Impact and Related Procedures (23 CFR 771) and FHWA environmental policies and applicable guidance
  - compliance with other federal laws and regulations, such as Section 7 of the Endangered Species Act, Section 106 of the National Historic Preservation Act, Section 404 of the Clean Water Act, Executive Order 11990-Protection of Wetlands, Executive Order 11988-Floodplain Management, and Section 4(f) of the Department of Transportation Act if applicable
- the consultant's technical specialist and environmental project manager have signed the External Certification form
- a copy of the complete Environmental Review Checklist, with cross-referenced page numbers has been provided
- correspondence from resource and regulatory agencies in included and clearly indicates that the mandates of federal law have been met

The principle engineer/project manager signs the External Certifications (Environmental Document Quality Control) form certifying that the above statements are true and submits the following to the DLAE:

- Transmittal Memo, signed by the local agency (principle engineer/project manager) stating that the document and supporting technical studies have been prepared
- Five (5) hard copies of the administrative environmental document
- One (1) electronic copies of the administrative environmental document
- One (1) copy of each technical study
- One (1) electronic copy of each technical study
- One (1) copy of the completed Environmental Document Review Checklist
- Completed and signed External Certifications (Environmental Document Quality Control Review Certification) form

Following Caltrans' review, the local agency is responsible for revising the document consistent with Caltrans' comments.

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