

BROADWAY VALDEZ DISTRICT SPECIFIC PLAN

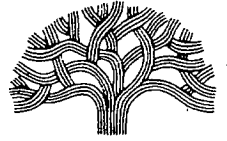
Draft Environmental Impact Report
SCH No. 2012052008

Prepared for
The City of Oakland

September 2013



CITY OF OAKLAND



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94612-2032

Department of Planning and Building
Strategic Planning Division

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**NOTICE OF AVAILABILITY/ RELEASE OF
DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE
BROADWAY/VALDEZ DISTRICT SPECIFIC PLAN
AND
NOTICE OF PUBLIC HEARINGS ON DEIR AND SPECIFIC PLAN**

TO: All Interested Parties

SUBJECT: Notice of Availability/Release of DEIR for the Broadway Valdez District Specific Plan, and Notice of Public Hearing on the same.

REVIEW/COMMENT PERIOD: September 20, 2013 through November 4, 2013

CASE NO.: ZS12046, ER12-0005 (CEQA State Clearing House Number 2012052008)

PROJECT SPONSOR: City of Oakland

PROJECT LOCATION: The Broadway Valdez District Plan Area ("Plan Area") is located at the north edge of Oakland's Central Business District. The Plan Area, which includes land along both sides of Broadway, extends 0.8 miles from Grand Avenue to I-580. The Plan Area includes approximately 95.5 acres, including 35.1 acres in public right-of-way and 60.4 acres of developable land.

PROJECT DESCRIPTION: The Broadway Valdez District Specific Plan will be a 25-year planning document that provides a vision and planning framework for future growth and development within the Plan Area. The Plan provides a comprehensive vision for the Plan Area along with goals, policies and development regulations to guide the Plan Area's future development and serves as the mechanism for insuring that future development is coordinated and occurs in an orderly and well-planned manner.

The overarching goal of the Specific Plan is to create a destination retail district that addresses the City's deficiency in comparison goods shopping and to transition the Plan Area to a more sustainable mix of uses that contribute to the vitality, livability, and identity of Downtown Oakland, and address residents' shopping needs. In contrast to current land use pattern, the Specific Plan prioritizes the development of retail uses throughout the Plan Area, and particularly along the designated commercial corridors and the Valdez Triangle subarea. Adoption of and development under the Plan would ultimately transform the Plan Area's auto-orientated character into a more pedestrian-oriented mixed-use neighborhood that encourages alternate modes of transportation and around-the-clock activity with people present day and night, and on weekdays and weekends. The Specific Plan requires General Plan and Planning Code amendments (text and map changes) along with Design Guidelines to achieve the Plan goals.

For more information on the project, including draft documents, please visit the project website at:
www.oaklandnet.com/bvdsp

ENVIRONMENTAL REVIEW: A Notice of Preparation of an EIR was issued by the City of Oakland's Department of Planning and Building on April 30, 2012. A Draft Environmental Impact Report (DEIR) has now been prepared for the project under the requirements of the California Environmental Quality Act (CEQA), pursuant to Public Resources Code Section 21000 et seq. The DEIR analyzes potentially significant environmental impacts in all environmental categories/topics. The Draft EIR identifies significant unavoidable environmental impacts related to: Aesthetics, Shadow and Wind; Air Quality; Cultural Resources; Greenhouse Gases and Climate Change; Noise; and Transportation and Circulation.

The City of Oakland's Department of Planning and Building is hereby releasing this DEIR, finding it to be accurate and complete and ready for public review. **Starting on Friday, September 20, 2013**, copies of the DEIR and Specific Plan will be available for review or distribution to interested parties at no charge at the Department of Planning and Building, 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, CA 94612, Monday through Friday, 8:30 a.m. to 5:00 p.m. Additional copies are available for review at the Oakland Public Library, Social Science and Documents, 125 14th Street, Oakland CA 94612. The DEIR may also be reviewed at the City's "Current Environmental Review Documents" webpage: <http://www2.oaklandnet.com/Government/o/PBN/OurServices/Application/DOWD009157> and the Specific Plan may be reviewed on the project website: www.oaklandnet.com/bvdsp.

TWO PUBLIC HEARINGS WILL BE HELD BY THE CITY ON THE DEIR AND SPECIFIC PLAN:

CITY PLANNING COMMISSION PUBLIC HEARING	LANDMARKS PRESERVATION ADVISORY BOARD PUBLIC HEARING
Wednesday, October 16, 6:00 p.m. Oakland City Hall Hearing Room 1 One Frank H. Ogawa Plaza Oakland, CA 94612	Monday, October 14, 6:00 p.m. Oakland City Hall Hearing Room 1 One Frank H. Ogawa Plaza Oakland, CA 94612

Members of the public are welcome to attend these hearings and provide comments on the DEIR and Specific Plan. Comments on the DEIR should focus on whether the DEIR is sufficient in discussing possible impacts to the physical environment, ways in which potential adverse effects may be avoided or minimized through mitigation measures, and alternatives to the Specific Plan in light of the EIR's purpose to provide useful and accurate information about such factors. Comments may be made at the public hearings described above or in writing. Please address all written comments to Laura Kaminski, City of Oakland Strategic Planning Division, 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612; (510) 238-6809 (phone); (510) 238-6538 (fax); or e-mailed to lkaminski@oaklandnet.com. Comments on the DEIR and Specific Plan **must be received no later than 5:00 p.m. on November 4, 2013.**

After all comments have been received, a Final EIR will be prepared and the Planning Commission will consider certification of the EIR and rendering a decision on the Specific Plan at a public hearing, date yet to be determined. All comments received will be considered by the City prior to finalizing the EIR and taking any further action pertaining to this EIR. If you challenge the environmental document or other actions pertaining to this Project in court, you may be limited to raising only those issues raised at the public hearings described above or in written correspondence received by November 4, 2013. For further information please contact Laura Kaminski at (510) 238-6809 or via email to lkaminski@oaklandnet.com.

September 20, 2013



Rachel Flynn
Environmental Review Officer

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Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #2012052008

Project Title: Broadway Valdez District Specific PlanLead Agency: City of Oakland, Dept. of Planning and BuildingContact Person: Laura KaminskiMailing Address: 250 Frank H. Ogawa Plaza, Suite 3315Phone: (510) 238-6809City: OaklandZip: 94612County: Alameda County**Project Location:** County: Alameda County City/Nearest Community: OaklandCross Streets: Along Oakland's Broadway corridor between Grand Avenue and I-580 Zip Code: 94612Longitude/Latitude (degrees, minutes and seconds): _____ " N / _____ " W Total Acres: 95.5Assessor's Parcel No.: I-580, I-980

Section: _____ Twp.: _____ Range: _____ Base: _____

Within 2 Miles: State Hwy #: _____ Waterways: San Francisco Bay, Oakland Inner Harbor, Lake MerrittAirports: NoRailways: NoSchools: Yes**Document Type:**CEQA: ☐ NOP☒ Draft EIRNEPA: ☐ NOIOther: ☐ Joint Document☐ Early Cons☐ Supplement/Subsequent EIR☐ EA☐ Final Document☐ Neg Dec

(Prior SCH No.) _____

☐ Draft EIS☐ Other: _____☐ Mit Neg Dec

Other: _____

☐ FONSI**Local Action Type:**☐ General Plan Update☒ Specific Plan☒ Rezone☐ Annexation☒ General Plan Amendment☐ Master Plan☐ Prezone☐ Redevelopment☐ General Plan Element☐ Planned Unit Development☐ Use Permit☐ Coastal Permit☐ Community Plan☐ Site Plan☐ Land Division (Subdivision, etc.)☒ Other: Design Guidelines**Development Type:**☒ Residential: Units 1,800 Acres _____☒ Office: Sq.ft. 695,000 Acres _____ Employees _____☐ Transportation: Type _____☐ Commercial: Sq.ft. 1.1 mil Acres _____ Employees _____☐ Mining: Mineral _____☐ Industrial: Sq.ft. _____ Acres _____ Employees _____☐ Power: Type _____ MW _____☐ Educational: _____☐ Waste Treatment: Type _____ MGD _____☐ Recreational: _____☐ Hazardous Waste: Type _____☐ Water Facilities: Type _____ MGD _____☒ Other: Hotel**Project Issues Discussed in Document:**☒ Aesthetic/Visual☐ Fiscal☒ Recreation/Parks☐ Vegetation☒ Agricultural Land☒ Flood Plain/Flooding☒ Schools/Universities☒ Water Quality☒ Air Quality☐ Forest Land/Fire Hazard☐ Septic Systems☐ Water Supply/Groundwater☒ Archeological/Historical☒ Geologic/Seismic☒ Sewer Capacity☐ Wetland/Riparian☒ Biological Resources☒ Minerals☒ Soil Erosion/Compaction/Grading☒ Growth Inducement☐ Coastal Zone☒ Noise☒ Solid Waste☒ Land Use☐ Drainage/Absorption☒ Population/Housing Balance☒ Toxic/Hazardous☒ Cumulative Effects☒ Economic/Jobs☒ Public Services/Facilities☒ Traffic/Circulation☐ Other: _____**Present Land Use/Zoning/General Plan Designation:**Community Commercial, Institutional, Urban Residential and Mixed Housing Type Residential**Project Description:** *(please use a separate page if necessary)*

The Broadway Valdez District Specific Plan will be a 25-year planning document that provides a vision and planning framework for future growth and development within the Plan Area, which runs along Oakland's Broadway corridor between Grand Avenue and I-580. The Plan provides a comprehensive vision for the Plan Area along with goals, policies and development regulations to guide the Plan Area's future development and serves as the mechanism for insuring that future development is coordinated and occurs in an orderly and well-planned manner.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".

If you have already sent your document to the agency please denote that with an "S".

<input checked="" type="checkbox"/> Air Resources Board	<input checked="" type="checkbox"/> Office of Historic Preservation
<input type="checkbox"/> Boating & Waterways, Department of	<input type="checkbox"/> Office of Public School Construction
<input type="checkbox"/> California Emergency Management Agency	<input type="checkbox"/> Parks & Recreation, Department of
<input checked="" type="checkbox"/> California Highway Patrol	<input type="checkbox"/> Pesticide Regulation, Department of
<input checked="" type="checkbox"/> Caltrans District # 4	<input type="checkbox"/> Public Utilities Commission
<input type="checkbox"/> Caltrans Division of Aeronautics	<input checked="" type="checkbox"/> Regional WQCB # SF Bay Region
<input type="checkbox"/> Caltrans Planning	<input type="checkbox"/> Resources Agency
<input type="checkbox"/> Central Valley Flood Protection Board	<input type="checkbox"/> Resources Recycling and Recovery, Department of
<input type="checkbox"/> Coachella Valley Mtns. Conservancy	<input type="checkbox"/> S.F. Bay Conservation & Development Comm.
<input type="checkbox"/> Coastal Commission	<input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
<input type="checkbox"/> Colorado River Board	<input type="checkbox"/> San Joaquin River Conservancy
<input type="checkbox"/> Conservation, Department of	<input type="checkbox"/> Santa Monica Mtns. Conservancy
<input type="checkbox"/> Corrections, Department of	<input type="checkbox"/> State Lands Commission
<input type="checkbox"/> Delta Protection Commission	<input type="checkbox"/> SWRCB: Clean Water Grants
<input type="checkbox"/> Education, Department of	<input type="checkbox"/> SWRCB: Water Quality
<input type="checkbox"/> Energy Commission	<input type="checkbox"/> SWRCB: Water Rights
<input checked="" type="checkbox"/> Fish & Game Region # 3	<input type="checkbox"/> Tahoe Regional Planning Agency
<input type="checkbox"/> Food & Agriculture, Department of	<input checked="" type="checkbox"/> Toxic Substances Control, Department of
<input type="checkbox"/> Forestry and Fire Protection, Department of	<input type="checkbox"/> Water Resources, Department of
<input type="checkbox"/> General Services, Department of	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Health Services, Department of	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Housing & Community Development	
<input checked="" type="checkbox"/> Native American Heritage Commission	

Local Public Review Period (to be filled in by lead agency)

Starting Date September 20, 2013

Ending Date November 4, 2013

Lead Agency (Complete if applicable):

Consulting Firm: ESA

Address: 350 Frank H. Ogawa Plaza, Suite 300

City/State/Zip: Oakland, CA 94612

Contact: Elizabeth Kanner

Phone: (510) 839-5066

Applicant: City of Oakland, Dept. of Planning and Building

Address: 250 Frank H. Ogawa Plaza

City/State/Zip: Oakland, CA 94612

Phone: (510) 238-6538

Signature of Lead Agency Representative: _____

Date: 9-16-13

Authority cited: Section 21083, Public Resources Code. Reference/Section 21161, Public Resources Code.

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Draft Environmental Impact Report

Prepared for
The City of Oakland

September 2013



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List of Acronyms and Abbreviations

AADT	average annual daily traffic
AB	Assembly Bill
ABAG	Association of Bay Area Governments
A/C	Asphalt & Concrete
ACCWP	Alameda County Clean Water Program
ACDEH	Alameda County Department of Environmental Health
ACFCWCD	Alameda County Flood Control and Water Conservation District
ACM	asbestos containing material
ACTC	Alameda County Transportation Commission
ACWMA	Alameda County Waste Management Authority
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
afem	Artificial fill over estuarine mud
APG	Adaption Policy Guide
API	Area of Primary Importance
ARB	Air Resources Board
ARDTP	Archaeological Research Design and Treatment Plan
ASCE	American Society of Civil Engineers
ASI	Area of Secondary Importance
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BCDC	Bay Conservation and Development Commission
BFE	Base Flood Elevation
BMP	Best Management Practice or Bicycle Master Plan
BRT	Bus Rapid Transit
CAAQS	California Ambient Air Quality Standards
CALGreen	California Green Building Standards
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAO	Cleanup and Abatement Order
CAP	Clean Air Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAT	Climate Action Team
CASQA	California Stormwater Quality Association
CBC	California Building Code
CBD	Central Business District
CBTP	Community-Based Transportation Plan

CCAA	California Clean Air Act
CCCC	California Climate Change Center
CCR	California Code of Regulations
CCTP	Climate Change Technology Program
C&D	Construction and Demolition
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDMG	California Department of Mines and Geology
CDO	Cease and Desist Order
CDSR	Construction and Demolition Summary Report
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERES	California Environmental Resources Evaluation System
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CERC-NFRAP	CERCLIS No Further Remedial Action Planned
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	methane
CHMIRS	California Hazardous Materials Incident Report System
CHP	California Highway Patrol
CIP	Capital Improvement Project
cm	Centimeter
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO-CAT	Coastal and Ocean Working Group of the California Climate Action Team
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalents
Corps	U.S. Army Corps of Engineers
CRHR	California Register of Historic Resources
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DHS	Department of Health Services
DNL	Day/Night Average Sound Level
DOT	Department of Transportation

DPM	diesel particulate matter
DPR	Department Parks and Recreation
DSOD	Division of Safety of Dams
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EBMUD	East Bay Municipal Utilities District
EBRPD	East Bay Regional Parks District
ECAP	Energy and Climate Action Plan
EIR	Environmental Impact Report
E.O.	Executive Order
EPA	Environmental Protection Agency
FAR	Floor-area Ratio
FCAA	Federal Clean Air Act
FDDC	Fire Department Dispatch Center
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIP	Federal Implementation Plan
FTA	Federal Transit Authority
FUDS	Formerly Used Defense Sites
FY	Fiscal Year
GHG	greenhouse gas
GMNA	Greater Mosswood Neighborhood Association
GWP	global warming potential
HABS	Historic American Building Survey
HAP	Hazardous Air Pollutant
HCM	Highway Capacity Manual
HFC	hydrofluorocarbon
HMARRP	Hazardous Materials Assessment Report and Remediation Plan
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HMP	hydrograph modification management plan
HPE	Historic Preservation Element
HRA	Health Risk Assessment
HV	heating and ventilation
Hz	hertz
I-580	Interstate 580
I-880	Interstate 880
I-980	Interstate 980
IBC	International Building Code

ICLEI	Local Governments for Sustainability (formerly International Council for Local Environmental Initiatives)
I&I	Inflow and Infiltration
IPCC	International Panel on Climate Change
ITE	Institute of Transportation Engineers
kV	kilovolt
L ₅₀	noise level that is equaled or exceeded 50 percent of the specified time
L ₉₀	noise level that is equaled or exceeded 90 percent of the specified time
L _{eq}	equivalent sound level
L _{max}	instantaneous maximum noise level
LCFS	Low Carbon Fuel Standards
LEED	Leadership in Energy and Environmental Design
LID	low impact development
LOS	level of service
LPAB	Landmarks Preservation Advisory Board
LS	Less than Significant
LUFT	leaking underground storage tank
LUST	leaking underground storage tank
LUTE	Land Use and Transportation Element
M	Richter Magnitude
mgd	million gallons per day
MM	Modified Mercalli
MMT	million metric tons
MRP	Municipal Regional Stormwater NPDES Permit
mph	miles per hour
MPO	metropolitan planning organization
MSDS	Materials Safety Data Sheets
MT	metric tons
MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
MUTCD	Manual on Uniform Traffic Control Devices
Mw	Moment Magnitude
MXD	mixed-use development
N	No Impact
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service

NO	nitric oxide
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
NRDC	Natural Resources Defense Council
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
O ₃	ozone
OAM	Oakland Art Murmur
OCHS	Oakland Cultural Heritage Survey
ODP	Operational Diversion Plan
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OFD	Oakland Fire Department
OHP	Office of Historic Preservation
OMC	Oakland Municipal Code
OPD	Oakland Police Department
OPR	Office of Planning and Research/also [Oakland] Office of Parks and Recreation
OSCAR	Open Space, Conservation and Recreation Element
OSHA	Occupational Safety and Health Administration
OUSD	Oakland Unified School District
Qf	Late Pleistocene to Holocene alluvium
Qof	Early to Middle Pleistocene alluvium
Qmt	Pleistocene marine terrace
Pb	lead
PBD	Parking Benefit District
PCB	polychlorinated biphenyl
PCM	parallel climate model
pc/mi/ln	Passenger cars per mile per lane
PDHP	Potential Designated Historic Properties
PeMS	(Caltrans) Performance Measurement Systems
PFC	perfluorocarbon
PGA	peak ground acceleration
PG&E	Pacific Gas & Electric
PM	particulate matter
PM2.5	fine particular matter (that is less than 2.5 microns in diameter)
PM10	particulate matter (that is 10 microns or less in diameter)

PMP	Pedestrian Master Plan
PMPL	Proposed National Priorities List
PPD	pounds per day
ppm	part(s) per million
PRC	Public Resources Code
PS	Potentially Significant
PS&E	Plans, Specifications, and Estimates
PSHA	probabilistic seismic hazard assessment
PUC	Public Utilities Commission
PWA	Public Works Agency
RCRA	Resource Conservation and Recovery Act
R&D	Research and Development
RMP	Risk Management Plan
ROG	reactive organic gases
ROW	right(s)-of-way
RPP	Residential Parking Permit
RRFB	Rectangular Rapid Flash Beacons
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
S	Significant
SAAQS	State Ambient Air Quality Standards (California)
SAB	State Allocation Board
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCA	Standard Condition of Approval
SCS	Sustainable Communities Strategy
SCVWD	Santa Clara Valley Water District
SDC	Seismic Design Category
SDI	Sustainable Community Development Initiative
SDMP	Storm Drainage Master Plan
SDWA	Safe Drinking Water Act
SF ₆	sulfur hexafluoride
SFO	San Francisco International Airport
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLIC	Spills, Leaks, Investigations, and Cleanup
SMARA	Surface Mining and Reclamation Act
SO ₂	sulfur dioxide
SOV	single-occupant vehicle
SPCC	Spill Prevention, Control and Countermeasure
SR-24	State Route 24
SRRE	Source Reduction and Recycling Element

SSES	Sewer System Evaluation Survey
SU	Significant Unavoidable
SWITRS	Statewide Integrated Traffic Records System
SWP	State Water Program
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TAZ	traffic analysis zones
TDM	transportation demand management
TDR	Transfer of Development Rights
TMDL	Total Maximum Daily Load
TPMA	Transportation and Parking Management Agency
TRB	Transportation Research Board
TSCA	Toxic Substances Control Act
TSP	Transit Service Priority
UCMP	University of California Museum of Paleontology
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
UST	underground storage tank
UWMP	Urban Water Management Plan
v/c	volume to capacity
VI	moderate ground shaking
VII	produced strong ground shaking
VIII	very strong ground shaking
IX	violent ground shaking
VMT	vehicle miles traveled
vph	vehicles per hour
VTR	vehicle trip reductions
WBWG	Western Bat Working Group
WMAC	Waste Management of Alameda County
WRRP	Waste Reduction and Recycling Plan
WSA	Water Supply Assessment
WSMP	Water Supply Management Program

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CHAPTER 1

Introduction

1.1 Project Overview

The City of Oakland (“City”) as the Lead Agency prepared this Environmental Impact Report (“EIR”) to address the physical and environmental effects of the Broadway Valdez District Specific Plan (“Plan” or “Specific Plan”). The Specific Plan provides a vision and planning framework for future growth and development in the approximately 95.5-acre area (“Plan Area”) along Oakland’s Broadway corridor between Grand Avenue and Interstate 580 (I-580). The Specific Plan has been developed through a careful analysis of the Plan Area’s economic and environmental conditions and input from City decision-makers, landowners, developers, real estate experts, and the community at large. The Plan provides a comprehensive vision for the Plan Area along with goals, policies and development regulations to guide the Plan Area’s future development and serves as the mechanism for insuring that future development is coordinated and occurs in an orderly and well-planned manner. The Specific Plan builds upon the Broadway Valdez District Draft Concept Plan that was published on December 1, 2011.

The Specific Plan does not propose specific private developments, but for the purposes of environmental review, establishes the Broadway Valdez Development Program, which represents the *maximum feasible development* that the City has projected can reasonably be expected to occur in the Plan Area over a 25-year planning period. In total, the Broadway Valdez Development Program includes approximately 3.7 million square feet of development, including approximately 695,000 square feet of office space, 1,114,000 square feet of restaurant / retail space, 1,800 residential units, a new 180-room hotel, approximately 6,500 parking spaces provided by the development program, and approximately 4,500 new jobs (see Table 3-2 in Chapter 3, *Project Description*). The Broadway Valdez Development Program represents the level of development envisioned by the Specific Plan and analyzed in this EIR. Chapter 3, *Project Description*, of this document presents a detailed description of the Specific Plan and the Plan Area.

1.2 Environmental Review

The City of Oakland is the Lead Agency for this EIR (pursuant to State and local guidelines for implementing the California Environmental Quality Act [CEQA]), and has determined that the Specific Plan is subject to CEQA (Public Resources Code Section 21000, et seq. and Section 15000, et seq.) and the State CEQA Guidelines (California Code of Regulations) promulgated thereunder (together “CEQA”).

The degree of specificity in an EIR corresponds to the degree of specificity in the underlying activity described in the EIR. As CEQA specifies, a Program EIR is appropriate for a Specific Plan, under which there will be future development proposals that are 1) related geographically, 2) logical parts in a chain of contemplated actions, 3) connected as part of a continuing program, and 4) carried out under the same authorizing statute or regulatory authority and have similar environmental impacts that can be mitigated in similar ways (CEQA Guidelines Section 15168). For some site-specific purposes, a program-level environmental document may provide sufficient detail to enable an agency to make informed site-specific decisions within the program. This approach would allow agencies the ability to consider program-wide mitigation measures and cumulative impacts that might be slighted in a case-by-case analysis approach, and to carry out an entire program without having to prepare additional site-specific environmental documents. In other cases, the formulation of site-specific issues is unknown until subsequent design occurs, leading to the preparation of later project-level environmental documentation. Preparation of a program-level document simplifies the task of preparing subsequent project-level environmental documents for future projects under the Specific Plan for which the details are currently unknown. This EIR presents an analysis of the environmental impacts of adoption and implementation of the Specific Plan. Specifically, it evaluates the physical and land use changes from potential development that could occur with adoption and implementation of the Specific Plan.

Further, where feasible, and where an adequate level of detail is available such that the potential environmental effects may be understood and analyzed, this EIR provides a project-level analysis to eliminate or minimize the need for subsequent CEQA review of projects that could occur under the Specific Plan. Although not required under CEQA, some “project-level” impacts of reasonably foreseeable level of build-out of the Specific Plan are discussed to the extent that such impacts are known. Two projects within the Plan Area—Broadway-West Grand (mixed-use development) and Shops at Broadway (grocery store / retail)—have submitted planning applications and are currently undergoing independent environmental review. Although these projects are considered in the cumulative scenario, no specific other future development projects were identified at the time this Draft EIR was prepared; rather, the analysis of potential physical environmental impacts is based on reasonable assumptions about future development that could occur in the Specific Plan Area. The assumed future development is established within the Specific Plan as the Broadway Valdez Development Program (see Section 3.5 in Chapter 3, *Broadway Valdez Development Program*). Pursuant to CEQA Guidelines Sections 15162-15164, 15168, 15183 and 15183.5, future program- and project-level environmental analyses may be tiered from this EIR.

The City intends to use the streamlining/tiering provisions of CEQA to the maximum feasible extent, so that future environmental review of specific projects are expeditiously undertaken without the need for repetition and redundancy, as provided in CEQA Guidelines section 15152 and elsewhere. Specifically, pursuant to CEQA Guidelines Section 15183, streamlined environmental review is allowed for projects that are consistent with the development density established by zoning, community plan, specific plan, or general plan policies for which an EIR was certified, unless such a project would have environmental impacts peculiar/unique to the project or the project site. Likewise, Public Resources Code section 21094.5 and CEQA

Guidelines Section 15183.3 also provides for streamlining of certain qualified, infill projects. In addition, CEQA Guidelines Sections 15162-15164 allow for the preparation of a Subsequent (Mitigated) Negative Declaration, Supplemental or Subsequent EIR, and/or Addendum, respectively, to a certified EIR when certain conditions are satisfied. Moreover, California Government Code section 65457 and CEQA Guidelines section 15182 provide that once an EIR is certified and a specific plan adopted, any residential development project, including any subdivision or zoning change that implements and is consistent with the specific plan is generally exempt from additional CEQA review under certain circumstances. The above are merely examples of possible streamlining/tying mechanisms that the City may pursue and in no way limit future environmental review of specific projects.

The City elected not to prepare an Initial Study Checklist to reduce the scope of the EIR, as permitted by Section 15060(d) of the CEQA Guidelines. This EIR addresses all environmental topics identified in the City of Oakland's CEQA Thresholds/Criteria of Significance document.

The analysis in this EIR also relies on previously adopted environmental impact reports (EIRs) such as the Land Use and Transportation Element (LUTE) EIR (City of Oakland, 1998), the Safety Element Initial Study/Negative Declaration (City of Oakland, 2004), the Housing Element EIR (City of Oakland, 2010), and the Proposed Amendments to the Central District Urban Renewal Plan EIR (City of Oakland, 2011). As noted in section 1.5, *References*, below, these documents are available at the City of Oakland's offices and on their official website.¹ As a separate and independent basis, the document also relies upon the Plan Bay Area certified EIR for certain environmental topics, including without limitation air quality (Association of Bay Area Governments and the Metropolitan Transportation Commission, 2013).²

CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of "the environment on the project" in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

1.2.1 Use of this EIR

Pursuant to CEQA, this EIR is a public information document prepared for use by governmental agencies and the public to identify and evaluate potential environmental consequences of the adoption and development under the Specific Plan, to evaluate and recommend mitigation measures that would substantially lessen or eliminate significant environmental adverse impacts, and to examine a reasonable range of feasible alternatives to the Specific Plan. This EIR is intended to provide the information and objective environmental analysis necessary to assist the

¹ Available online at <http://www2.oaklandnet.com> or at the City's Offices at 250 Frank H. Ogawa – Suite 3315, Oakland, CA 94612.

² Available online at <http://onebayarea.org/regional-initiatives/plan-bay-area/plan-elements/environmental-impact-report.html>. Accessed on August 30, 2013.

Lead Agency, the City of Oakland, in considering all the approvals and actions necessary to adopt the Specific Plan. It is prepared to aid and streamline the review and decision-making process by disclosing the potential for significant environmental impacts to occur with implementation of the Specific Plan. The information contained in this Draft EIR is subject to review and consideration by the City of Oakland and any other responsible agency prior to the City's decision to approve, reject or modify the Specific Plan.

1.2.2 EIR Scoping

On April 30, 2012, the City of Oakland issued a Notice of Preparation (NOP), to inform agencies and interested parties of its intent to prepare and distribute a "Draft EIR for the Broadway/Valdez District Specific Plan." The NOP was distributed to governmental agencies, organizations, and persons interested in the Specific Plan. The City sent the NOP to agencies with statutory responsibilities in connection with the Specific Plan and requested their input on the scope and content of the environmental information that should be addressed in the EIR. The Landmarks Preservation Advisory Board and the City of Oakland Planning Commission held Scoping Meetings on May 14 and May 16, 2012, respectively, to accept comments regarding the scope of the EIR in response to the NOP. The NOP review period ended on May 30, 2012. The NOP and written and oral comments that the City received in response to the NOP are included as Appendix A to this Draft EIR, which addresses all comments received in response to the NOP that are relevant to environmental issues. During the public scoping process for this EIR, no specific areas of controversy have arisen relevant to this CEQA analysis.

1.2.3 Public Review

This Draft EIR is available for public review and comment for the period identified on the Notice of Release/Availability of Draft Environmental Impact Report accompanying this document (45 calendar days, September 20 through November 4, 2013). During the public review and comment period, written comments on the Draft EIR may be submitted to the City at the address indicated on the notice. Oral comments may be stated at the public hearing on the Draft EIR, which will be held as indicated on the above-referenced notice.

Following the public review and comment period for the Draft EIR, the City will prepare responses that address all written and oral comments on the Draft EIR's environmental analyses and received within the specified review period. The responses and any other revisions to the Draft EIR will be prepared as a Responses to Comments document. The Draft EIR and its Appendices, together with the Responses to Comments document, will constitute a Final EIR (commonly referred to collectively as "EIR") for the Broadway Valdez Development Program under the Broadway Valdez District Specific Plan.

1.3 CEQA Review and Approval

Prior to approving the Specific Plan, the City of Oakland must ultimately certify that it has reviewed and considered the information in the EIR and that the EIR has been completed in conformity with the requirements of CEQA. This EIR must be certified and considered by the Lead Agency before any final City decision can be made regarding Specific Plan. This EIR identified significant effects that would result from the Broadway Valdez Development Program under the Specific Plan. Therefore, pursuant to CEQA Guidelines Section 15091, the following findings would be required if the City decides to approve the Specific Plan:

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

1.4 Organization of the Draft EIR

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

Chapter 2, *Summary*, contains a brief summary of the Broadway Valdez Development Program and Specific Plan and allows the reader to easily reference the analysis presented in the Draft EIR.

Table 2-1, Summary of Impacts, Standard Conditions of Approval (SCAs), Mitigation Measures, and Residual Impacts, is provided at the end of Chapter 2 as a reader-friendly reference to each of the environmental effects, proposed mitigation measures and residual environmental impacts after mitigation is implemented, presented by environmental topic. Chapter 2 also summarizes the Alternatives analysis, areas of controversy and NOP comments received.

Chapter 3, *Project Description*, describes in detail the Plan Area and surroundings, the background and regulatory context of the Specific Plan. The goals and objectives of the Specific Plan also are discussed along with the relevant characteristics of the Specific Plan. Chapter 3 identifies other agencies that must consider or approve aspects of the Specific Plan.

Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval, and Mitigation Measures*, discusses the environmental setting (existing physical conditions and regulatory framework), the environmental impacts of the adoption and development under the Specific Plan and cumulative conditions, and the SCAs and mitigation measures that, after implementation, would reduce or eliminate significant impacts.

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

Chapter 6, *Impact Overview and Growth Inducement*, summarizes the potentially significant and unavoidable impacts and the cumulative impacts that could result with adoption and development under the Specific Plan, as they are identified throughout Chapter 4. Chapter 6 also describes the Specific Plan's potential for inducing growth.

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

Appendices to the Draft EIR are provided on a CD and include the NOP, Responses to the NOP, as well as certain supporting background documents used for the impact analyses for specific topics. All reference documents and persons contacted to prepare the EIR analyses are listed at the end of each analysis section in Chapter 4, *Environmental Setting, Impacts, Standard Conditions of Approval and Mitigation Measures*. The Draft EIR is available for review by the public at the City of Oakland CEDA, Planning Department, Strategic Planning Division-Major Projects, under reference Case Number ER 12-0005, located at 250 Frank H. Ogawa Plaza, Suite 3315, Oakland, California 94612.

A *List of Acronyms and Abbreviations* used in this EIR are provided before Chapter 1.

1.5 References

- Association of Bay Area Governments and the Metropolitan Transportation Commission, 2013. *Plan Bay Area: Environmental Impact Report*, July 2013. Available online at <http://onebayarea.org/regional-initiatives/plan-bay-area/plan-elements/environmental-impact-report.html>. Accessed on August 30, 2013.
- City of Oakland, 2011. *Proposed Amendments to the Central District Urban Renewal Plan EIR*, June, 2011. Available: <http://www2.oaklandnet.com/Government/o/PBN/OurServices/Application/EIR/index.htm>.
- City of Oakland, 2010. *City of Oakland Housing Element EIR*, August, 2010. Available: <http://www2.oaklandnet.com/Government/o/PBN/OurServices/Application/EIR/index.htm>.
- City of Oakland, 2004. *Protect Oakland: Update of the Safety Element of the Oakland General Plan Initial Study / Negative Declaration*, September 15, 2004. Available: <http://www2.oaklandnet.com/oakca1/groups/ceda/documents/webcontent/oak035224.pdf>.
- City of Oakland, 1998. *City of Oakland Land Use and Transportation Element EIR*, February, 1998. Available at the City of Oakland, Department of Planning and Building, 250 Frank H. Ogawa – Suite 3315, Oakland, CA 94612.

CHAPTER 2

Summary

This chapter is intended to summarize in a stand-alone section the project described in Chapter 3, the impacts, standard conditions of approval, and mitigation measures discussed in Chapter 4, the alternatives analysis presented in Chapter 5, and the comments received in response to the Notice of Preparation (NOP) of this EIR.¹

2.1 Project Overview

The City of Oakland (“City”) as the Lead Agency prepared this Environmental Impact Report (“EIR”) to address the physical and environmental effects of adoption and implementation of the Broadway Valdez District Specific Plan (“Plan” or “Specific Plan”). The Specific Plan provides a vision and planning framework for future growth and development in the approximately 95.5-acre area (“Plan Area”) along Oakland’s Broadway corridor between Grand Avenue and Interstate 580 (I-580). The Specific Plan has been developed through a careful analysis of the Plan Area’s economic and environmental conditions and input from City decision-makers, landowners, developers, real estate experts, and the community at large. The Plan provides a comprehensive vision for the Plan Area along with goals, policies and development regulations to guide the Plan Area’s future development and serves as the mechanism for insuring that future development is coordinated and occurs in an orderly and well-planned manner. The Specific Plan builds upon the Broadway Valdez District Draft Concept Plan that was published on December 1, 2011.

The Specific Plan does not propose specific private developments, but, for the purposes of environmental review, establishes the Broadway Valdez Development Program, which represents the *maximum feasible development* that the City has projected can reasonably be expected to occur in the Plan Area over a 25-year planning period. In total, the Broadway Valdez Development Program includes approximately 3.7 million square feet of development, including approximately 695,000 square feet of office space, 1,114,000 square feet of restaurant / retail space, 1,800 residential units, a new 180-room hotel, approximately 6,500 additional parking spaces, and approximately 4,500 new jobs (see Table 3-2 in Chapter 3, *Project Description*). The Broadway Valdez Development Program represents the level of development envisioned by the Specific Plan and analyzed in this EIR. Chapter 3, *Project Description*, of this document presents a detailed description of the Specific Plan and the Plan Area.

¹ As a summary, this Chapter includes definitions and information detailed in other sections of the Draft EIR.

2.2 Environmental Impacts, Standard Conditions of Approval and Mitigation Measures

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

This EIR identifies for the project significant and unavoidable impacts associated with the following topics:

Significant and Unavoidable Aesthetics, Shadow, and Wind Impacts

- **Impact AES-4:** Adoption and development under the Specific Plan could result in substantial new shadow that could shade the Temple Sinai. Although Mitigation Measure AES-4 would require a shadow study to evaluate the shadowing effects, it cannot be known with certainty that a project redesign would eliminate the potential for new significant shading on the Temple Sinai. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-5:** Adoption and development under the Specific Plan has the potential to result in adverse wind conditions in cases where structures 100 feet in height or taller are proposed for development. Although Mitigation Measure AES-5 would require a wind study to evaluate the effects of proposed development, it cannot be known with certainty that a project redesign would eliminate the potential for new adverse wind impacts. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-6:** For the reasons listed above, adoption and development under the Specific Plan is conservatively deemed to result in significant cumulative wind, and shadow impacts. Therefore, adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area, also is conservatively deemed significant and unavoidable.

Significant and Unavoidable Air Quality Impacts

- **Impact AIR-1:** Construction associated with adoption and development under the Specific Plan would result in average daily emissions in excess of 54 pounds per day of ROG. With the inclusion of Recommended Measure AIR-1, it cannot reliably be demonstrated that ROG emissions from application of architectural coatings associated with adoption and development under the Specific Plan would be reduced to 54 pounds per day or less. To assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AIR-2:** Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NOX, or PM_{2.5}; 82 pounds per day of PM₁₀; or result in maximum annual emissions of 10 tons per

year of ROG, NOX, or PM_{2.5} or 15 tons per year of PM₁₀. Although implementation of SCA 25 and Recommended Measure AIR2 would reduce environmental effects on air quality, adoption and development under the Specific Plan still would contribute substantially to an existing air quality violation (ozone precursors and particulate matter). Therefore, even with implementation of Recommended Measure AIR-2, this impact would remain significant and unavoidable for emissions of ROG, NOX, and PM₁₀. To assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the significant and unavoidable determination is considered conservative.

- **Impact AIR-4:** Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) under cumulative conditions resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter as a result of project operations. Although, due to the BAAQMD's permitting requirements, residual risk for a given generator would be less than 10 in one million, and although implementation of Mitigation Measure AIR-4 would substantially reduce potential cancer risks associated with DPM, the degree to which multiple sources, if concentrated on one area, would maintain cumulative risks to below 100 in one million cannot be assured. Therefore, the impact is conservatively deemed significant and unavoidable.

Significant and Unavoidable Cultural Resources Impacts

- **Impact CUL-1:** Adoption and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **Impact CUL-5:** Adoption and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources.

Significant and Unavoidable Greenhouse Gases and Climate Change Impacts

- **Impact GHG-1:** Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO_{2e} per year that would exceed the project-level threshold of 4.6 metric tons of CO_{2e} per service population annually. Although future projects under the Specific Plan would be subject to SCA F, GHG Reduction Plan, according to the specific applicability criteria, and GHG emissions would be reduced through project-by-project implementation of project-specific reduction measures, it cannot be guaranteed that sufficient reductions can be achieved. Therefore, the impact is conservatively deemed significant and unavoidable.

Significant and Unavoidable Noise Impacts

- **Impact NOI-5:** Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area.

- **Impact NOI-6:** Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels.
- **Impact NOI-7:** Adoption and development under the Specific Plan could result in stationary noise sources, such as rooftop mechanical equipment and back-up generators; that when combined with noise from traffic generated by adoption and development under the Specific Plan; as well as from and from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area.

Significant and Unavoidable Transportation and Circulation Impacts

Existing Plus Project Conditions

- **Impact TRANS-2:** The development under the Specific Plan would degrade the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour under Existing Plus Project conditions.
- **Impact TRANS-6:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under Existing Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS A during both weekday PM and Saturday peak hours, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.

2020 Plus Project Conditions

- **Impact TRANS-7:** The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more, increase the total intersection v/c ratio by 0.03 or more, and increase the v/c ratio for a critical movement by 0.05 or more at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) which would operate at LOS F during the weekday PM peak hour under 2020 conditions.
- **Impact TRANS-8:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**).
- **Impact TRANS-10:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2020 conditions.

- **Impact TRANS-12:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under 2020 Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact TRANS-13:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *West Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the PM peak hour in 2020.

2035 Plus Project Conditions

- **Impact TRANS-14:** The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM and Saturday peak hours at the *51st Street/Pleasant Valley Avenue/Broadway* intersection (**Intersection #7**) under 2035 conditions.
- **Impact TRANS-17:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday PM peak hour at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) under 2035 conditions.
- **Impact TRANS-18:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more at an intersection operating at LOS F during the Saturday peak hour at the *Grand Avenue/Lake Park Avenue/Santa Clara Avenue* intersection (**Intersection #16**) under 2035 conditions.
- **Impact TRANS-19:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions.
- **Impact TRANS-20:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Piedmont Avenue/Broadway* and *Hawthorne Avenue/Brook Street/Broadway* intersections (**Intersections #20 and #21**) under 2035 conditions.
- **Impact TRANS-21:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *27th Street/Telegraph Avenue* intersection (**Intersection #29**) which would operate at LOS F during the weekday PM peak hour under 2035 conditions.
- **Impact TRANS-22:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by

four seconds or more during the weekday PM peak hour and at the *27th Street/ Broadway* intersection (**Intersection #30**) under 2035 conditions.

- **Impact TRANS-24:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the Saturday peak hour at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2035 conditions.
- **Impact TRANS-26:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under 2035 Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact TRANS-27:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the West *Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the weekday PM peak hour in 2035.
- **Impact TRANS-28:** The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Grand Avenue/Broadway* intersection (**Intersection #49**) in 2035.

Roadway Segment Evaluation

- **Impact TRANS-29:** The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments:
 - MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035.
 - Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035.
 - Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035.
 - Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035.
 - San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035.
 - Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035.

Previous environmental documents have identified intersections that either currently operate at an unacceptable LOS or are projected to operate at an unacceptable LOS in the future. This EIR identifies these intersections as “impacted intersections” because components of the proposed project may affect those locations. Appendix G presents the intersections that previously published environmental documents identified as having significant and unavoidable impacts.

2.3 Alternatives

Chapter 5 presents a detailed analysis of a range of reasonable alternatives to the Specific Plan. The alternatives that are analyzed in detail or discussed in this Draft EIR are listed below:

- No Project Alternative 1
- Partially Mitigated Alternative 2
- Maximum Theoretical Buildout Alternative 3
- Historical Preservation Sub-Alternative

The Partially Mitigated Alternative 2 is identified as the CEQA-required environmentally superior alternative.

2.4 Areas of Controversy and Scoping Comments

The following CEQA topics were among those that were raised in written comments received in response to the NOP for this EIR (see Appendix A), and stated during the City’s scoping meetings held by the Oakland Planning Commission and the City’s Landmarks Preservation Advisory Board (LPAB). The majority of comments to the NOP raised non-CEQA topics related to issues beyond the scope of the analysis in this Draft EIR prepared pursuant to CEQA. Many of these comments were either in support of the Plan policies or suggestions to revise the specifics of the Plan. Non-CEQA comments, which will be considered by decision makers, are noted but not addressed in this Draft EIR. Therefore, only those comments relevant to the analysis pursuant to CEQA are listed below. While each of the comments listed below was considered in the preparation of this Draft EIR, many were either addressed in a manner sufficient for CEQA analysis but more generally than requested, or not addressed directly because the information is accounted in the background data and model assumptions.

- **General Comments**
 - Study the effects of intensified zoning and commercial development on the Harrison side of the Plan Area, on Lake Merritt Park, the Veterans Memorial Building, and on the mouth of Glen Echo Creek.
- **Transportation and Circulation**
 - Analyze the impacts of the Plan on state highway facilities.
 - Consider that low-income households tend to have lower rates of car ownership, lower miles traveled and higher rates of transit usage.
 - Analyze the potential impacts to performance or Safety of BART facilities.

- Analyze the Plan's impacts on BART transit service using a maximum operation capacity of 107 passengers per car.
 - Analyze the Plan's cumulative impacts on BART service.
 - Analyze the Plan's impacts AC Transit service, including planned improvements.
 - Assess the need for concentrated parking facilities and develop mitigations to reduce/eliminate the need for such facilities.
 - Include more detailed information on parking ratios and the range of parking standards for each type of development.
- **Utilities and Service Systems**
 - Acknowledge future individual projects may require a water supply assessment (WSA) pursuant to CEQA Guidelines Section 15155.
 - Require project applicants to replace/rehab sewer collection systems to prevent infiltration/inflow to the maximum extent feasible.
- **Cultural and Historic Resources**
 - Analyze the potential impact to historic resources if the Plan directs adaptive reuse only where feasible.
 - Analyze the potential impacts of historic resource relocation.
 - Analyze the character defining features of each Area of Secondary Importance.
 - Require a pre-construction archeological study.
 - Require preparation of an archeological treatment plan, to be reviewed by the Landmarks Preservation Advisory Board, prior to the start of any sub-surface work.
 - Study and describe historic preservation provisions including: State Historic Building Code provisions, Oakland Mills Act program, Federal tax incentives, and zoning and permit procedures to facilitate adaptive reuse in conformance with the Historic Preservation Element.

2.5 Summary of Impacts

As noted above, **Table 2-1**, below, includes impact statements, standard conditions of approval, recommended mitigation measures, and the level of significance of the impact after recommended mitigation measures are implemented. It should be noted that while CEQA requires the analysis of potential adverse effects of a project on the environment, potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of "the environment on the project" in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

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

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Aesthetics, Shadow and Wind		
Impact AES-1: Adoption and development under the Specific Plan would not adversely affect scenic public vistas or views of scenic resources (Criteria 1 and 2). (Less than Significant)	None Required	Less than Significant
Impact AES-2: Adoption and development under the Specific Plan would not substantially degrade the existing visual character or quality of the site and its surroundings (Criterion 3). (Less than Significant)	None Required	Less than Significant
Impact AES-3: Adoption and development under the Specific Plan would result in new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area (Criterion 4). (Less than Significant)	Standard Condition of Approval 40: <i>Lighting Plan</i>	Less than Significant
Impact AES-4: Adoption and development under the Specific Plan could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light (Criteria 5 through 9). (Conservatively Significant and Unavoidable)	Mitigation Measure AES-4: Shadow Analysis. Project sponsors for projects proposed for development on the parcel bounded by Webster Street, 29th Street, Broadway, and 29th Street shall conduct a shadow analysis to evaluate the shadowing effects of the proposed project on the stained glass windows on the eastern façade of the Temple Sinai. Should the initial shadow analysis reveal new shading would occur on the stained glass windows of the Temple Sinai during morning worship periods, the project sponsor shall, if feasible, modify project designs and reduce proposed building heights, as necessary, until a revised shadow analysis demonstrates that new shading on Temple Sinai would not materially impair this resource's historic significance (i.e., would avoid Temple Sinai's stained glass windows during morning worship periods, which are generally from 7:30 a.m. to 12:00 p.m.).	Conservatively Significant and Unavoidable
Impact AES-5: Adoption and development under the Specific Plan has the potential to result in adverse wind conditions (Criterion 10). (Conservatively Significant and Unavoidable)	Mitigation Measure AES-5: Wind Analysis. Project sponsors proposing buildings 100 feet tall or taller within the portion of the Plan Area designated Central Business District shall conduct detailed wind studies to evaluate the effects of the proposed project. If the wind study determines that the proposed project would create winds exceeding 36 mph for more than one hour during daylight hours during the year, the project sponsor shall incorporate, if feasible, measures to reduce such potential effects, as necessary, until a revised wind analysis demonstrates that the proposed project would not create winds in excess of this threshold. Examples of measures that such projects may incorporate, depending on the site-specific conditions, include structural and landscape design features and modified tower designs: wind protective structures or other apparatus to redirect downwash winds from tall buildings, tree plantings or dense bamboo plantings, arbors, canopies, lattice fencing, etc.	Conservatively Significant and Unavoidable
Impact AES-6: Adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area, would result in significant cumulative wind, and shadow impacts. (Conservatively Significant and Unavoidable)	Mitigation Measure AES-6: Implement Mitigation Measures AES-4 and AES-5.	Conservatively Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Air Quality		
Impact AIR-1: Construction associated with adoption and development under the Specific Plan would result in average daily emissions of 54 pounds per day of ROG, NO _x , or PM _{2.5} or 82 pounds per day of PM ₁₀ (Criterion 1). (Conservatively Significant and Unavoidable)	<p>Standard Condition of Approval A: Construction-Related Air Pollution Controls (Dust and Equipment Emissions)</p> <p>Recommended Measure AIR-1: During construction, the project applicant shall require the construction contractor to use prefinished materials and colored stucco, as feasible.</p>	Conservatively Significant and Unavoidable
Impact AIR-2: Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NO _x , or PM _{2.5} or 82 pounds per day of PM ₁₀ ; or result in maximum annual emissions of 10 tons per year of ROG, NO _x , or PM _{2.5} or 15 tons per year of PM ₁₀ (Criterion 2). (Conservatively Significant and Unavoidable)	<p>Standard Condition of Approval 25: Parking and Transportation Demand Management</p> <p>Recommended Measure AIR-2: The following measures identified in the 2012 BAAQMD CEQA Guidelines for specific development projects in excess of 50,000 square feet or 325 dwelling units are recommended to be considered and if determined feasible, implemented for those projects:</p> <ul style="list-style-type: none"> • Establish a dedicated employee transportation coordinator for each specific development as a condition of occupancy permit/tenancy contract; • Increase building energy efficiency by 20 percent beyond 2008 Title 24 (reduces NO_x related to natural gas combustion); • Require use of electrically powered landscape equipment; • Require only natural gas hearths in residential units as a condition of final building permit; • Use low VOC architectural coatings in maintaining buildings; • Require smart meters and programmable thermostats; and • Install solar water heaters for all uses. 	Conservatively Significant and Unavoidable
Impact AIR-3: Adoption and development under the Specific Plan would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour (Criterion 3). (Less than Significant)	None Required	Less than Significant
Impact AIR-4: Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 10 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM _{2.5} concentration of greater than 0.3 micrograms per cubic meter or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM _{2.5} of greater than 0.8 micrograms per cubic meter as a result of construction activities or project operations (Criterion 4). (Conservatively Significant and Unavoidable)	<p>Standard Condition of Approval A: Construction-Related Air Pollution Controls (Dust and Equipment Emissions)</p> <p>Mitigation Measure AIR-4: Risk Reduction Plan</p> <p>Applicants for projects that would include backup generators shall prepare and submit to the City, a Risk Reduction Plan for City review and approval. The applicant shall implement the approved plan. This Plan shall reduce cumulative localized cancer risks to the maximum feasible extent. The Risk Reduction Plan may contain, but is not limited to the following strategies:</p>	Conservatively Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Air Quality (cont.)		
Impact AIR-4 (cont.)	<ul style="list-style-type: none"> Demonstration using screening analysis or a health risk assessment that project sources, when combined with local cancer risks from cumulative sources with 1,000 feet would be less than 100 in one million. Installation of non-diesel fueled generators. Installation of diesel generators with an EPA-certified Tier 4 engine or Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy. 	
Impact AIR-5: Adoption and development under the Specific Plan would not expose sensitive receptors to substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) an increase of annual average PM _{2.5} concentration of greater than 0.8 micrograms per cubic meter by siting a new sensitive receptor (Criterion 5). (Less than Significant)	Standard Condition of Approval B: <i>Exposure to Air Pollution (Toxic Air Contaminants)</i>	Less than Significant
Impact AIR-6: Adoption and development under the Specific Plan would not frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people (Criterion 6). (Less than Significant)	None Required	Less than Significant
Impact AIR-7: Adoption and development under the Specific Plan would be consistent with the primary goals of the Bay Area Clean Air Plan (CAP) and would not fundamentally conflict with the CAP because the Specific Plan demonstrates reasonable efforts to implement control measures contained in the CAP (Criterion 7). (Less than Significant)	Standard Condition of Approval 25: <i>Parking and Transportation Demand Management</i>	Less than Significant
Impact AIR-8: Adoption and development under the Specific Plan would include special overlay zones containing goals, policies, and objectives to minimize potential Toxic Air Contaminant (TAC) impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips (Criterion 8). (Less than Significant)	Standard Condition of Approval B: <i>Exposure to Air Pollution (Toxic Air Contaminants)</i>	Less than Significant
Impact AIR-9: Adoption and development under the Specific Plan would not identify existing and planned sources of odors with policies to reduce potential odor impacts (Criterion 9). (Less than Significant)	None Required	Less than Significant
Biological Resources		
Impact BIO-1: Adoption and development under the Specific Plan could adversely affect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 1). (Less than Significant)	None Required	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Biological Resources (cont.)		
Impact BIO-2: Adoption and development under the Specific Plan could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 2). (Less than Significant)	Standard Condition of Approval 43: <i>Tree Removal Permit on Creekside Properties</i> ; 44: <i>Tree Removal During Breeding Season</i> ; 45: <i>Tree Removal Permit</i> ; 46: <i>Tree Replacement Plantings</i> ; and 47: <i>Tree Protection during Construction</i>	Less than Significant
Impact BIO-3: Adoption and development under the Specific Plan could have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means (Criterion 3). (Less than Significant)	Standard Condition of Approval 55: <i>Erosion and Sedimentation Control Plan</i> ; 35: <i>Hazards Best Management Practices</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; and 80: <i>Post-construction Stormwater Management Plan</i>	Less than Significant
Impact BIO-4: Adoption and development under the Specific Plan could substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Criterion 4). (Less than Significant)	Standard Condition of Approval 44: <i>Tree Removal During Breeding Season</i>	Less than Significant
Impact BIO-5: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances (Criterion 6). (Less than Significant)	Standard Condition of Approval 46: <i>Tree Replacement Plantings</i> , requires replacement plantings for impacted protected trees; and 47: <i>Tree Protection during Construction</i>	Less than Significant
Impact BIO-6: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources (Criterion 7). (Less than Significant)	Standard Condition of Approval 83: <i>Creek Protection Plan</i> ; 55: <i>Erosion and Sedimentation Control Plan</i> ; 57: <i>Vibrations Adjacent to Historic Structures</i> ; 35: <i>Hazards Best Management Practices</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; and 80: <i>Post-construction Stormwater Management Plan</i>	Less than Significant
Impact BIO-7: Construction activity and operations of adoption and development under the Specific Plan, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects in the Plan Area, would not result in impacts on special-status species, sensitive habitats, wildlife movement corridors, wetlands, and other waters of the U.S. (Less than Significant)	Standard Condition of Approval 57: <i>Vibrations Adjacent to Historic Structures</i> ; 35: <i>Hazards Best Management Practices</i> ; 55: <i>Erosion and Sedimentation Control Plan</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; 80: <i>Post-construction Stormwater Management Plan</i> ; 44: <i>Tree Removal During Breeding Season</i> ; 45: <i>Tree Removal Permit</i> ; 46: <i>Tree Replacement Plantings</i> ; 47: <i>Tree Protection during Construction</i> ; A: <i>Bird Collision Reduction</i> ; and 83: <i>Creek Protection Ordinance</i>	Less than Significant
Cultural Resources		
Impact CUL-1: Adoption of and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources (Criterion 1). (Significant and Unavoidable)	Standard Condition of Approval 56: <i>Property Relocation Rather than Demolition</i> ; and 57: <i>Vibrations Adjacent to Historic Structures</i> Mitigation Measure CUL-1: a) Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures.	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Cultural Resources (cont.)		
Impact CUL-1 (cont.)	<ul style="list-style-type: none"> <i>Avoidance.</i> The City shall ensure, where feasible, that all future development activities allowable under the Specific Plan, including demolition, alteration, and new construction, would avoid historical resources (i.e., those listed on federal, state, and local registers). <i>Adaptive Reuse.</i> If avoidance is not feasible, adaptive reuse and rehabilitation of historical resources shall occur in accordance with the <i>Secretary of Interior's Standards for the Treatment of Historic Properties</i>. <i>Appropriate Relocation.</i> If avoidance or adaptive reuse <i>in situ</i> is not feasible, SCA 56, <i>Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition)</i>, shall be implemented, as required. Projects that relocate the affected historical property to a location consistent with its historic or architectural character could reduce the impact less than significant (Historic Preservation Element Action 3.8.1), unless the property's location is an integral part of its significance, e.g., a contributor to a historic district. <p>b) Future Site-specific Surveys and Evaluations.</p> <p>Although the Plan Area has been surveyed by the City of Oakland's OCHS and as part of the Broadway Valdez Specific Plan effort by ESA in 2009, evaluations and ratings may change with time and other conditions. There may be previously unidentified historical resources which would be affected by future development activities. For any future projects on or immediately adjacent to buildings 50 years old or older between 2013 and 2038, which is the build-out horizon for the Specific Plan (i.e., by the end of the Plan period, buildings constructed prior to 1988), the City shall require specific surveys and evaluations of such properties to determine their potential historical significance at the federal, state, and local levels. Intensive-level surveys and evaluations shall be completed by a qualified architectural historian who meets the <i>Secretary of the Interior's Standards</i>. For all historical resources identified as a result of site-specific surveys and evaluations, the City shall ensure that future development activities avoid, adaptively reuse and/or appropriately relocate such historical resources in accordance with measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), above. Site-specific surveys and evaluations that are more than 5 years old shall be updated to account for changes which may have occurred over time.</p> <p>c) Recordation and Public Interpretation.</p> <p>If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures) is determined infeasible as part of a future project, the City shall evaluate the feasibility and appropriateness</p>	

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Cultural Resources (cont.)		
Impact CUL-1 (cont.)	<p>of recordation and public interpretation of such resources prior to any construction activities which would directly affect them. Should City staff decide recordation and or public interpretation is required, the following activities would be performed:</p> <ul style="list-style-type: none"> • <i>Recordation.</i> Recordation shall follow the standards provided in the National Park Service's Historic American Building Survey (HABS) program, which requires photo-documentation of historic structures, a written report, and/or measured drawings (or photo reproduction of original plans if available). The photographs and report would be archived at the Oakland Planning Department and local repositories, such as public libraries, historical societies, and/or the Northwest Information Center at Sonoma State University. The recordation efforts shall occur prior to demolition, alteration, or relocation of any historic resources identified in the Plan Area, including those that are relocated pursuant to measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures). Additional recordation could include (as appropriate) oral history interviews or other documentation (e.g., video) of the resource. • <i>Public Interpretation.</i> A public interpretation or art program would be developed by a qualified historic consultant or local artist in consultation with the Landmarks Preservation Advisory Board and City staff, based on a City-approved scope of work and submitted to the City for review and approval. The program could take the form of plaques, commemorative markers, or artistic or interpretive displays which explain the historical significance of the properties to the general public. Such displays would be incorporated into project plans as they are being developed, and would typically be located in a publicly accessible location on or near the site of the former historical resource(s). Public interpretation displays shall be installed prior to completion of any construction projects in the Plan Area. <p>Photographic recordation and public interpretation of historically significant properties does not typically mitigate the loss of resources to a less-than-significant level [CEQA Section 15126.4(b)(2)].</p> <p>d) Financial Contributions.</p> <p>If measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures) and measure "b" (Future Site-specific Surveys and Evaluations) are not satisfied, the project applicant shall make a financial contribution to the City of Oakland, which can be used to fund other historic preservation projects within the Plan Area or in the immediate vicinity. Such programs include, without limitation, a Façade Improvement Program or a Property Relocation Assistance Program.</p>	

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Cultural Resources (cont.)		
Impact CUL-1 (cont.)	<p>This mitigation would conform to Action 3.8.1(9) of the Historic Preservation Element of the City of Oakland General Plan. Contributions to the fund(s) shall be determined by staff at the time of approval of site-specific project plans based on a formula to be determined by the Landmarks Preservation Advisory Board. However, such financial contribution, even in conjunction with measure "c" (Recordation and Public Interpretation), would not reduce the impacts to less-than-significant levels.</p> <p>Only avoidance of direct effects to historic resources, as would be achieved through measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), and measure "b" (Future Site-specific Surveys and Evaluations) would reduce the impacts to historic resources to a less-than-significant level. Therefore, if demolition or substantial alteration of historically significant resources is identified by the City as the only feasible option for development in the Plan Area, even with implementation of measure "c" (Recordation and Public Interpretation) and measure "d" (Financial Contributions), the impact of adoption of and development under the Specific Plan would be considered significant and unavoidable.</p>	
Impact CUL-2: Adoption of and development under the Specific Plan could result in significant impacts to unknown archaeological resources (Criterion 2). (Less than Significant)	Standard Condition of Approval 52: <i>Archaeological Resources</i>	Less than Significant
Impact CUL-3: Adoption of and development under the Specific Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Criterion 3). (Less than Significant)	Standard Condition of Approval 54: <i>Paleontological Resources</i>	Less than Significant
Impact CUL-4: Adoption of and development under the Specific Plan could disturb human remains, including those interred outside of formal cemeteries (Criterion 4). (Less than Significant)	Standard Condition of Approval 52: <i>Archaeological Resources; and 53: Human Remains</i>	Less than Significant
Impact CUL-5: Adoption of and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources. (Significant and Unavoidable)	<p>Standard Condition of Approval 52: <i>Archaeological Resources; and 53: Human Remains; 53: Human Remains; 54: Paleontological Resources; 56: Property Relocation Rather than Demolition; and 57: Vibrations Adjacent to Historic Structures</i></p> <p>Mitigation Measure CUL-5: Implement Mitigation Measure CUL-1.</p>	Significant and Unavoidable (Historic Resources) for Cumulative Impact
Geology, Soils and Geohazards		
Impact GEO-1: Adoption and development under the Specific Plan could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, collapse, or lateral spread (Criterion 1). (Less than Significant)	Standard Condition of Approval 58: <i>Soils Report; and 60: Geotechnical Report</i>	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Geology, Soils and Geohazards (cont.)		
Impact GEO-2: Adoption and development under the Specific Plan could be subjected to geologic hazards, including expansive soils, subsidence, seismically-induced settlement and differential settlement (Criterion 3). (Less than Significant)	Standard Condition of Approval 58: <i>Soils Report</i> ; and 60: <i>Geotechnical Report</i>	Less than Significant
Impact GEO-3: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would not result in significant cumulative impacts with respect to geology, soils or seismicity. (Less than Significant)	None Required	Less than Significant
Greenhouse Gases and Climate Change		
Impact GHG-1: Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO _{2e} per year, that would exceed 4.6 metric tons of CO _{2e} per service population annually (Criterion 1). (Conservatively Significant and Unavoidable)	Standard Condition of Approval F: <i>GHG Reduction Plan</i> ; H: <i>Green Building for Residential Structures and Non-residential Structures</i> ; I: <i>Green Building for Building and Landscape Projects</i> ; 25: <i>Parking and Transportation Demand Management</i> ; 36: <i>Waste Reduction and Recycling</i> ; 12: <i>Required Landscape Plan for New Construction and Certain Additions to Residential Facilities</i> ; 13: <i>Landscape Requirements for Street Frontages</i> ; 15: <i>Landscape Maintenance (residential)</i> ; 17: <i>Landscape Requirements for Street Frontages</i> ; 18: <i>Landscape Maintenance (new commercial and manufacturing)</i> ; 46: <i>Tree Replacement Plantings</i> ; 55: <i>Erosion and Sedimentation Control Plan</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; and 83: <i>Creek Protection Plan</i>	Conservatively Significant and Unavoidable
Impact GHG-2: Adoption and development under the Specific Plan would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions (Criterion 2). (Less than Significant)	Standard Condition of Approval A: <i>Construction-Related Air Pollution Controls</i> ; F: <i>GHG Reduction Plan</i> ; 12: <i>Required Landscape Plan for New Construction and Certain Additions to Residential Facilities</i> ; 13: <i>Landscape Requirements for Street Frontages</i> ; 15: <i>Landscape Maintenance (residential)</i> ; 17: <i>Landscape Requirements for Street Frontages</i> ; 18: <i>Landscape Maintenance (new commercial and manufacturing)</i> ; 36: <i>Waste Reduction and Recycling</i> ; 41: <i>Asbestos Removal in Structures</i> ; 46: <i>Tree Replacement Plantings</i> ; 55: <i>Erosion and Sedimentation Control Plan</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; and 83: <i>Creek Protection Plan</i>	Less than Significant
Hazards and Hazardous Materials		
Impact HAZ-1: Adoption and development under the Specific Plan would result in an increase in the routine transportation, use, and storage of hazardous chemicals (Criteria 1 and 3). (Less than Significant)	Standard Condition of Approval 35: <i>Hazards Best Management Practices</i>	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Hazards and Hazardous Materials (cont.)		
Impact HAZ-2: Adoption and development under the Specific Plan would result in the accidental release of hazardous materials used during construction through improper handling or storage (Criterion 2). (Less than Significant)	Standard Condition of Approval 35: <i>Hazards Best Management Practices; 63: Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment; 64: Environmental Site Assessment Reports Remediation; and 67: Health and Safety Plan per Assessment</i>	Less than Significant
Impact HAZ-3: Adoption and development under the Specific Plan would result in the exposure of hazardous materials in soil and ground water (Criteria 2 and 5). (Less than Significant)	Standard Condition of Approval 68: <i>Best Management Practices for Soil and Groundwater Hazards; and 69: Radon or Vapor Intrusion from Soil or Groundwater Sources</i>	Less than Significant
Impact HAZ-4: Adoption and development under the Specific Plan would result in the exposure of hazardous building materials during building demolition (Criterion 2). (Less than Significant)	Standard Condition of Approval 65: <i>Lead-base Paint Remediation; and 41: Asbestos Removal in Structures</i>	Less than Significant
Impact HAZ-5: Adoption and development under the Specific Plan would require use of hazardous materials within 0.25 mile of a school (Criterion 4). (Less than Significant)	Standard Condition of Approval 74: <i>Hazardous Materials Business Plan</i>	Less than Significant
Impact HAZ-6: Development under Specific Plan could result in fewer than two emergency access routes for streets exceeding 600 feet in length but would not physically interfere with an adopted emergency response plan or emergency evacuation plan (Criteria 6 and 9). (Less than Significant)	None Required	Less than Significant
Impact HAZ-7: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would result in cumulative hazards. (Less than Significant)	Standard Condition of Approval 66: <i>Other Materials Classified as Hazardous Waste; 74: Hazardous Materials Business Plan; and 61: Site Review by Fire Services Division</i>	Less than Significant
Hydrology and Water Quality		
Impact HYD-1: Adoption and development under the Specific Plan would alter drainage patterns and increase the volume of stormwater, or the level of contamination or siltation in stormwater flowing from the Plan Area (Criteria 1 and 3 through 7). (Less than Significant)	Standard Condition of Approval 34 or 55: <i>Erosion and Sedimentation Control Plan; 75: Stormwater Pollution Prevention Plan; 78: Site Design Measures for Post-Construction Stormwater Management; 79: Source Control Measures to Limit Stormwater Pollution; 80: Post-construction Stormwater Pollution Management Plan; 81: Maintenance Agreement for Stormwater Treatment Measures; 82: Erosion, Sedimentation, and Debris Control Measures; 85: Creek Monitoring; 86: Creek Landscaping Plan; and 83: Creek Protection Plan</i>	Less than Significant
Impact HYD-2: Adoption and development under the Specific Plan could be susceptible to flooding hazards as a result of being placed in a 100-year flood zone as mapped by FEMA (Criteria 8 through 10). (Less than Significant)	Standard Condition of Approval 89: <i>Regulatory Permits and Authorizations; and 90: Structures within a Floodplain</i>	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Hydrology and Water Quality (cont.)		
Impact HYD-3: Adoption and development under the Specific Plan could be susceptible to flooding hazards in the event of dam or reservoir failure (Criterion 10). (Less than Significant)	None Required	Less than Significant
Impact HYD-4: Adoption and development under the Specific Plan could be susceptible to inundation in the event of sea-level rise (Criterion 10). (Less than Significant)	Standard Condition of Approval 84: <i>Regulatory Permits and Authorizations</i>	Less than Significant
Impact HYD-5: Adoption and development under the Specific Plan would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge (Criterion 2) (Less than Significant)	None Required	Less than Significant
Impact HYD-6: Adoption and development under the Specific Plan would not be susceptible to mudflow, seiche, and tsunami-related hazards (Criterion 11). (Less than Significant)	None Required	Less than Significant
Impact HYD-7: Adoption and development under the Specific Plan, combined with past, present, existing, approved, pending, and reasonably foreseeable future projects would not result in potentially significant cumulative impacts to hydrologic resources. (Less than Significant)	None Required	Less than Significant
Land Use, Plans and Policies		
Impact LU-1: Adoption and development under the Specific Plan would not result in the physical division of an existing community or conflict with adjacent or nearby land uses (Criteria 1 and 2). (Less than Significant)	None Required	Less than Significant
Impact LU-2: Adoption and development under the Specific Plan would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect (Criterion 3). (Less than Significant)	None Required	Less than Significant
Impact LU-3: Adoption and development under the Specific Plan would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan (Criterion 4). (Less than Significant)	None Required	Less than Significant
Impact LU-4: Development under the Specific Plan, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, does not reveal any significant adverse cumulative impacts in the area. (Less than Significant)	None Required	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Noise		
Impact NOI-1: Adoption and development under the Specific Plan would not result in substantial temporary or periodic increases in ambient noise levels in the Plan Area above existing levels without the Specific Plan and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Criteria 1, 2 and 8). (Less than Significant)	Standard Condition of Approval 28: <i>Days/Hours of Construction Operation; 29: Noise Control; 30: Noise Complaint Procedures; 39: Pile Driving and Other Extreme Noise Generators; and 57: Vibrations Adjacent to Historic Structures</i>	Less than Significant
Impact NOI-2: Adoption and development under the Specific Plan would not increase operational noise levels in the Plan Area to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 3). (Less than Significant)	Standard Condition of Approval 31: <i>Interior Noise</i> ; and 32: <i>Operational Noise (General)</i>	Less than Significant
Impact NOI-3: Adoption and development under the Specific Plan would not expose persons to exterior noise levels in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (Criterion 6). (Less than Significant)	Standard Condition of Approval 31: <i>Interior Noise</i>	Less than Significant
Impact NOI-4: Adoption and development under the Specific Plan would not expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities in the Plan Area to noise levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 5). (Less than Significant)	Standard Condition of Approval 31: <i>Interior Noise</i>	Less than Significant
Impact NOI-5: Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area (Criterion 4). (Significant and Unavoidable)	Mitigation: None Feasible. A reduction of 29 percent of the traffic volumes on 24th Street would be required to achieve a less-than-significant conclusion. Measures included in the TDM plan that would be required of Specific Plan development projects greater than 50 units or 50,000 square feet would reduce project trips by at most 20 percent (see Section 4.13, <i>Traffic and Circulation</i>). Consequently, no feasible mitigation measures are available that would reduce this exterior noise impact to a level that would be less than significant.	Significant and Unavoidable
Impact NOI-6: Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels (Criterion 4). (Significant and Unavoidable)	None Feasible	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Noise (cont.)		
Impact NOI-7: Stationary noise sources such as rooftop mechanical equipment and back-up generators in combination with traffic generated by adoption and development under the Specific Plan; and from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area; (Criterion 4). (Significant and Unavoidable)	None Feasible	Significant and Unavoidable
Population, Housing, and Employment		
Impact POP-1: Adoption and development under the Specific Plan could induce population growth, but not in a manner not anticipated in the General Plan (Criterion 1). (Less than Significant)	None Required	Less than Significant
Impact POP-2: Adoption and development under the Specific Plan could displace existing housing and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City's Housing Element (Criteria 2 and 3). (Less than Significant)	None Required	Less than Significant
Impact POP-3: Adoption and development under the Specific Plan individually and in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Less than Significant)	None Required	Less than Significant
Public Services, Parks and Recreation		
Impact PSR-1: Adoption and development under the Specific Plan could result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	None Required	Less than Significant
Impact PSR-2: Adoption and development under the Specific Plan could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	None Required	Less than Significant
Impact PSR-3: Adoption and development under the Specific Plan could result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	None Required	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Public Services, Parks and Recreation (cont.)		
Impact PSR-4: Adoption and development under the Specific Plan could increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities (Criteria 1 through 3). (Less than Significant)	None Required	Less than Significant
Impact PSR-5: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would not result in a cumulative increase in demand for police, fire, and school services. (Less than Significant)	None Required	Less than Significant
Impact PSR-6: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Specific Plan Area, would result in an increased demand for recreational facilities. (Less than Significant)	None Required	Less than Significant
Transportation and Circulation		
Impact TRANS-1: The development under the Specific Plan would degrade the <i>MacArthur Boulevard/Piedmont Avenue</i> intersection (Intersection #13) from LOS D to LOS E (Significant Threshold #1) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)	<p>Mitigation Measure TRANS-1: Implement the following measures at the MacArthur Boulevard/Piedmont Avenue intersection:</p> <ul style="list-style-type: none"> • Provide an additional through lane on the eastbound MacArthur Boulevard approach (currently temporarily closed for construction of Kaiser Hospital; expected to open in 2014 after completion of that construction). • Modify northbound approach from the current configuration which provides one right-turn lane and one shared through/left lane to provide one right-turn lane, one through lane, and one left-turn lane. • Upgrade intersection signal equipment, optimize signal timing at this intersection, and coordinate signal timing changes with the adjacent intersections that are in the same signal coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 55 percent of the Development Program is developed.</p>	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-1 (cont.)	<p>Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would operate at LOS D during the weekday AM and PM peak hours and LOS C during the Saturday peak hour. No secondary impacts would result from the implementation of this measure.</p>	
<p>Impact TRANS-2: The development under the Specific Plan would degrade the <i>Perry Place/I-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour under Existing Plus Project conditions. (Significant and Unavoidable)</p>	<p>Mitigation Measure TRANS-2: Implement the following measures at the Perry Place / I-580 Eastbound Ramps/Oakland Avenue intersection:</p> <ul style="list-style-type: none"> • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the PM peak hour • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any equipment or facility upgrades must be approved by Caltrans prior to installation. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division and Caltrans for review and approval:</p> <ul style="list-style-type: none"> • Plans, Specifications, and Estimates (PS&E) to modify intersection. All elements shall be designed to City and Caltrans standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for the elements listed below: <ul style="list-style-type: none"> - 2070L Type Controller with cabinet assembly - GPS communications (clock) - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile) - Countdown pedestrian head module switch out - City standard ADA wheelchair ramps - Video detection on existing (or new, if required) - Mast arm poles, full actuation (where applicable) - Polara push buttons (full actuation) 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-2 (cont.)	<ul style="list-style-type: none"> - Bicycle detection (full actuation) - Pull boxes - Signal interconnect and communication with trenching (where applicable), or through (E) conduit (where applicable) - 600 feet maximum - Conduit replacement contingency - Fiber Switch - PTZ Camera (where applicable) - Transit Signal Priority (TSP) equipment consistent with other signals along corridor • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 15 percent of the Development Program is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue improve to LOS E during the weekday PM peak hour and reduce the impact to a less than significant level. It is not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is considered significant and unavoidable. No secondary impacts would result from implementation of this measure.</p>	

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
<p>Impact TRANS-3: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)</p>	<p>Mitigation Measure TRANS-3: Implement the following measures at the Lake Park Avenue/Lakeshore Avenue intersection:</p> <ul style="list-style-type: none"> Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> Plans, Specifications, and Estimates (PS&E) to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 80 percent of the Development Program is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would improve to LOS D during the weekday PM peak hour and reduce the impact to a less than significant level. No secondary impacts would result from implementation of this measure.</p>	Less than Significant
<p>Impact TRANS-4: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)</p>	<p>Mitigation Measure TRANS-4: Implement the following measures at the 24th Street/ Broadway intersection.</p> <ul style="list-style-type: none"> Signalize the intersection providing actuated operations, with permitted left turns on all movements, Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. 	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-4 (cont.)	<ul style="list-style-type: none"> Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 75 percent of the Development Program in Subdistrict 1, 2, and 3 are developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.</p>	
Impact TRANS-5: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)	<p>Mitigation Measure TRANS-5: Implement the following measures at the 23rd Street/ Broadway intersection.</p> <ul style="list-style-type: none"> Signalize the intersection providing actuated operations, with permitted left turns on all movements, Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 65 percent of the Development Program in Subdistrict 1, 2, and 3 are developed. Investigation of the need</p>	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-5 (cont.)	<p>for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.</p>	
<p>Impact TRANS-6: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant and Unavoidable)</p>	<p>Mitigation Measure TRANS-6: This impact can be mitigated to less than significant level by signalizing the intersection. Signalizing the 23rd Street/Harrison Street intersection would also improve pedestrian and bicyclist access and circulation by providing a protected crossing of Harrison Street. However, the signalization may result in secondary impacts.</p> <p>This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations and pedestrian and bicycle circulation at the Grand Avenue/Harrison Street intersection (As shown in Table 4.13-24, Queuing Summary, later in this chapter, signalization of 23rd Street/Harrison Street intersection would result in queues on northbound Harrison Street at 23rd Street to spill back to Grand Avenue during the weekday PM peak hour).</p> <p>Thus, installing a signal at this intersection may not be desirable. Depending on the specific location, type, and amount of development that would have vehicular and pedestrian access at this intersection and timing of other mitigation measures in the area (such as Mitigation Measure TRANS-5 at the 23rd Street/Broadway intersection and Mitigation Measure TRANS-10 at the 27th Street/24th Street/Bay Place/Harrison Street intersection), other improvements, such as prohibiting turns at this intersection, may mitigate the impact without degrading overall access in the area.</p> <p>Specifically, to implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • A Traffic Study Report providing detailed analysis of signalizing the intersection and potential impacts on traffic operations and pedestrian and bicycle circulation at the Grand Avenue/Harrison Street intersection. The report shall study various design options such as turn prohibitions, various signal timing and phasing, signal cycle lengths, and signal coordination to determine the feasibility of signalizing the intersection. In addition to traffic operations, the report shall also address safety, access, and circulation for motorists, bicyclists, and pedestrians under different options explored. 	Conservatively Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-6 (cont.)	<p>If the Traffic Study Report recommends signalization of the study, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> - PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. - Signal timing plans for the signals in the coordination group. - Design plans for other intersection improvements, if recommended by the Traffic Study Report. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 85 percent of the Development Program in Subdistrict 2 is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>Depending on the specific improvements implemented under this measure, the intersection may improve to LOS A during both weekday PM and Saturday peak hours. Because the specific improvements to be implemented, according to City standards, must be finalized after a detailed intersection/signalization engineering design study is performed and a preferred, detailed design selected by the City and because the improvement may result in potential secondary impacts at Grand Avenue/Harrison Street intersection, this EIR conservatively identifies the impact as significant and unavoidable.</p>	
Impact TRANS-7: The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the <i>Perry Place/I-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) which would operate at LOS F during the weekday PM peak hour under 2020 conditions. (Significant and Unavoidable)	<p>Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the Perry Place/I-580 Eastbound Ramps/Oakland Avenue (Intersection #15) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on the Eastbound I-580 Off-Ramp, a third through lane on northbound Oakland Avenue, or a second lane on the Eastbound I-580 On-Ramp and conversion of the existing northbound through lane to a shared through/right-turn lane. However, these modifications cannot be accommodated within the existing automobile right-</p>	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-7 (cont.)	of-way and would require additional right-of-way, and/or loss of bicycle lanes, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.	
Impact TRANS-8: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17). (Significant and Unavoidable)	Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the Lake Park Avenue/Lakeshore Avenue (Intersection #17) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on eastbound Lake Park Avenue, or a third left-turn lane on northbound Lakeshore Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.	Significant and Unavoidable
Impact TRANS-9: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)	Mitigation Measure TRANS-9: Implement Mitigation Measure TRANS-4. After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.	Less than Significant
Impact TRANS-10: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours at the <i>27th Street/24th Street/Bay Place/Harrison Street</i> intersection (Intersection #37) under 2020 conditions. (Significant and Unavoidable)	Mitigation Measure TRANS-10: Implement the following measures at the 27th Street/24th Street/Bay Place/Harrison Street intersection: <ul style="list-style-type: none"> • Reconfigure the 24th Street approach at the intersection to restrict access to 24th Street to right turns only from 27th Street and create a pedestrian plaza at the intersection approach. • Convert 24th Street between Valdez and Harrison Streets to two-way circulation and allow right turns from 24th Street to southbound Harrison Street south of the intersection, which would require acquisition of private property in the southwest corner of the intersection. • Modify eastbound 27th Street approach from the current configuration (one right-turn lane, two through lanes, and one left-turn lane) to provide one right-turn lane, one through lane, and two left-turn lanes. • Realign pedestrian crosswalks to shorten pedestrian crossing distances. • Reduce signal cycle length from 160 to 120 seconds, and optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-10 (cont.)	<p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2020 Plus Project conditions indicates that mitigation at this intersection may be required by 2017. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would improve to LOS E during the weekday AM peak hour and LOS D during the Saturday peak hour and continue to operate at LOS F during the weekday PM peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour, it would not reduce the v/c ratio for critical movements to 0.05 or less. Therefore, the impact would remain significant and unavoidable.</p> <p>No other feasible mitigation measures are available that would mitigate the Project impacts at the 27th Street/24th Street/Bay Place/Harrison Street (Intersection #37) intersection. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a third lane on northbound or southbound Harrison Street, or a second through lane on eastbound 27th Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of existing bicycle lanes, medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.</p> <p>This mitigation measure would also reduce pedestrian delays at the intersection and improve pedestrian safety by realigning the crosswalks at the intersection and reducing pedestrian crossing distances. No other secondary impacts would result from implementation of this measure.</p>	

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-11: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)	Mitigation Measure TRANS-11: Implement Mitigation Measure TRANS-5. After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.	Less than Significant
Impact TRANS-12: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant and Unavoidable)	Mitigation Measure TRANS-12: Implement Mitigation Measure TRANS-6. After implementation of this measure, the intersection would improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour. This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations at the Grand Avenue/Harrison Street intersection. Because the improvement may result in potential secondary impacts, this EIR conservatively identifies the impact as significant and unavoidable.	Conservatively Significant and Unavoidable
Impact TRANS-13: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West <i>Grand Avenue/Northgate Avenue</i> intersection (Intersection #47) which would operate at LOS F during the PM peak hour in 2020. (Significant and Unavoidable)	Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the West Grand Avenue/Northgate Avenue intersection (Intersection #47). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on westbound Grand Avenue or a second left-turn lane on eastbound Grand Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians, bicycle lanes, and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.	Significant and Unavoidable.
Impact TRANS-14: The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM and Saturday peak hours at the <i>51st Street/Pleasant Valley Avenue/Broadway</i> intersection (Intersection #7) under 2035 conditions. (Significant and Unavoidable)	Mitigation Measure TRANS-14: Implement the following measures at the 51st Street / Pleasanton Valley Avenue/Broadway intersection: <ul style="list-style-type: none"> • Modify southbound approach to provide two left-turn lanes, one through lane, and one shared through/right lane. • Modify northbound approach to provide one left-turn lane, one through lane, and one shared through/right lane. • Upgrade signal equipment to replace the existing split phasing in the north/south direction with protected left turns. • Eliminate the existing northbound and southbound slip right-turn lanes and "pork chop" islands. • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-14 (cont.)	<p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2031. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM and Saturday peak hours. The mitigation measure would not reduce the increase in v/c ratio for a critical movement to 0.05 or less.</p> <p>No other feasible mitigation measures are available that would mitigate the Project impacts at the 51st Street/Pleasanton Valley Avenue/Broadway intersection (Intersection #7). Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a second left-turn lane on either the westbound Pleasant Valley Avenue or the eastbound 51st Street, or a third lane on northbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking, and are considered to be infeasible.</p> <p>In addition, introduction of an additional vehicle lane would increase the pedestrian crossing distance and would require increasing the signal cycle length to accommodate the increased pedestrian crossing distance, which would conflict with City policy concerning pedestrian safety and comfort. Therefore, the impact is considered significant and unavoidable. No other secondary impacts would result from implementation of this measure.</p>	

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
<p>Impact TRANS-15: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour at the <i>40th Street/Telegraph Avenue</i> intersection (Intersection #8) under 2035 conditions. (Significant)</p>	<p>Mitigation Measure TRANS-15: Implement the following measures at the 40th Street / Telegraph Avenue intersection:</p> <ul style="list-style-type: none"> • Provide permitted-protected operations on the eastbound and westbound approaches • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> • PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. • Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2034. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. However, the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour to less than 2035 No Project conditions and the increase in v/c ratio for a critical movement to 0.03 or less. No secondary impacts would result from implementation of this measure.</p>	Less than Significant
<p>Impact TRANS-16: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the <i>West MacArthur Boulevard/Telegraph Avenue</i> intersection (Intersection #11) under 2035 conditions. (Significant)</p>	<p>Mitigation Measure TRANS-16: Implement the following measures at the West MacArthur Boulevard/Telegraph Avenue intersection:</p> <ul style="list-style-type: none"> • Provide protected left-turn phase(s) for the northbound and southbound approaches. • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). 	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-16 (cont.)	<ul style="list-style-type: none"> Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2030. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. However, the mitigation measure would reduce the total intersection v/c ratio to less than under 2035 No Project conditions and the increase in v/c ratio for a critical movement to 0.03 or less. No secondary impacts would result from implementation of this measure.</p>	
Impact TRANS-17: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the <i>Perry Place/I-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) under 2035 conditions. (Significant and Unavoidable)	<p>Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the Perry Place/I-580 Eastbound Ramps/Oakland Avenue (Intersection #15) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on the Eastbound I-580 Off-Ramp, a third through lane on northbound Oakland Avenue, or a second lane on the Eastbound I-580 On-Ramp and conversion of the existing northbound through lane to a shared through/right-turn lane. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.</p>	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-18: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more (Significant Threshold #5) at an intersection operating at LOS F during the Saturday peak hour at the <i>Grand Avenue/Lake Park Avenue/Santa Clara Avenue</i> intersection (Intersection #16) under 2035 conditions. (Significant and Unavoidable)	Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the Grand Avenue/Lake Park Avenue/Santa Clara Avenue intersection (Intersection #16). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Grand Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of on-street parking sidewalks, and/or bulbouts, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable. Therefore, the impact would remain significant and unavoidable.	Significant and Unavoidable
Impact TRANS-19: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions. (Significant and Unavoidable)	Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the Lake Park Avenue/Lakeshore Avenue (Intersection #17) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on eastbound Lake Park Avenue, or a third left-turn lane on northbound Lakeshore Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.	Significant and Unavoidable
Impact TRANS-20: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the <i>Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway</i> intersection (Intersections #20 and #21) under 2035 conditions. (Significant and Unavoidable)	No feasible mitigation measures are available that would mitigate the Project impacts at the Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway intersection (Intersections #20 and #21). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians, and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.	Significant and Unavoidable
Impact TRANS-21: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the <i>27th Street/Telegraph Avenue</i> intersection (Intersection #29) which would operate at LOS F during the weekday PM peak hour under 2035 conditions. (Significant and Unavoidable)	Mitigation Measure TRANS-21: Implement the following measures at the 27th Street/ Telegraph Avenue intersection: <ul style="list-style-type: none"> • Provide protected left-turn phases for the northbound and southbound approaches. • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-21 (cont.)	<ul style="list-style-type: none"> Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. <p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2029. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour, it would not reduce the increase in v/c ratio for critical movements to 0.05 or less. Therefore, the impact would remain significant and unavoidable.</p>	
Impact TRANS-22: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour and at the <i>27th Street/Broadway</i> intersection (Intersection #30) under 2035 conditions. (Significant and Unavoidable)	<p>Mitigation Measure TRANS-22: Implement the following measures at the 27th Street / Broadway intersection:</p> <ul style="list-style-type: none"> Upgrade traffic signal operations at the intersection to actuated-coordinated operations Reconfigure westbound 27th Street approach to provide a 150-foot left-turn pocket, one through lane, and one shared through/right-turn lane. Provide protected left-turn phase(s) for the northbound and southbound approaches. Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-22 (cont.)	<p>To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:</p> <ul style="list-style-type: none"> PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. <p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2024. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians, and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable. No other secondary impacts would result from implementation of this measure.</p>	
Impact TRANS-23: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)	<p>Mitigation Measure TRANS-23: Implement Mitigation Measure TRANS-4.</p> <p>After implementation of this measure, the intersection would improve to LOS B during both the weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.</p>	Less than Significant
Impact TRANS-24: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the Saturday peak hour at the <i>27th Street/24th Street/Bay Place/Harrison Street</i> intersection (Intersection #37) under 2035 conditions. (Significant and Unavoidable)	<p>Mitigation Measure TRANS-24: Implement Mitigation Measure TRANS-10.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the AM and PM peak hours and improve to LOS D during the Saturday peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday AM and PM peak hours, it would not reduce the v/c ratio for critical movements to 0.02 or less. Therefore, the impact would remain significant and unavoidable.</p>	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-25: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)	Mitigation Measure TRANS-25: Implement Mitigation Measure TRANS-5. After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.	Less than Significant
Impact TRANS-26: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant and Unavoidable)	Mitigation Measure TRANS-26: Implement Mitigation Measure TRANS-6. After implementation of this measure, the intersection would improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour. This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations at the Grand Avenue/Harrison Street intersection. Because the improvement may result in potential secondary impacts, this EIR conservatively identifies the impact as significant and unavoidable.	Conservatively Significant and Unavoidable
Impact TRANS-27: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West <i>Grand Avenue/Northgate Avenue</i> intersection (Intersection #47) which would operate at LOS F during the weekday PM peak hour in 2035. (Significant and Unavoidable)	Mitigation: None feasible. No feasible mitigation measures are available that would mitigate the Project impacts at the West Grand Avenue/Northgate Avenue intersection (Intersection #47). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on westbound Grand Avenue or a second left-turn lane on eastbound Grand Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians, bicycle lanes, and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.	Significant and Unavoidable
Impact TRANS-28: The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the <i>Grand Avenue/Broadway</i> intersection (Intersection #49) in 2035. (Significant and Unavoidable)	Mitigation Measure TRANS-28: Implement the following measures at the Grand Avenue/ Broadway intersection: <ul style="list-style-type: none"> • Provide permitted-protected left-turn phasing for the northbound and southbound approaches. • Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection). • Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. To implement this measure, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval: <ul style="list-style-type: none"> • PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group. 	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-28 (cont.)	<p>The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.</p> <p>A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2031. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.</p> <p>After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Therefore, the impact would remain significant and unavoidable.</p> <p>Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as an exclusive left-turn lane on westbound Grand Avenue or an additional through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of on-street parking, and are considered to be infeasible. No other secondary impacts would result from implementation of this measure.</p>	
<p>Impact TRANS-29: The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments:</p> <ul style="list-style-type: none"> MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035. Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035. Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035. Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035. 	<p>Mitigation Measure TRANS-29: Implement Mitigation Measures TRANS-1, TRANS-10, TRANS-13, TRANS-14, TRANS-15, TRANS-16, TRANS-20, TRANS 22, TRANS-24, TRANS-27, and TRANS-2830.</p> <p>Traffic operations along the adversely affected roadway segments would improve, but would continue to operate at LOS F after implementation of the mitigation measures.</p> <p>In addition, as previously described, the Broadway Valdez Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of this impact. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.</p>	Significant and Unavoidable

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Transportation and Circulation (cont.)		
Impact TRANS-29 (cont.) <ul style="list-style-type: none"> San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035. Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035. (Significant and Unavoidable) 	No other feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected roadway segments. The LOS at these roadway segments can be improved by providing additional automobile travel lanes on the affected roadway segments. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking or narrowing of existing sidewalks, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.	
Utilities and Service Systems		
Impact UTIL-1: The water demand generated by adoption and development under the Specific Plan would not exceed water supplies available from existing entitlements and resources (Criterion 3). (Less than Significant)	None Required	Less than Significant
Impact UTIL-2: Adoption and development under the Specific Plan would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required (Criteria 1 and 4). (Less than Significant)	Standard Condition of Approval 91: <i>Stormwater and Sewer</i>	Less than Significant
Impact UTIL-3: Adoption and development under the Specific Plan would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Criteria 2). (Less than Significant)	Standard Condition of Approval 91: <i>Stormwater and Sewer</i> ; 80: <i>Post-construction Stormwater Pollution Prevention Plan</i> ; and 75: <i>Stormwater Pollution Prevention Plan</i>	Less than Significant
Impact UTIL-4: Adoption and development under the Specific Plan would not violate applicable federal, state, and local statutes and regulations related to solid waste; nor generate solid waste that would exceed the permitted capacity of the landfills serving the area (Criteria 5 and 6). (Less than Significant)	Standard Condition of Approval 36: <i>Waste Reduction and Recycling</i>	Less than Significant
Impact UTIL-5: Adoption and development under the Specific Plan would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities (Criteria 7 and 8). (Less than Significant)	Standard Condition of Approval H: <i>Green Building for Residential Structures and Non-residential Structures</i> ; and I: <i>Green Building for Building and Landscape Projects</i> ;	Less than Significant

TABLE 2-1 (Continued)
SUMMARY OF IMPACTS, MITIGATION MEASURES, STANDARD CONDITIONS OF APPROVAL AND RESIDUAL EFFECTS

Environmental Impact	Standard Conditions of Approval and Mitigation Measures	Level of Significance after application of Mitigation
Utilities and Service Systems (cont.)		
Impact UTIL-6: Adoption and development under the Specific Plan in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would result in an increased demand for utilities services. (Less than Significant)	Standard Condition of Approval 36: <i>Waste Reduction and Recycling</i> ; 91: <i>Stormwater and Sewer</i> ; 75: <i>Stormwater Pollution Prevention Plan</i> ; and 80: <i>Post-construction Stormwater Pollution Prevention Plan</i>	Less than Significant

CHAPTER 3

Project Description

This chapter includes a detailed description of the proposed Broadway Valdez District Specific Plan (“Specific Plan” or “Plan”). Specifically, this chapter summarizes the existing characteristics of the Broadway Valdez District Specific Plan Area (“Plan Area”), and details the objectives and key characteristics of the Plan and approvals required to implement it. The information presented in this chapter is largely extracted or summarized from the Specific Plan and focuses on aspects directly pertinent to the potential environmental effects of the implementing the Plan.

3.1 Introduction

The Specific Plan provides a vision and planning framework for future growth and development in the approximately 95.5-acre area along Oakland’s Broadway corridor between Grand Avenue and Interstate 580 (I-580) (see **Figure 3-1**). The Specific Plan has been developed through a careful analysis of the Plan Area’s economic and environmental conditions and input from City decision-makers, landowners, developers, real estate experts, business owners, residents, and the community at large. The Plan provides a comprehensive vision for the Plan Area along with goals, policies and development regulations to guide the Plan Area’s future development and serves as the mechanism for insuring that future development is coordinated and occurs in an orderly and well-planned manner.

As discussed in Chapter 1, *Introduction*, for the purposes of environmental review, the project analyzed in this EIR is the Broadway Valdez Development Program, which sets forth a maximum allowable development that would occur within the Plan Area during the life of the Plan. While this chapter describes the entire realm of possibilities envisioned by the Specific Plan, the EIR is intended to only cover a maximum allowable amount of projected development that can reasonably be expected to occur in the Plan Area over the 25-year planning period. Once this level of development is reached, additional projects that go beyond the development maximum established in this EIR would be required to undertake additional environmental review, as detailed in Section 3.8, below.



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-1
Plan Area Location Map

3.2 Specific Plan Objectives

The Specific Plan seeks to articulate and implement a long-range vision for the Plan Area by establishing a broad set of goals and policies that address all aspects of the Broadway Valdez District's life, including its physical, functional, social, and economic character. The Vision Statement for the Broadway Valdez District Plan Area expresses the desired outcome from implementation of this Specific Plan.

The Broadway Valdez District will be a new, re-imagined 21st Century neighborhood. A “complete” neighborhood that supports socially- and economically-sustainable mixed use development; increases the generation and capture of local sales tax revenue; celebrates the cultural and architectural influences of the neighborhood's past and present-day prosperity; and implements a “green,” “transit-first” strategy that reduces greenhouse gas emissions and the use of non-renewable resources.

Key Plan goals include:

- An attractive, regional destination for retailers, shoppers, employers and visitors that serves in part the region's shopping needs and captures sales tax revenue for reinvestment in Oakland.
- A “complete” mixed-use neighborhood that is economically and socially sustainable—providing quality jobs, diverse housing opportunities, and a complementary mix of retail, dining, entertainment, and medical uses.
- New uses and development that enhance the Plan Area's social and economic vitality by building upon the area's existing strengths and successes, and revitalizing and redeveloping underutilized, outdated, and/or nuisance uses or properties.
- A compact neighborhood that is well-served by an enhanced and efficient transit system.
- Creative reuse of historic buildings that maintains a link to the area's social, cultural and commercial heritage while accommodating contemporary uses that further City objectives to establish a vibrant and visually distinctive retail and mixed use district.
- A well-designed neighborhood that integrates high quality design of the public and private realms to establish a socially and economically vibrant; and visually and aesthetically distinctive identity for the Broadway Valdez District.
- Quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that supports increased pedestrian activity.
- A balanced and complete circulation network of “complete streets” that accommodates the internal and external transportation needs of the Plan Area by promoting walking, biking, and transit while continuing to serve automobile traffic.
- Carefully managed parking that addresses retail needs while not undermining walking, bicycling and public transit as preferred modes of transportation.
- A multi-pronged approach to sustainability that integrates land use, mobility, and design strategies to minimize environmental impact, reduce resource consumption, and prolong economic and social cohesiveness and viability.

- A coordinated implementation strategy that ensures consistent and on-going City support for the Specific Plan vision for the area.

3.3 Location and Setting

3.3.1 Local Setting

The Broadway Valdez District Plan Area is located at the north edge of Oakland's Central Business District (see Figure 3-1). The Plan Area, which includes land along both sides of Broadway, extends 0.8 miles from Grand Avenue to I-580. The Plan Area serves as an important transition between the Downtown and the Upper Broadway area, and a critical link in Oakland's Main Street, which extends from Jack London Square (at the Estuary) to the Oakland Hills.

The Plan Area is bounded by the Uptown District and Lake Merritt/Kaiser Center Office District to the south, and the Kaiser Permanente Oakland Medical Center to the north. Pill Hill, which includes the Alta Bates Summit Medical Center, and the Koreatown/Northgate neighborhood to the northwest, and the 25th Street Garage District border the area to the west, and the Richmond Avenue, Harrison/Oakland Avenue, and Adams Point residential neighborhoods occupy the hilly terrain to the east of the area. These surrounding neighborhoods are discussed further below.

Regional freeway access to the Plan Area is provided by Interstates 580 and 980, and State Route 24. BART provides regional transit service to the area, with the 19th Street BART station located about 0.3 miles south of the Plan Area, and the MacArthur BART station approximately 0.75 miles to the northwest. In addition to BART, there is also frequent AC Transit bus service along Broadway.

Altogether, the Plan Area includes approximately 95.5 acres, including 35.1 acres in public right-of-way and 60.4 acres of developable land. The Plan Area itself has a relatively small residential population (fewer than 600 households) due to its predominantly commercial focus. There are approximately 4,020 households and approximately 7,530 people residing in the larger area of just under one square mile bounded by Grand Avenue, Harrison Street, I-580 and I-980.

3.3.2 Surrounding Neighborhoods

The Broadway Valdez District Plan Area is surrounded by the following neighborhoods, whose land use and development patterns, while different from each other and from the Plan Area, have an influence on those within the Plan Area.

Lake Merritt/Kaiser Center Office District. This district extends south of Grand Avenue between Broadway and Lake Merritt and is a major employment center with additional office developments planned and approved on the Kaiser Center properties on Webster between 20th and 21st Streets.

Uptown Entertainment District. This district is located southwest of the Plan Area. It is anchored by the Downtown's two historic theaters - the Paramount and the recently restored

Fox – which are surrounded by restaurants, cafés, and bars. This district also contains several large residential developments, including the Forest City Uptown development, Broadway-West Grand, and 100 Grand, all in the vicinity of Broadway and Grand Avenue.

Art Murmur Gallery District (25th Street Garage District). This district lies just west of the southern part of the Plan Area and has the distinctive architectural character of historic garages throughout this district which now house a number of galleries and cultural venues that form the Oakland Art Murmur (OAM). OAM includes monthly art walks and stroll events that attract hundreds of people from around the Bay.

Medical Centers. As mentioned above, the Alta Bates Summit Medical Center is located in the area known as “Pill Hill” to the northwest of the Plan Area. The 20-acre campus includes a hospital, outpatient services, and related medical uses and facilities, as well as a nursing college. Additional medical offices and related uses are located surrounding Pill Hill, including some within the Plan Area. Kaiser Permanente Oakland Medical Center is located just north of the Plan Area, on the other side of I-580.

Residential Neighborhoods. The Plan Area is surrounded by residential neighborhoods to the east, west, and north. Housing in these neighborhoods is primarily in apartment buildings with five or more units with a mix of lower-density, single family homes, duplexes, and three/four-plexes. Senior housing developments in the surrounding area include two high-rise complexes: Westlake Christian Terrace at Valdez and 28th and St. Paul’s Towers on Bay Place southeast of the Plan Area. The Harri-Oak (Harrison and Oakland Avenue) and Adams Point neighborhoods on the hills just east of the Plan Area consist of a mix of houses and apartments. West of the Plan Area, the mixed-use Koreatown/Northgate neighborhood along Telegraph Avenue is separated from the Plan Area by the medical uses on Pill Hill. The residential neighborhoods north of the Plan Area are separated from it by I-580, Mosswood Park, and Kaiser Permanente Oakland Medical Center.

3.3.3 Existing Conditions

This section summarizes the land use and development conditions in the Plan Area to establish a general setting against which to describe the proposed Specific Plan. More detailed description and illustrations of existing conditions are provided in the relevant environmental analysis sections in Chapter 4 of this Draft EIR.

3.3.3.1 Existing General Plan and Zoning Designations

Most of the Plan Area falls within the *Community Commercial* General Plan land use designation (see Figure 3-3 introduced below in section 3.4.5). As described in the Land Use and Transportation Element of the City’s General Plan, the *Community Commercial* land use designation is intended to identify, create, maintain, and enhance areas suitable for a wide variety of commercial and institutional operations along the City’s major corridors and in shopping districts or centers. Smaller portions of the Plan Area also fall within *Institutional*, *Urban Residential* and *Neighborhood Center Mixed Use* land use designations.

Surrounding the Plan Area are areas designated by the General Plan as *Central Business District* to the south, *Mixed Housing Type Residential* to the east, *Community Commercial* to the west, and *Institutional* to north and northwest.

Various zoning classifications exist throughout and surrounding the Plan Area, with commercial zoning being most predominant, combined with special and combining districts related to the Broadway retail frontage, medical uses, and medium to higher density residential.

Further relevant aspects of the existing General Plan, Zoning Ordinance, and other applicable land use regulations, are discussed in detail in Section 4.9, *Land Use, Plans and Policies*.

3.3.3.2 Existing Land Uses

Commercial Uses. Consistent with its historic identity as Auto Row, the predominant land uses in the area continue to be automotive. These uses occupy nearly half the developable area, and are distributed throughout the Plan Area. At the end of 2012 there were several dealerships on Auto Row offering various brands of new and used cars, as well as other auto-related uses, such as auto repair facilities, car rental businesses, and auto parts stores both as part of larger dealerships and as smaller, independent operations. Non-automotive commercial uses are the next most prevalent in the area and are clustered along Broadway, with the uses being most diverse in the southern half of the Plan Area, closest to Downtown. The automotive and non-automotive commercial uses account for 67 percent of the of the Plan Area that does not consist of public right-of-way.

Housing. Housing occupies about 14 percent of the developable area and is generally located along the Plan Area's southern and eastern edges. Older single-family and small multi-family buildings that were constructed prior to World War II are clustered on the area's east side. Two recently developed high-rise residential buildings supply the majority of the area's housing units: the 12-story Valdez Plaza on 28th Street east of Broadway provides 150 senior housing units, and the 21-story 100 Grand development on Grand Avenue provides 238 units.

Medical Uses. Medical uses, which consist primarily of office space, represent a small (3.5 percent of developable area) but important complement of uses for the area. These uses are generally located along Webster Street in proximity to the Alta Bates Summit Medical Center. The largest of these is the 12-story Broadway Medical Plaza building at Webster and Hawthorne streets and the 15-story office building at Grand Avenue and Broadway. The rest are generally small professional offices located in former residential buildings. Non-medical office uses in the Plan Area are extremely limited.

Parking. Parking, not including private parking structures attached to specific developments (e.g., the YMCA and the Broadway Medical Plaza) or the surface lots used by auto dealers as display/storage areas, is the fourth most prevalent land use in the area, occupying 11 percent of the developable land. This includes primarily surface parking lots, but also includes the free-standing parking garage at Waverly and 23rd Street.

Institutions. Two important institutional uses in the Plan Area that serve as landmarks and destinations are the historic First Presbyterian Church at Broadway and 27th and the YMCA at Broadway and 24th.

Parks and Open Spaces. There is no designated parkland in the Plan Area. The only public open space consists of two plazas along Broadway – one at 25th Street and one at 27th Street. These plazas were created as part of a redevelopment effort in the 1990s to enhance the image of Broadway’s Auto Row by investing in new streetscape amenities. The intent was to create spaces that could be jointly used by adjacent automobile dealers to display their vehicles and by the public. In spite of the new lighting, decorative paving, and public art, the plazas receive very little public use.

Nearby parks and open spaces also serve resident, employee and visitor populations of the Plan Area. These include Mosswood Park, located directly north of the Plan Area, and parks surrounding Lake Merritt, southeast of the Plan Area. Although not located within the Plan Area, and not designated parkland, Glen Echo Creek, which flows parallel to the Plan Area’s eastern boundary and south into Lake Merritt, provides a linear open space accessible to the northern portion of the Plan Area. Oak Glen Park extends along the banks of the creek a block east of Piedmont Avenue, providing 2.79 acres of shaded parkland.

3.3.3.3 Existing Heights and Development Pattern

Topographically, the Plan Area is situated in a shallow valley that slopes down from north to south and is framed by ridges—Pill Hill to the west and the Harri-Oak neighborhood to the east. The effect is to create a subtle definition of the area and an orientation toward Downtown and Lake Merritt. Broadway, which extends the length of the area, bisects the grid of streets on a diagonal, which creates an irregular block pattern—a series of shallow triangular and trapezoidal blocks.

With a few exceptions, the height of existing buildings in the Plan Area is generally low, consistent with the low intensity uses that have historically occupied the area. Most buildings are between one and four stories, although the Plan Area also includes a few taller buildings of six to eight stories. A 15-story building is located on the corner of Grand Avenue and Harrison Street and a 22-story tower is located on the corner of Grand Avenue and Webster Street.

3.3.3.4 Existing Historic Resources

There are 20 buildings in the Plan Area that are considered historic resources for purposes of CEQA. They are summarized in **Table 3-1** below, and described in detail in Section 4.4, *Cultural Resources*.

In addition to individual resources, the City has identified the 25th Street Garage District, of which two buildings are within the Plan Area, as an Area of Primary Importance (API). This district is considered a National Register quality district and therefore is considered an historic resource under CEQA.

**TABLE 3-1
SUMMARY TABLE OF CEQA HISTORIC RESOURCES WITHIN PLAN AREA**

Street Address		Year Built	Historic Name/Current Name	OCHS Rating/Survey Type
2355	Broadway	1913-14	Packard & Maxwell Don Lee Western Auto Bldg / Packard Lofts	B+1+, Study List, API contributor / Intensive Survey
2401	Broadway	1913-14	Pacific Kissel Kar salesroom and garage/ Oakland Mitsubishi	Eb-1*, API contingency contributor (restoration potential)/ Intensive Survey
2601-19	Broadway	1913-14	First Presbyterian Church/same	A3, Study List/ Intensive Survey
2740	Broadway	1929	Pacific Nash Co. auto sales and garage/Volkswagen of Oakland	Cb+2+, proposed B rating in 2009 Survey/ Intensive Survey
2801-25	Broadway	1916	Arnstein-Field & Lee Star showroom/none	Cb+2+, proposed B rating in 2009 Survey/Intensive Survey
2863-69	Broadway	1892	Scherman building/none	B-2+/Intensive Survey
2946-64	Broadway	1930	Firestone Tire & Rubber service station/Mercedes Benz of Oakland	B-2+ /Intensive Survey
3074	Broadway	1917	Grandjean Burman GM Co-Alzina garage / Window Tinting Plus	B-2+/Intensive Survey
3330-60	Broadway	1917	Eisenback (Leo)-Strough (Val) showroom/Honda of Oakland	B*2+/Intensive Survey
3093	Broadway	1947	Connell GMC Pontiac Cadillac/Bay City Chevrolet	Cb+2+, proposed B-rating in 2009 Survey/Intensive Survey
2332	Harrison St	1925-26	YWCA Blue Triangle Club/Lake Merritt Lodge	A3/Intensive Survey
2333	Harrison St	1915-18	Seventh Church of Christ, Scientist/ unoccupied	A3/Intensive Survey
2346	Valdez St	1909-10	Newsom Apartments/same	B+2+/Intensive Survey
2735	Webster St	1924	Howard Automobile-Dahl Chevrolet showroom /Infiniti of Oakland	Cb+2+, proposed B-rating in 2009 Survey/Intensive Survey
315	27th St	1964	Biff's II Coffee Shop/JJ's - /unoccupied	*b+3, Heritage Property, determined eligible for Landmark status on 1/13/97 / Intensive Survey
2335	Broadway	1920	Dinsmore Brothers Auto Accessories Building/Unoccupied	Eb+3. Heavily altered but with rehabilitation potential. Designed by renowned California architect Julia Morgan / Intensive Survey
2343	Broadway	1924-25	Kiel (Arthur) auto showroom/Unoccupied	Ec3. Heavily altered but with rehabilitation potential / Intensive Survey
2345	Broadway	1920	J.E. French Dodge showroom/ Unoccupied	Eb-3. Heavily altered but with rehabilitation potential / Intensive Survey
2366-2398	Valley Street	1936	Art Deco warehouse/none	Cb-2+. Rehabilitation potential / Intensive Survey
440-448	23rd Street	1919	Elliot (C.T.) Shop-Valley Auto Garage/ Unoccupied	Cb+2+. Rehabilitation potential / Intensive Survey

There are also four areas within the Plan Area that the City has identified as Areas of Secondary Importance (ASIs) because they contain a group of older buildings that, while not considered eligible for the National Register either individually or as a group, may have local importance that is worthy of recognition. The four ASI's are listed below and described in detail in Section 4.4, *Cultural Resources*:

- Broadway Auto Row District
- Waverly Street Residential District
- Richmond Avenue District
- Richmond Boulevard District

3.4 Specific Plan Characteristics

3.4.1 Vision and Overview

The Vision Statement for the Broadway Valdez District Plan Area expresses the desired outcome from implementation of this Specific Plan.

The Broadway Valdez District will be a new, re-imagined 21st Century neighborhood. A “complete” neighborhood that supports socially- and economically-sustainable mixed use development; increases the generation and capture of local sales tax revenue; celebrates the cultural and architectural influences of the neighborhood’s past and present-day prosperity; and implements a “green,” “transit-first” strategy that reduces greenhouse gas emissions and the use of non-renewable resources.

The overarching goal of the Specific Plan is to create a destination retail district that addresses the City’s deficiency in comparison goods shopping and to transition the Plan Area to a more sustainable mix of uses that contribute to the vitality, livability, and identity of Downtown Oakland, and address residents’ shopping needs. In contrast to current land use pattern, the Specific Plan prioritizes the development of retail uses throughout the Plan Area, and particularly along the designated commercial corridors. Adoption of and development under the Plan would ultimately transform the Plan Area’s auto-orientated character into a more pedestrian-oriented mixed-use neighborhood that encourages alternate modes of transportation and around-the-clock activity with people present day and night, and on weekdays and weekends.

By focusing retail, entertainment, services, residences, and employment within convenient walking distance of each other and of transit, and thus eliminating the need for many of the daily vehicle trips that are necessary when these uses are dispersed, mixed-use development under the Plan would support the creation of a pedestrian-oriented district. The intent is for future Plan Area residents to be able to walk from homes and jobs to nearby businesses for dining, shopping, services, and entertainment, and for those who visit or commute to the Plan Area to be able to commute by transit or, if they drive, to park once and then walk to most or all of their destinations. The intent is also to leverage the existing surrounding districts and land uses to attract people to the Plan Area.

3.4.2 Subarea Land Use Concepts

The Specific Plan divides the Plan Area into two distinct but interconnected subareas: the **Valdez Triangle** and the **North End** (see **Figure 3-2**). Each of these subareas is proposed to have a different land use focus that responds to specific site conditions and development contexts in order to create and reinforce distinct neighborhood identities and provide variety to development along this section of Broadway. Each is described in detail below. The Broadway Valdez Development Program, which represents the reasonably feasible maximum development within these subareas, is described in Section 3.5, below.

3.4.2.1 Valdez Triangle Subarea

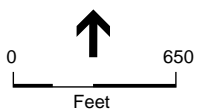
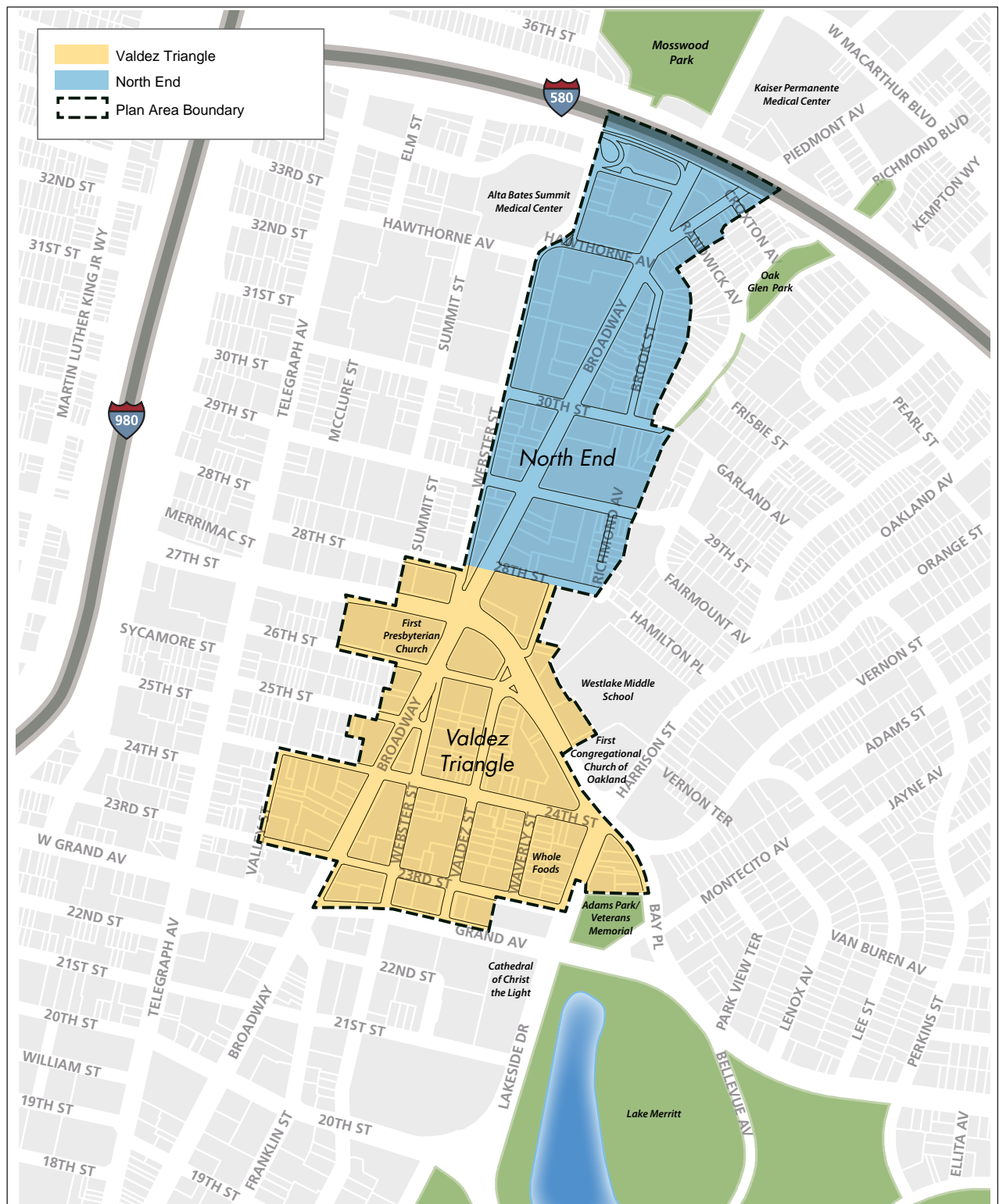
The Specific Plan would promote the development of a destination retail district within the Valdez Triangle that is focused on comparison goods type retailers and takes advantage of its adjacency to the Uptown and “Art Murrer Gallery Districts,” and its accessibility to transit and regional routes. The Specific Plan would also encourage development of a complementary mix of retail, entertainment, office, and residential uses within the Valdez Triangle. The Valdez Triangle is envisioned as an extension of the Downtown, and to support this concept, the Specific Plan would amend the General Plan boundaries for the *Central Business District* land use designation to extend north to 27th Street and incorporate the Valdez Triangle. General Plan and zoning designations for the Valdez Triangle would support mixed-use development and provide flexibility in development type and configuration.

In terms of the Valdez Triangle’s identity and presence, the Specific Plan aims to develop a pedestrian-oriented environment by encouraging active street-fronting retail, complementary dining and entertainment on the ground level, and safe public spaces. The Valdez Triangle has a significant number of historic buildings that contribute to the Plan Area’s character. The Plan would encourage the integration of new buildings with renovated and repurposed historic buildings with the goal of maintaining the authentic local character.

The Specific Plan places restrictions on residential activities in limited areas of the Valdez Triangle, called Retail Priority Sites, with residential activities being used as an incentive for development of retail uses, providing larger format retail space that is suitable for comparison goods retail would be required and the larger the amount of retail provided the higher the density of residential activity that will be allowed (see Section 3.4.7, *Retail Priority Sites*, below).

3.4.2.2 North End Subarea

The Specific Plan envisions the North End subarea as an attractive, mixed-use district that would link the Downtown to the Piedmont Avenue and North Broadway areas, and be integrated with the adjoining residential and medical districts. As in the Valdez Triangle, the concept for the North End is to promote mixed use development with active ground-floor commercial uses, while also encouraging a complementary mix of office, residential, retail, dining, and entertainment uses that activate the area during both day and night and on weekdays and weekends. The Specific Plan policies for the North End would encourage development of a compatible mix of



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-2
Subarea Map

commercial services to complement the regional retail envisioned for the Valdez Triangle and address the needs of adjoining and nearby neighborhoods, with less emphasis on comparison goods type retail and the creation of a regional destination.

In the North End, the Specific Plan would promote uses that complement and support the adjoining Alta Bates Summit and Kaiser Permanente medical centers, including professional and medical office uses, medical supplies outlets, and visitor and workforce housing. New automobile dealerships would be permitted with a Conditional Use Permit.

The North End, like the Valdez Triangle, has a significant number of historic buildings that contribute to the Plan Area's character. The Plan would encourage the renovation and repurposing of many of the historic garages and auto showroom buildings along this stretch of Broadway while at the same time integrating new buildings that can accommodate the transition to new uses.

The North End contains three underutilized properties that serve as Large Opportunity Sites for major new development because of their relatively large size and the prevalence of surface parking lots on each (Large Opportunity Sites are depicted in Figure 3-9 introduced below in section 3.4.7). Each has the potential to accommodate large developments that can significantly enhance the character of the subarea. The Specific Plan would permit the development of large-format retail on these sites; however, more emphasis would be placed on introducing mixed use development that includes retail, commercial, and residential uses.

In terms of physical design, the Specific Plan proposes to widen sidewalks and create new plazas and public spaces in the North End. The design concept emphasizes the renovation and adaptive reuse of the substantial inventory of automobile showrooms and automotive garages that line Broadway to maintain a connection to the area's Auto Row heritage. It also calls for the protection and enhancement of the residential and medical areas that adjoin Broadway, and the sensitive vertical and horizontal integration of new uses with existing development.

3.4.3 Broadway Revitalization

Some of the key physical changes that the Specific Plan would encourage along Broadway include: development of taller buildings in certain areas that are more in scale with the wide boulevard character of Broadway; creation of a more consistent building setback along Broadway for infill parcels and requiring a setback of four feet for blocks that have parcels that are vacant or mostly vacant in order to establish a wider sidewalk; infill of surface parking lots and other underutilized parcels with new development; and relocation of parking to the rear of buildings or into parking structures.

3.4.4 Transit-Oriented Development

As noted above, the Plan Area is located between BART's 19th Street and MacArthur stations and along a busy AC Transit bus route. The Specific Plan includes policies intended to encourage land use and development patterns that reduce automobile dependence and support alternative

modes of transportation while minimizing impacts on existing community character. In addition, the proposed land use program (discussed below under Section 3.5, *Broadway Valdez Development Program*) focuses on creation of a mixed-use neighborhood that would contain many typical daily destinations within walking distance to each other, including employment, retail, services, and entertainment.

Development density would increase under the Specific Plan and would attract higher daytime and nighttime populations to the Plan Area, with the intention of discouraging “pass through” traffic typically associated with suburban-style strip malls and big-box retail. While the Specific Plan would not prohibit major attractions or destinations that people drive to, such as hotels, theaters, shops and restaurants, such uses would be expected to fit into a pedestrian-oriented environment that prioritizes transit and walkability.

3.4.5 Proposed Land Use Controls¹

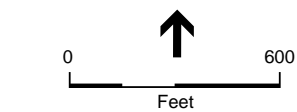
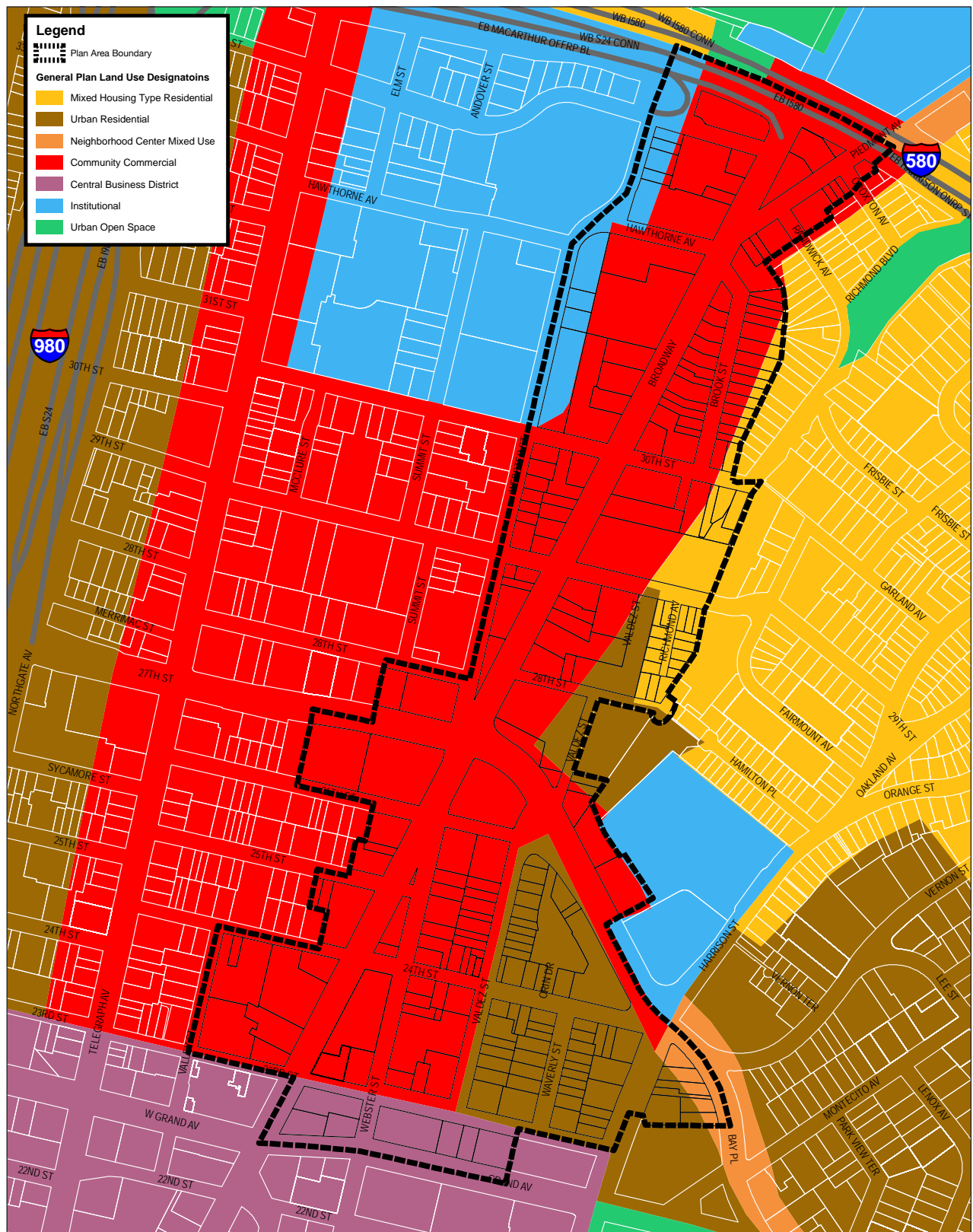
Adoption of the Specific Plan, concurrently with associated General Plan amendments and rezoning, would put into place the regulatory framework for future uses and developments within the Broadway Valdez District Specific Plan Area. The new General Plan designations proposed by the Specific Plan would inform the update of the Plan Area’s zoning in order to implement the vision of the Plan.

The Specific Plan proposes General Plan land use designations as shown in **Figure 3-4** (Existing General Plan land use designations are shown in **Figure 3-3**, see pages 3-14 and 3-15). While much of the *Community Commercial* land use designation would be maintained or expanded to those areas that were formerly designated Institutional throughout the North End subarea, the Specific Plan would expand the *Central Business District* designation further north to encompass most of the Valdez Triangle. In addition, areas along Brook Street and Richmond Avenue would be designated *Mixed Housing Type Residential* to protect existing residential uses, and a small area between Harrison Street and Bay Place that is currently designated as *Urban Residential or Neighborhood Center Mixed Use* would be designated *Community Commercial* (see Section 4.9, *Land Use and Planning*).

In order to implement the General Plan, the Specific Plan proposes four (4) new district-specific zoning classifications that would replace the existing zoning, as shown in **Figure 3-6** (Existing Zoning is shown in **Figure 3-5**, see pages 3-16 and 3-17). These district-specific zones follow a nomenclature established by the City in other districts, such as the Wood Street District, Oak to Ninth, and the Kaiser Permanente Medical Center areas. The Broadway Valdez zone districts are identified by the descriptive prefix of “D-BV” which signifies “District - Broadway Valdez.”

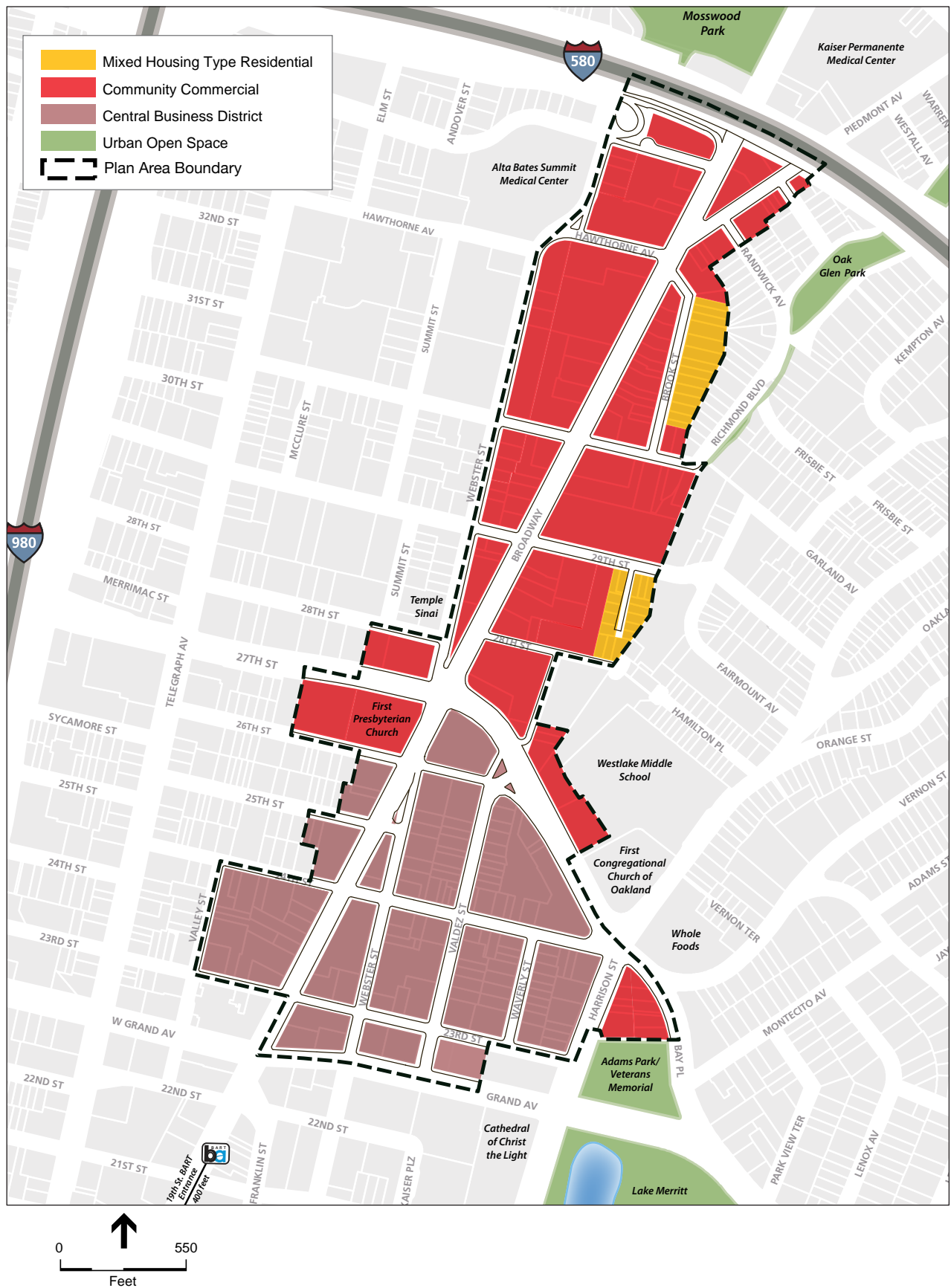
In summary, D-BV-1 Retail Priority Sites would be the most restrictive regarding uses and ground floor uses in particular; D-BV-4 Mixed Use would be the least restrictive regarding uses. D-BV-1 Retail Priority Sites only would allow residential uses if a project were to include a certain size/type

¹ The proposed land use controls, zoning, and height regulations/mapping have not yet been approved or adopted by the City’s various advisory and elected bodies, and are therefore, subject to change.



SOURCE: City of Oakland, Department of Planning and Building, 2013

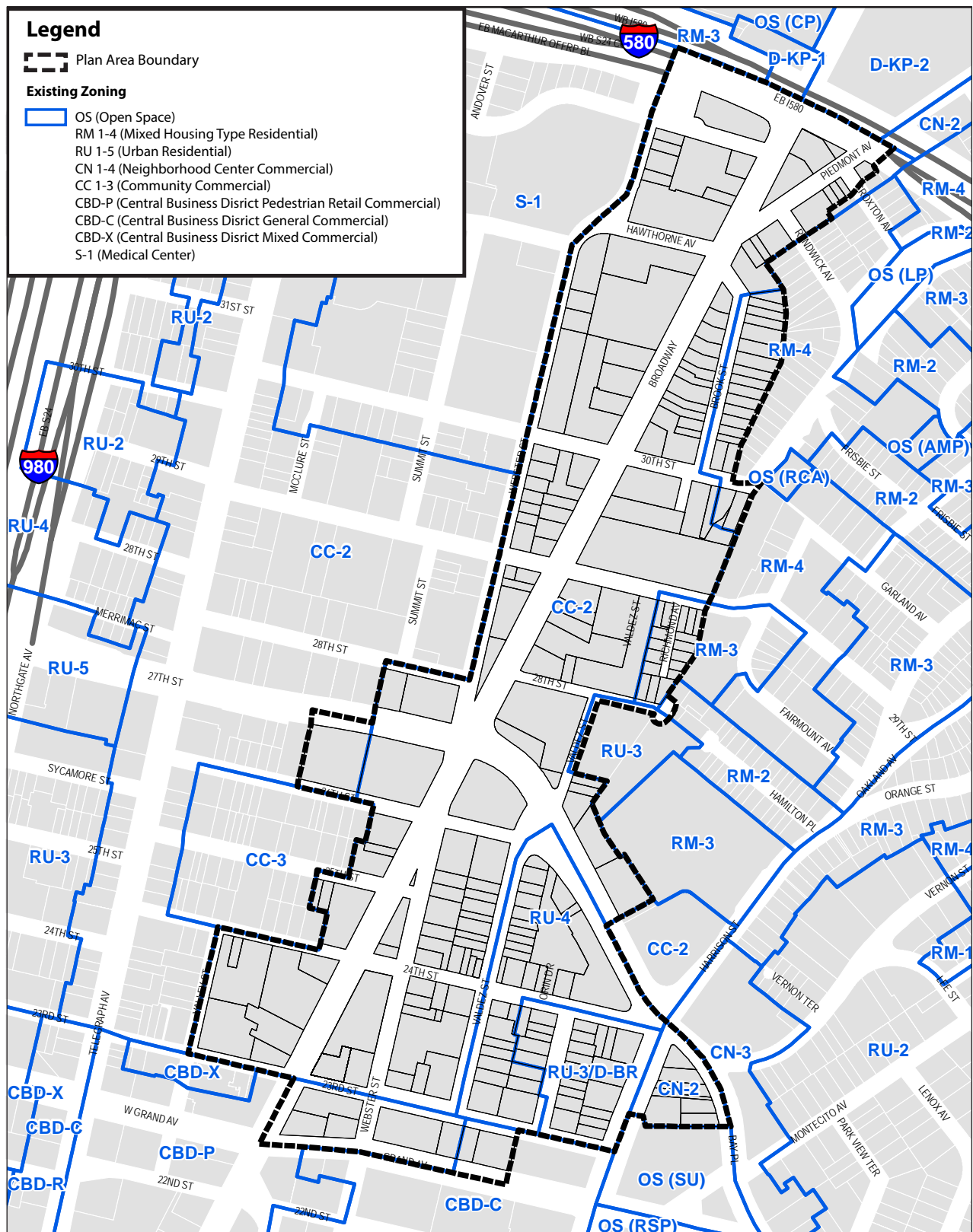
Broadway Valdez District Specific Plan . 208522
Figure 3-3
 Existing General Plan Land Use Designations



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

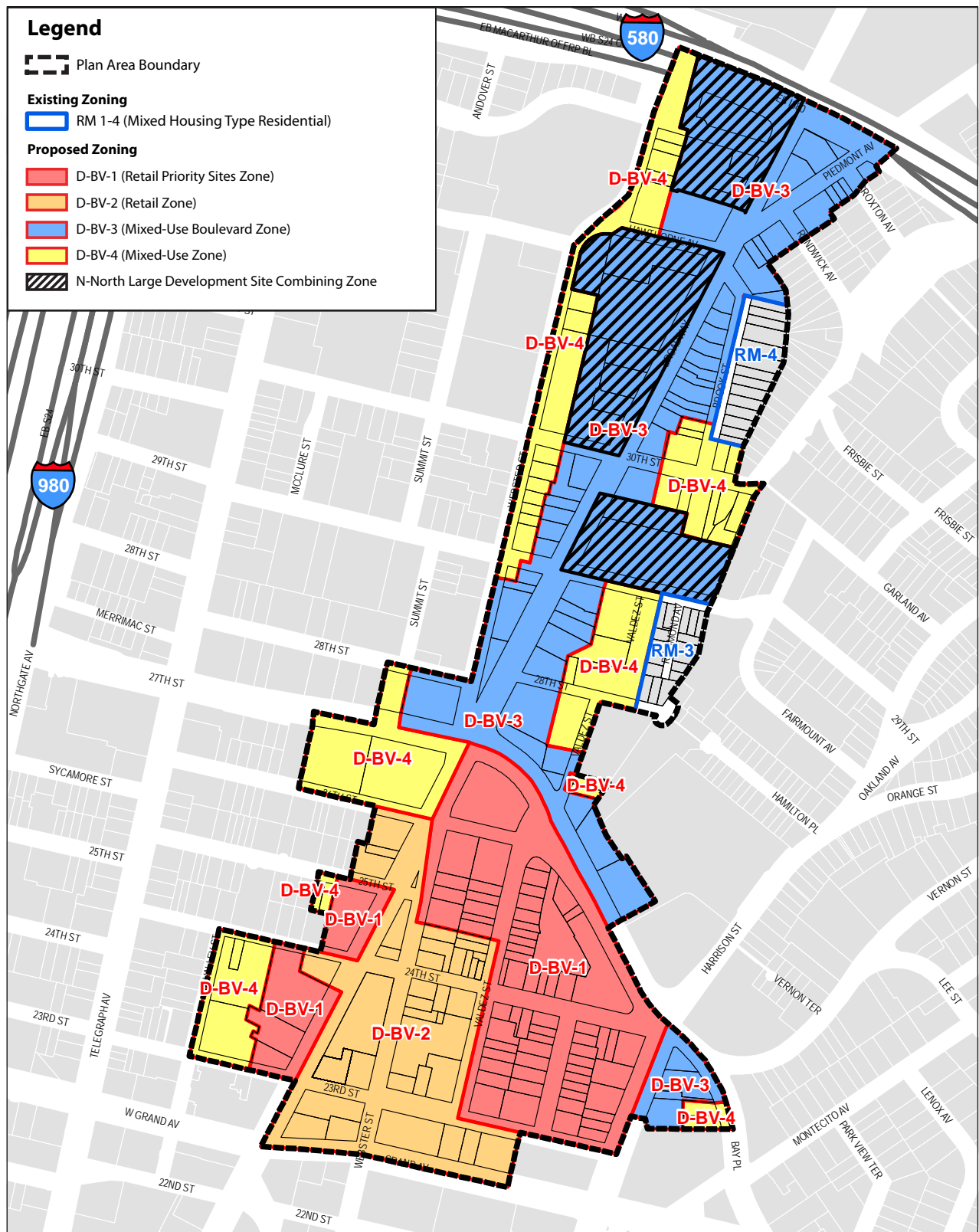
Figure 3-4
Proposed General Plan Land Use Designations



SOURCE: City of Oakland, Department of Planning and Building, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-5
Existing Zoning



SOURCE: City of Oakland, Department of Planning and Building, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-6
Proposed Zoning

of retail component (see also Section 3.4.6, *Proposed Height and Massing*, and 3.4.7, *Retail Priority Sites*, below); D-BV-2 Retail would require that ground floor uses consist of retail, restaurant, entertainment, or arts activities; D-BV-3 Mixed-Use Boulevard would allow for a wider range of ground floor office and other commercial activities than in D-BV-2; and D-BV-4 Mixed Use would allow the widest range of uses on the ground floor, including both residential and commercial businesses (see Appendix B of the Specific Plan for complete draft text of the proposed new zoning district regulations).

3.4.6 Proposed Height and Massing²

As noted above, the height of existing buildings in the Plan Area is generally quite low, with most of the buildings between one and four stories. The Plan is expected to result in a general increase in building heights to accommodate projected development intensities. The proposed height and massing concept seeks to accommodate this increase in height while balancing protection of desirable community character, compatibility with historic and natural resources, and accommodation of high-density mixed use development.

In addition to new district-specific zones, the Specific Plan proposes new height regulations for the Plan Area (see **Figures 3-7** and **3-8**, on pages 3-20 and 3-21). Maximum building heights would range from 45 feet along Brook Street to 250 feet along Grand Avenue and the southern end of the Plan Area between Broadway and Valdez Street. Generally, the tallest building heights would be permitted in the Valdez Triangle (closer to the existing Downtown) and in the North End adjacent to the Alta Bates Summit Medical Center and the elevated I-580 freeway. The lowest building heights would be designated in the North End subarea where existing residences and historic garage structures predominate. The areas currently zoned RM-3 would continue to have a 30 foot height limit and RM-4 a 35 foot height limit. Along the area adjacent to Alta Bates Summit Medical Center, the base height limits of 65 feet and 85 feet for areas with maximum building heights of 135 feet and 200-250 feet, respectively, would apply. Base height limits of 85 feet would apply along Grand Avenue and the southern end of Broadway. Special height regulations would apply to areas in the D-BV-1 Retail Priority Sites zoning district, which are also described in the following section:

- 45 feet in height allowed “by right”;
- Taller structures (ranging from 200 feet to a maximum of 250 feet) allowed if a certain size/type of retail component is included;
- The additional allowed height is dependent upon whether a project includes the appropriate size/type of retail component.

The heights shown in Figure 3-8 are conceptual and represent the associated revisions to the zoning regulations, which would ultimately regulate building height and form, including density, bulk and tower regulations. The revised zoning would specifically regulate building height at four

² Ibid.

levels: *Building Height Allowed by Right*, *Maximum Building Height*, *Minimum Building Height*, and *Maximum Base Height* (which applies to the building base of mid- and high-rise buildings). Moreover, buildings in all height zones would be subject to the Broadway Valdez design guidelines, which would provide strategies for ensuring that taller buildings are consistent with the Plan's overall vision. These are discussed further below in Section 3.6.

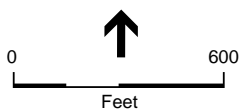
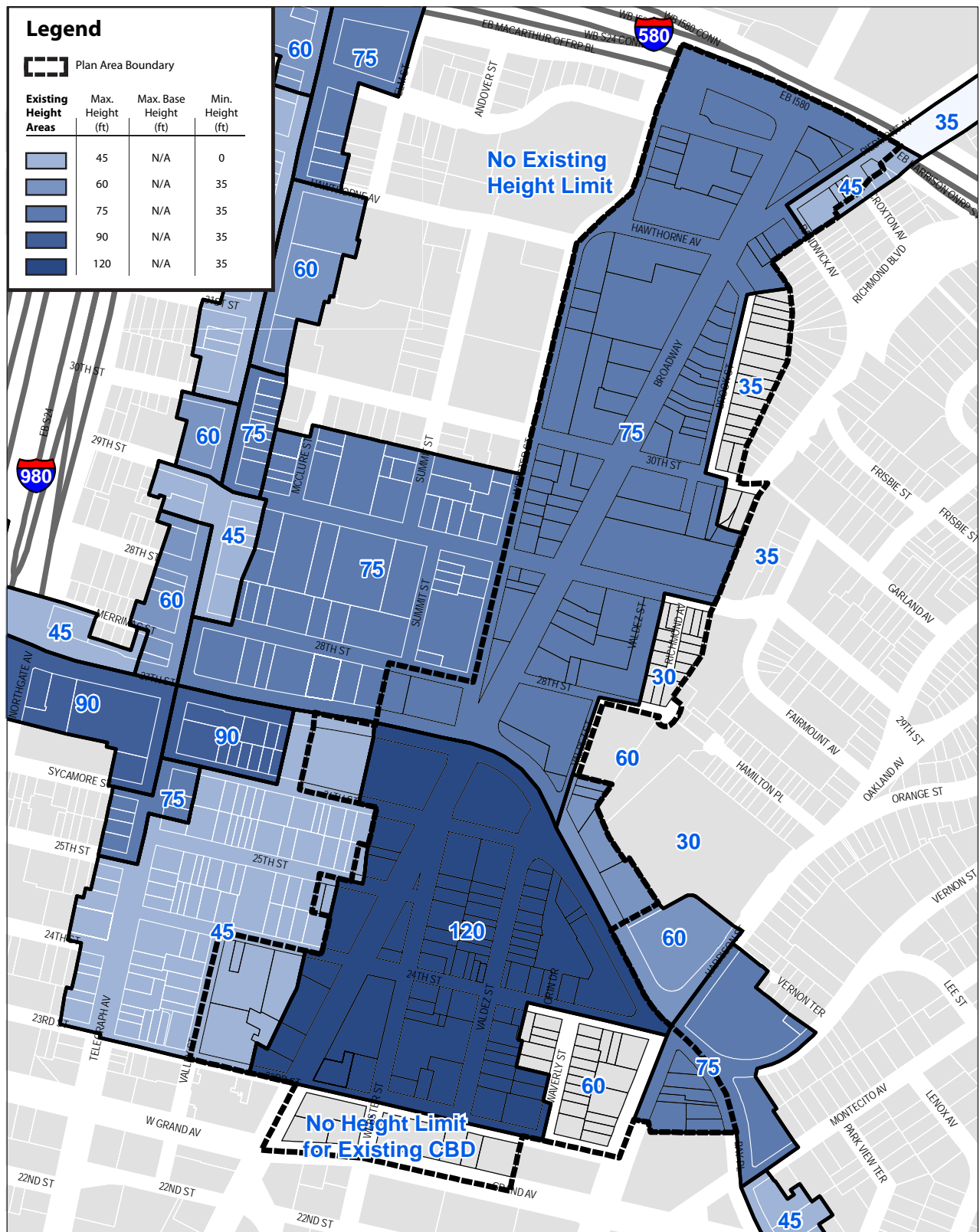
While the heights shown in Figure 3-8 are the maximum heights that would be permitted throughout the Plan Area, future Plan Area development would be subject to the Broadway Valdez Development Program which consists of the *reasonably foreseeable maximum development* assumed for the EIR. Therefore, as discussed in greater detail below in Section 3.5, *Broadway Valdez Development Program*, and in Section 3.8, *Adherence to Allowable Development Program*, individual development projects would be required to undergo monitoring by the City to ensure that the overall development program is not exceeded.

3.4.7 Retail Priority Sites and Incentives

As noted above, to help achieve the Specific Plan's goal of promoting the Plan Area as a retail destination, the Plan's land use concept includes a series of "Retail Priority Sites," which are implemented by the proposed new zoning district D-BV-1 Retail Priority Sites (see **Figure 3-9**). The regulatory framework of D-BV-1 is intended to ensure that larger sites and opportunity areas, particularly within the Valdez Triangle, are reserved primarily for new, larger retail development to accommodate consumer goods retail, at least on the ground floor. In addition to size, the Retail Priority Sites are also well served by transit, have excellent vehicular access, and are in areas of good visibility. The Plan proposes to use a combination of incentives and regulation to achieve its retail objectives on the Retail Priority Sites. The main incentive is that residential only would be allowed if a retail project of a specified size and type were to be developed; additional incentives could apply for retail projects that are larger than the minimum requirement, such as higher heights and allowed density, as well as reduced parking and open space for the residential component of a proposed project.

3.4.8 Entertainment District Overlay

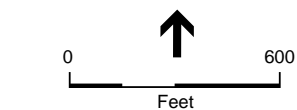
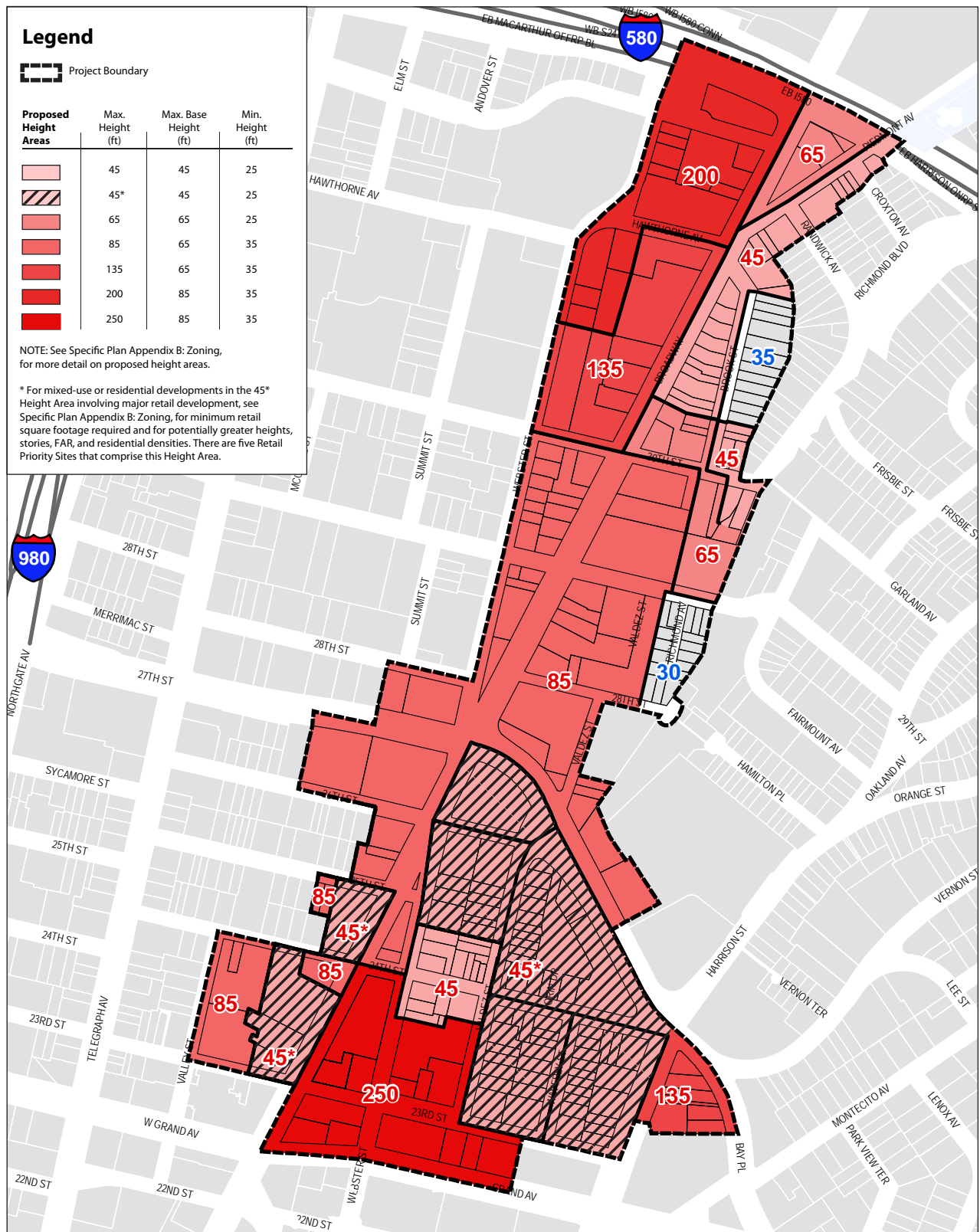
The Specific Plan includes an Entertainment District overlay zone that would include the areas along the Broadway and Telegraph Avenue corridors from 13th Street to 27th Street between Harrison and the west side of Telegraph, including a major portion of the Valdez Triangle subarea (see **Figure 3-10**). The overlay zone would encourage live entertainment and cabaret type uses by streamlining the permit process and allowing more extended hour permits; allowing more temporary events such as "artisan marketplaces" and mobile food provisions; streamlining the Encroachment Permit process for sidewalk cafes and reducing or eliminating extra fees; exempting the Entertainment District overlay zone district from the City's "dark skies" ordinance to allow architectural up-lighting that highlights building features; and creating special sign regulations that allow for bold, eye-catching signs that exceed current sign standards.



SOURCE: City of Oakland, Department of Planning and Building, 2013

Broadway Valdez District Specific Plan . 208522

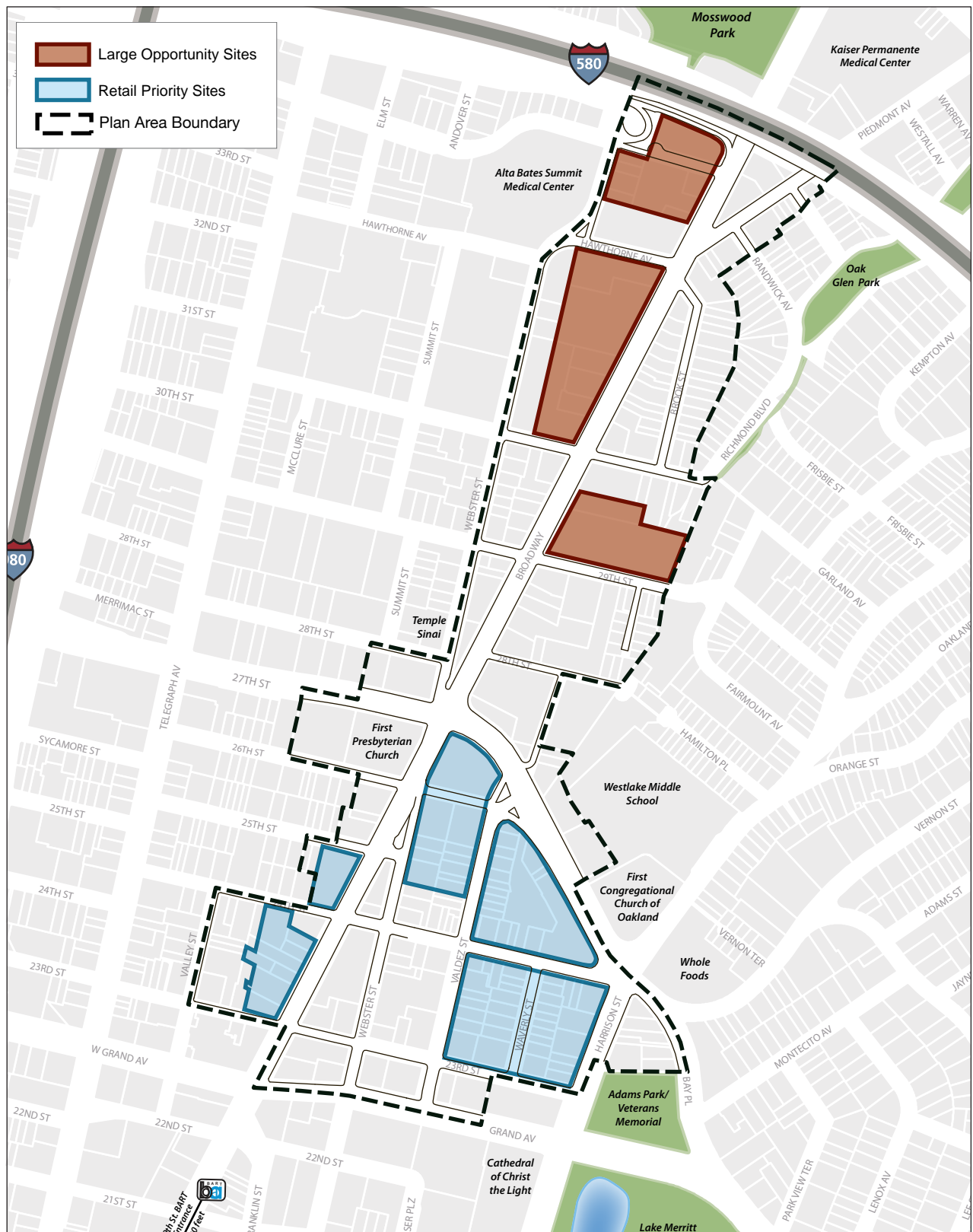
Figure 3-7
Existing Height Map



SOURCE: City of Oakland, Department of Planning and Building, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-8
Proposed Height Map

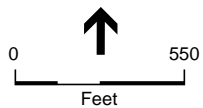
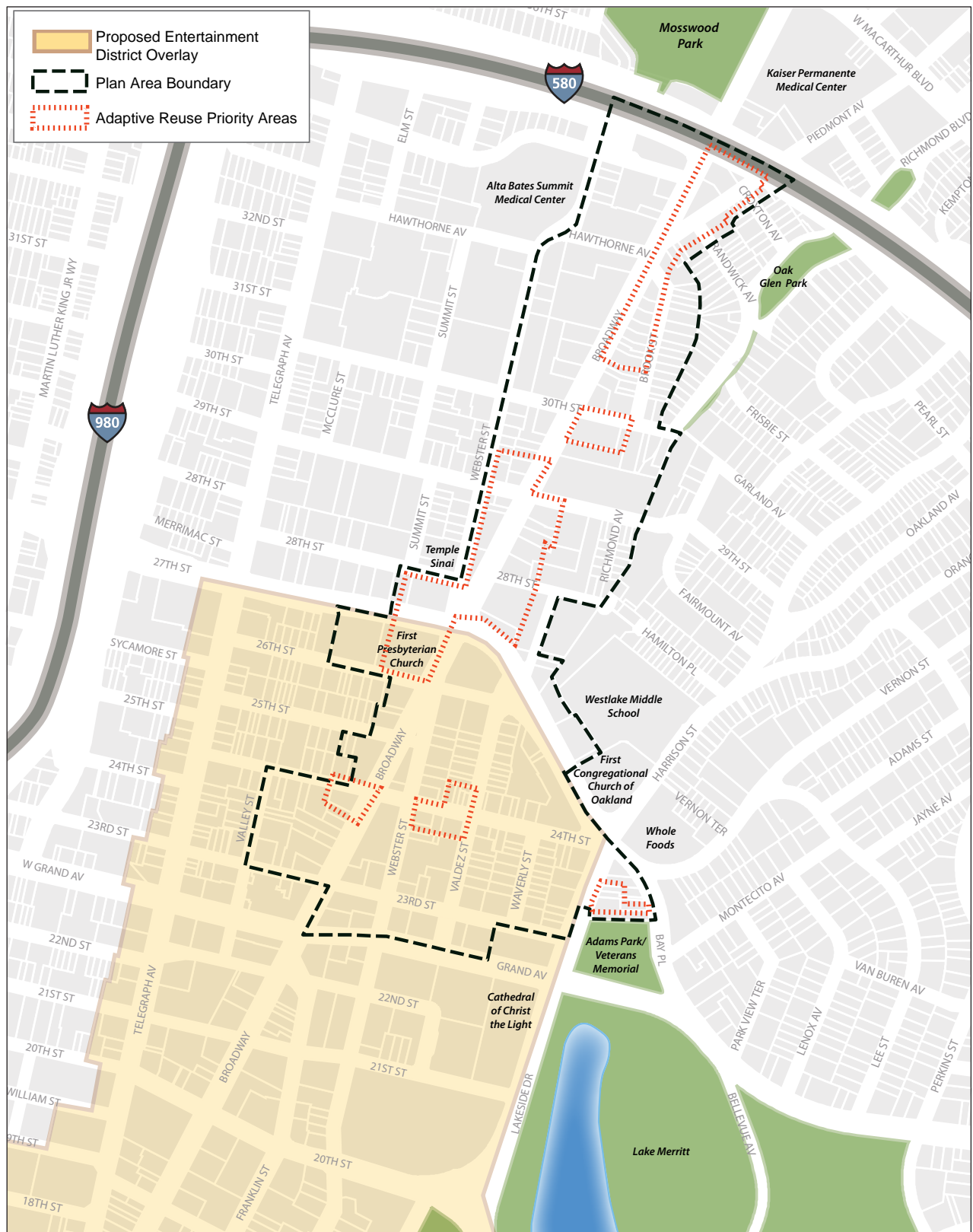


0 550 Feet

Broadway Valdez District Specific Plan . 208522

Figure 3-9

Major Opportunity Areas



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-10

Proposed Entertainment District Overlay
and Adaptive Reuse Priority Areas

3.4.9 Housing

The Specific Plan would encourage a mix of both rental and for-sale housing units. Densities provided would be intended to create a built-in customer base for some of the Plan Area's businesses as well as provide housing options for some of those working in the Plan Area and its vicinity.

The housing mix would include a diversity of unit types, including stacked flats, apartments, studio units, and assisted living units. New single-family detached units and duplexes would not be permitted except within certain perimeter areas of the Plan Area that are designated as *Mixed Housing Type* in the General Plan. Specifically, to support the establishment of a strong retail presence in the Broadway Valdez District Plan Area, and to ensure that housing does not displace potential for commercial development, areas in which residential uses can be introduced as the primary ground-floor use (residential lobbies are permitted per zoning) would be limited to streets around the perimeter of the Plan Area, including, but not limited to Brook Street, Webster Street north of 29th Street, Valley Street, and Richmond Avenue.

Nevertheless, the Plan's goal is to encourage up to 1,800 new residential units that would be distributed throughout the Plan Area and incorporated primarily as upper floor uses in mixed use buildings that include retail or other ground-floor commercial uses.

3.5 Broadway Valdez Development Program

The Broadway Valdez Specific Plan established the Broadway Valdez Development Program, which is shown below in **Table 3-2**. As introduced in Chapter 1, *Introduction*, the Broadway Valdez Development Program represents the *maximum feasible development* that the City has projected can reasonably be expected to occur in the Plan Area over the next 25 years, and is thus the level of development envisioned by the Specific Plan and analyzed in this EIR. In total, approximately 3.7 million square feet of development is envisioned, including 1,800 residential units, a new 180-room hotel, and 4,500 new jobs. This *maximum development* that is the basis of this EIR analysis is distinctly different from the *theoretical maximum development potential* that could ultimately occur in the Plan Area. The *reasonably foreseeable maximum development* assumed for the EIR analysis attempts to project what might be feasible based on a number of market factors, including: market demand for various uses; broader regional economic and market conditions; backlog of approved or planned projects in the vicinity; recent development and business investment in the area; landowner intentions for their properties; and properties susceptible to change due to vacancy, dereliction, or absence of existing development. The Specific Plan is a market-driven plan that would be implemented through the decisions that individual landowners make for their properties. Thus, it is difficult to project the exact amount and location of future development with any precision.

However, in order to evaluate the environmental consequences of Specific Plan implementation, particularly as it relates to traffic generation, assumptions have been made about the reasonable distribution and intensity of new development within the Plan Area. Specifically, the traffic analysis

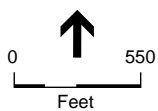
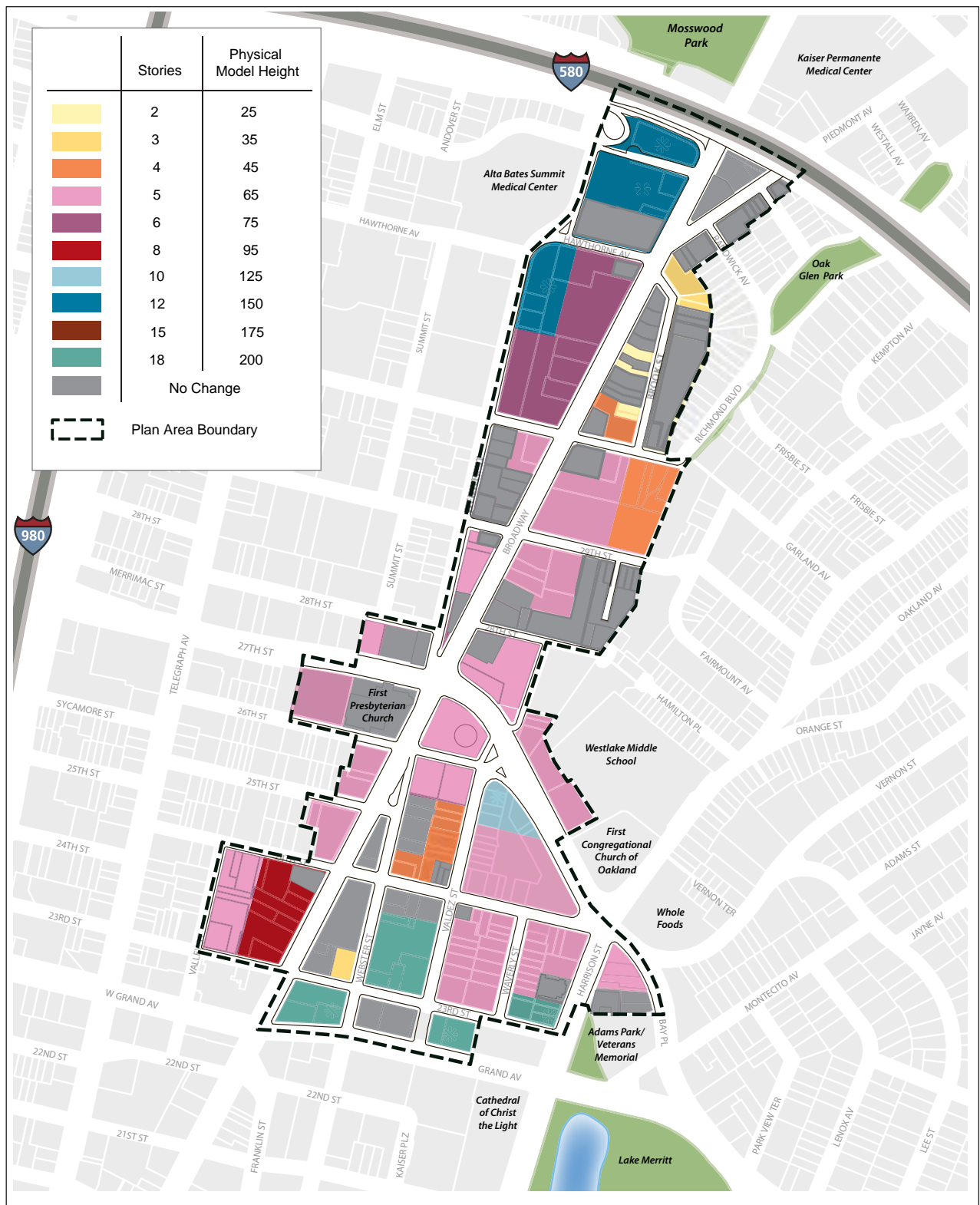
**TABLE 3-2
BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Valdez Triangle Subarea	North End Subarea	Total Plan Area (Rounded)
Residential Units	1,030	767	1,800
Office (sq. ft.)	116,000	579,000	695,000
Retail (sq. ft.)	794,000	321,000	1,114,000
Hotel Rooms	180	-	180
Non-Residential Development (sq. ft.)	1,027,000	899,000	1,927,000
Total Development (sq. ft.)	2,057,000	1,666,000	3,723,000
Parking spaces provided by the development program	3270	3151	6,420

SOURCE: WRT, 2012, Fehr & Peers, 2013.

includes assumptions about the generation of new automobile trips associated with the Broadway Valdez Development Program within five subdistricts of the Plan Area. These subdistricts and assumptions are discussed further in Section 4.13, *Transportation and Circulation*. The Broadway Valdez Development Program also is reflected above in Table 3-2 and in the Physical Height Model depicted in **Figure 3-11**. Note that the heights depicted in Figure 3-11 differ from the maximum building heights in the proposed rezoning (Figure 3-8). The Physical Height Model, which forms the basis of this EIR analysis, shows heights that are more reasonably foreseeable than the height maximums in the proposed rezoning and most of the Plan Area is expected to be built out to 65 feet or less in height. Further, heights and general building envelopes depicted in the Physical Height Model are conservative in that they include slightly more building area than would be required to accommodate the *maximum feasible development* assumed for the EIR analysis (i.e. the Broadway Valdez Development Program).

While the Broadway Valdez Development Program reflects a maximum feasible amount of development for the Plan Area of the 25-year planning period, it is not intended as a development cap that would restrict development in either of the two subareas. Rather, the Plan allows for flexibility in the quantity and profile of future development within each subarea, and between subareas, as long as it conforms to the general traffic generation parameters established by the Plan. For example, if significantly more residential and less office development than projected for the North End occurs, it would be allowed as long as the projected traffic generation is within ranges assumed by the Specific Plan and analyzed in this EIR. Through the established planning and environmental review and permitting processes required of each individual development in the City and under the Specific Plan, the City would monitor actual development, associated generation of new automobile trips, and other traffic characteristics within the Plan Area and within the study area as identified in Section 4.13 *Transportation and Circulation*, as the Specific Plan is implemented.



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 3-11

Broadway Valdez Development
Program Physical Height Model

3.6 Design Standards and Guidelines

The Specific Plan includes detailed design guidelines for future development in the Plan Area. In general, these design guidelines aim to influence the pattern, scale, character and quality of future development. These factors would affect the overall pedestrian environment, particularly throughout the Plan Area's public areas. The Specific Plan includes guidelines for both the public realm, which includes public right-of-ways, streets, and plazas, and for private developments.

3.6.1 Public Realm Design Guidelines

The Specific Plan includes guidelines that aim to establish consistent design character and quality within the public realm, including streets and plazas throughout the Plan Area. Specifically, Broadway would serve as the spine for the Broadway Valdez District Plan Area and would serve as the City's "grand boulevard," linking the Broadway Valdez District to other key destinations, from the Estuary to the Oakland Hills.

Primary access streets, including 27th Street, Webster Street, Piedmont Avenue, Harrison Street and Grand Avenue, would continue to serve as primary regional and local access into the Plan Area from adjoining neighborhoods and regional freeways. Along these streets, the Specific Plan proposes to guide new development in a way that reinforces corridor character and definition. The Plan also proposes streetscape improvement, such as sidewalk widening and street tree planting, width reductions along two pedestrian-oriented shopping streets (24th and Valdez Streets), the removal of channelized right-turn lanes at key intersections, implementation of improvements at several pedestrian crossings and installation of bicycle-related facilities at key intersections. All of these are discussed in greater detail below in Section 3.7, *Circulation*.

3.6.2 Private Realm Design Guidelines

The Specific Plan design guidelines focus on appropriate scale, massing, and detailing of buildings and on how individual architectural elements can be organized to create visual interest and maintain human scale. The Plan's design guidelines also support a denser, more compact pattern of development that would fill in the gaps in the urban fabric created by surface parking and vacant lots, and positively define and activate the public realm by establishing a more consistent orientation of active ground floor facades. New buildings would be built up to, and accessed directly from, the public sidewalk, and have active ground floor frontages and uses that would engage and animate the public realm. The Plan's guidelines would also encourage the creation of private and semi-public open space features, including the use of privately-owned pedestrian streets, courtyards and plazas, in a way that would activate the street and positively contribute to the pedestrian environment.

In addition, the Plan would promote the development of mixed-use buildings that place residential, office, entertainment and retail over ground floor retail and promote the adaptive re-use and repurposing the existing inventory of historic buildings to maintain a connection to the area's past and contribute to a variety of architectural styles. Further, Specific Plan design guidelines are customized to promote the development envisioned for each of the Plan Area subareas.

3.6.3 Historic Resources and Preservation Strategies

The Plan identifies Adaptive Reuse Priority Areas for historic preservation as a policy for maintaining a unique character for the Plan Area (also shown in Figure 3-10). This policy emphasizes the renovation and repurposing of historic garage and auto showroom buildings along Broadway to preserve a link to the corridor's past and enrich its character. The intent of the Adaptive Reuse Priority Areas is to include both designated historic resources and other existing buildings possessing architectural merit.

In addition to the parcels identified in the Adaptive Reuse Priority Areas, buildings located within the Plan Area's four ASI's, one API, and other Potential Designated Historic Properties (PDHPs) may be eligible for façade improvement grants and easements, transfer of development rights, use of California State Historical Building Code, reduced fees and expedited development review, property tax abatements (pursuant to Mills Act), and relief from code requirements. These programs are discussed in greater detail in Section 4.4, *Cultural Resources*.

3.7 Circulation

As previously discussed, the Plan encourages a mix of uses in a pedestrian-oriented urban environment that supports and is well-served by transit. The proposed mix of uses is designed to integrate transportation and land use and to encourage use of non-auto travel modes in the Plan Area.

3.7.1 Street Network

Historically, major arterials in the Plan Area and surrounding areas have been designed primarily for automobile traffic. However, in recent years, the City of Oakland has been reducing the number and/or width of travel lanes on various streets to better accommodate pedestrians and bicyclists. Within the Plan Area, along 27th Street, one travel lane in each direction has already been converted to a bicycle lane. While acknowledging the importance of automobiles and delivery trucks to the viability of the Broadway Valdez District, the Specific Plan looks for additional opportunities to improve access and circulation for pedestrians and bicyclists without degrading automobile access and circulation. The following sections describe circulation and the Specific Plan policies for each travel mode in the Plan Area.

3.7.1.1 Pedestrian Circulation

Specific Plan policies would promote pedestrian activity along 24th and Valdez Streets by aiming to reduce existing and future driveways and curb-cuts; widening sidewalks; reducing street crossing widths and increasing pedestrian visibility by installing bulb-outs and crosswalk markings at several key intersections; and providing pedestrian-scale street lighting. The Plan policies are designed to improve pedestrian safety, shorten pedestrian crossing times, and reduce vehicle speeds by removing channelized right-turn lanes that are determined to be unnecessary.

3.7.1.2 Bicycle Circulation

The majority of the planned bicycle network outlined in the City's 2007 Bicycle Master Plan for the Plan Area has been completed. Class 2 bicycle lanes³ on Broadway serve as the primary north-south bicycle connection and Class 2 bicycle lanes on 27th Street and Grand Avenue serve as the primary east-west bicycle connections. Implementation of the Specific Plan would include completion of the bicycle network in the Plan Area as envisioned in City of Oakland's 2007 Bicycle Master Plan. The Specific Plan also would enhance bicycle facilities at key intersections with high bicycle and automobile traffic, such as Broadway and Webster, Broadway and 27th, and Harrison and 27th intersections, through specific improvements at each intersection, and proposes increased bicycle parking supply in the public realm, particularly in non-residential areas.

3.7.1.3 Automobile Circulation

The Specific Plan would aim to reduce the Plan Area's overall automobile trip generation in comparison with more traditional suburban and some urban developments by locating the proposed mix and density of uses in proximity to transit service, bicycle network, and walkable streets. The Plan policies also are designed to accommodate future shoppers, particularly regional shoppers, for whom public transportation may not be a viable or convenient option, with adequate automobile access and circulation. Plan policies would minimize curb-cuts, prioritize pedestrian activity along the key retail streets such as Broadway, Valdez Street, and 24th Street, and locate vehicular parking and service access elsewhere in the Plan Area. The Plan may allow for the possible closure of segments of Waverly Street south of 24th Street, 34th Street between Broadway and freeway ramps, and 26th Street between Broadway and Valdez to through traffic on either a temporary or permanent basis in order enhance the pedestrian orientation of the street and surrounding areas and would implement traffic calming on residential streets. Such closures are analyzed as a project variant in this Draft EIR and would not cause significant impacts.

3.7.2 Transit

The Plan Area is served by AC Transit and public and private shuttles, and, as noted above, is near the MacArthur and 19th Street BART stations. The Specific Plan policies call for collaboration with AC Transit to improve bus service along Broadway and to incorporate several recommendations for the Plan Area, in consideration of Specific Plan implementation, into their Transit Performance Initiative,⁴ including: moving bus stop locations to effectively serve the local uses while maintaining or reducing operating speeds and reducing bus/auto conflicts; creating curb extensions to accommodate in-lane stops that enhance bus service times and provide

³ These facilities provide a dedicated area for bicyclists within the paved street width through the use of striping and appropriate signage. These facilities are typically five to six feet wide.

⁴ Through its Transit Performance Initiative (TPI), AC Transit is currently studying implementation of infrastructure improvements at specific locations along Route 51A, which operates along Broadway and which connects the District to Downtown Oakland, the City of Alameda, and the Fruitvale District to the south, and Upper Broadway and the Rockridge District to the north, to increase bus travel speeds and improve service reliability. These improvements, which may include relocating bus stops, installing bus bulb-outs, providing bus-only lanes, or upgrading traffic signal equipment, are expected to be finalized and implemented by 2014.

adequate space for bus stop amenities; improving bus stop facilities, such as shelters and real-time transit arrival displays. The Plan policies call for coordination with local shuttle operators, including Alta Bates Summit Medical Center and Kaiser Permanente Oakland Medical Center shuttle operators, to explore expanding the geographic area and extending the hours of operations.

In terms of BART-related improvements, the Specific Plan proposes to coordinate revitalization efforts in the Plan Area with additional efforts to enhance Broadway between the Plan Area and the 19th Street BART station to provide a more pedestrian-oriented connection to and from the BART Station.

The City of Oakland is also investigating the possibility of operating a streetcar system, which would include a line along Broadway. If implemented, Broadway would continue to provide two through vehicle lanes in each direction and would be able to accommodate streetcar tracks in the lane adjacent to the bicycle lane. The Specific Plan policies would ensure that improvements to Broadway would not preclude the possibility of future streetcar service along the corridor.

3.7.3 Transportation Demand Management

The Specific Plan proposes a Transportation Demand Management (TDM) program that would apply to the entire Plan Area. Specifically, the Plan would require that all commercial and residential developments in the Plan Area participate in the TDM. The Plan recommends the formation of a Transportation and Parking Management Agency (TPMA) to coordinate all Plan-related TDM efforts.⁵ In addition, the Plan proposes implementation of a comprehensive wayfinding signage program in the Plan Area with an emphasis on pedestrian and bicycle facilities and the provision of bicycle support facilities such as bicycle repair shops, attendant bicycle parking/bike station, and/or bike sharing/rental program. Other TDM-related Specific Plan policies could include providing new Plan Area residences with a transit pass and/or transit subsidies, provision of dedicated car-sharing spaces throughout the Plan Area, on-street or in publicly accessible parking facilities, and the requirement that all employers in the Plan Area participate in TDM programs that would encourage the use of transit and facilitate walking and bicycling among their employees through both incentives and disincentives.

3.7.4 Parking

3.7.4.1 Parking Management Plan

The Specific Plan policies aim to provide an appropriate amount of parking for regional visitors to the Plan Area who may not consider transit as a viable travel mode. To this end, the Specific Plan incorporates a number of policies aimed at minimizing the overall parking supply and optimizing use of available parking. For example, the Plan would encourage shared parking within and between developments, to the extent feasible.

⁵ A TPMA is an organization formed and funded by developments in a geographic area to coordinate areawide transportation and parking programs. Example TPMA responsibilities include providing residents, employers, employees, and visitors with information regarding available transportation alternatives, maintaining a website to include transportation-related data, and managing the parking supply.

Currently, a high number of parking spaces in the Plan Area are provided in surface parking lots which are identified in the Specific Plan as potential future development sites. Thus, as the Plan Area's development intensifies, it is anticipated that the available public parking supply would decrease. Although the Plan envisions creating a regional shopping destination which could result in a new need for parking, the development intensification thorough the Plan Area would result in more pedestrian, bicycle, and transit trips, and less reliance on automobile trips. The loss of the surface parking lots would be consistent with the Specific Plan's goals. The Specific Plan recommends that each new development within the Plan Area either provide its own off-street parking supply to be both shared and open to the public with little or no restrictions on use, or to share parking with an existing use that may have different operating hours or excessive parking. In addition to new garages, several large garages in the Plan Area and adjacent areas are expected to remain and be available to the public.

3.7.4.2 Parking Management Strategies

The Plan policies would encourage residential developments to unbundle the cost of parking from the cost of housing, thereby encouraging alternative modes of travel and making housing more affordable to residents who do not own a car.

The Plan would encourage the use of existing parking facilities in the Plan Area and would also implement an area-wide real-time parking information system that includes major parking facilities open to the public. In addition, it would also encourage implementing a parking pricing strategy that encourages Plan Area employees to walk, bike, or use transit to travel to and from work.

3.7.5 Street and Infrastructure Improvements

Although it is difficult to project the exact amount of future development with any precision, to evaluate the environmental consequences of Specific Plan implementation, assumptions have been made about the public realm improvements anticipated to be funded and implemented as conditions of new private development. Therefore, the following improvements along several major streets and at several key intersections throughout the Plan Area are considered reasonably foreseeable with adoption of and development under the Specific Plan and are thus anticipated as a part of the Specific Plan:

- Widened sidewalks along segments of 24th and Valdez Streets.
- Removal of the following channelized right-turn lanes:
 - From southbound Harrison Street to 27th Street;
 - From westbound 27th Street to Broadway;
 - From eastbound 27th Street to Valdez Street; and
 - From northbound Valdez Street to 27th Street.
- Squaring of the intersection at Broadway/Webster Street/25th Street.

- Improvements to the mid-block pedestrian connection between 30th and Hawthorne via installation of bulb-outs and enhanced crosswalk treatment and installations of Rectangular Rapid Flash Beacons.
- Implementation of bicycle markings and bicycle-related facilities, such as bicycle boxes or bicycle signal actuations, at key intersections, including Broadway/Webster, Broadway/27th, Harrison/27th).

3.8 Adherence to Allowable Development Program

The Specific Plan indicates, in Section 4.4.2, that the Broadway Valdez Development Program represents the reasonably foreseeable maximum development allowed by the Specific Plan. It is important to note that this is distinctly different from the theoretical ultimate development potential in Plan Area that would be permitted by full buildout under the revised General Plan and Planning Code regulations. This EIR examines the potential impacts associated with the reasonably foreseeable maximum development of the Broadway Valdez Development Program only and not the theoretical ultimate development permitted under the General Plan and zoning. (see Section 3.5 above). The theoretical ultimate development scenario is analyzed in Chapter 5, *Alternatives*, of this EIR.

While the CEQA analysis herein is based on the development quantities set forth in the Development Program, the intent of the Specific Plan and this EIR is to provide as much flexibility as is feasible in terms of precise mix of newly developed land uses and their location within the Plan Area while conforming to this CEQA analysis and thresholds. Since traffic capacity is the key environmental factor constraining development, the *maximum allowable development* under the Specific Plan would be tracked and measured by vehicle trip generation rather than the amount of specific land uses. As the Plan Area develops, the City would track amounts of development by land use, but would also estimate net new generation of automobile trips within each of the Plan Area's five subdistricts (see Section 3.5 above). Any proposal for development resulting in net trip generation in excess of the amounts estimated for each subdistrict and analyzed in Section 4.13 *Transportation and Circulation*, would be required to conduct a traffic impact analysis to establish that other traffic characteristics, including remaining circulation capacity, within the Plan Area and within the study area as identified in Section 4.13 *Transportation and Circulation*, would not result in new or more severe environmental impacts than are analyzed and disclosed in this EIR. As the Plan Area develops, the City will track (1) the total number of residential units, hotel rooms, and non-residential square footage for which entitlements have been granted and building permits issued, (2) the total number of residential units, hotel rooms, and non-residential square footage removed due to building demolition, and (3) the estimated net trip generation from entitled development under the Specific Plan per subdistrict relative to the amounts estimated per subdistrict as analyzed in this EIR.

In summary, this EIR evaluates the impacts of the reasonably foreseeable maximum development under the Broadway Valdez Development Program and as long as the actual build-out stays within the impact envelope, there can be a mix and match between various land uses (e.g. there can be more retail if less office, as built, or vice versa).

3.9 Required Approvals and Actions

3.9.1 City Approvals

The Broadway Valdez District Specific Plan is intended to be adopted concurrently with amendments to the City's General Plan and the Oakland Planning Code, which would provide the implementing regulatory framework that would guide future land use and development decisions in the Broadway Valdez District. This Specific Plan was written to be consistent with, and serve as an extension of, the Oakland General Plan, by providing both policy and regulatory direction. The Plan would work in conjunction with the Oakland Planning Code to regulate new development in the Plan Area.

Specifically, implementation of the Specific Plan would require amendments to the General Plan and to the City of Oakland Planning Code. These amendments are included as a part of, and would be adopted concurrently with, the Specific Plan. Upon adoption, the objectives and policies contained within the Plan would supersede goals and policies in the General Plan with respect to the Plan Area. In situations where policies or standards relating to a particular subject are not provided in the Specific Plan, the existing policies and standards of the City's General Plan and Planning Code would continue to apply. The amendments would be made to both the General Plan and Planning Code to ensure that broad City policy and specific development standards are tailored to be consistent with the Plan. Projects would be evaluated for consistency with the intent of Plan policies and for conformance with development regulations and design guidelines.

This EIR is intended to provide the information and environmental analysis necessary to assist the City in considering all the approvals and actions necessary to adopt and implement the Broadway Valdez District Specific Plan. To summarize previous discussions in this chapter, such actions/approvals include without limitation:

- **Certification of the EIR.** Certify the Broadway Valdez District Specific Plan EIR and make environmental findings pursuant to CEQA.
- **Adoption of the Specific Plan.** Adoption of the Specific Plan, including the design guidelines.
- **Amendments to General Plan.** Amend General Plan text and maps to incorporate the Specific Plan.
- **Amendments to the City of Oakland Planning Code.** Amend Planning Code text and map to incorporate the Specific Plan
- **Design Guidelines.** The Broadway Valdez District Specific Plan includes design guidelines to supplement the Planning Code regulations for this area.

As detailed in Section 1.2, *Environmental Review*, the City intends to use the streamlining/tiering provisions of CEQA to the maximum feasible extent, so that future environmental review of specific projects is expeditiously undertaken without the need for repetition and redundancy, as provided in CEQA Guidelines Section 15152 and elsewhere.

3.9.2 Other Agencies

Other agencies may be required to rely on this EIR for development in areas under their jurisdiction that are within the Plan Area including without limitation:

- **San Francisco Bay Regional Water Quality Control Board (RWQCB)** – acceptance of a Notice of Intent (NOI) to obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit), and Notice of Termination after construction is complete. Granting of required clearances to confirm that all applicable standards, regulations and conditions for all previous contamination at the site have been met.
- **Bay Area Air Quality Management District (BAAQMD)** – compliance with BAAQMD Regulation 2, Rule 1 (General Requirements) for all portable construction equipment subject to that rule.
- **East Bay Municipal Utility District (EBMUD)** – approval of new service requests and new water meter installations.
- **Alameda County Department of Environmental Health (ACDEH)** – review and acceptance of an updated Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP).
- **California Department of Toxic Substances Control (DTSC)** – ensuring compliance with state regulations for the generation, transportation, treatment, storage, and disposal of hazardous waste.
- **California Department of Transportation (Caltrans)** – review and approval of plans, specifications, and estimates (including any equipment or facility upgrades) for modifications to intersections under the jurisdiction of Caltrans to accommodate signal timing changes.

CHAPTER 4

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

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

This chapter contains the analysis of the potential effects to environmental topics considered under CEQA from adoption and development under the Specific Plan. This chapter describes the existing setting for each topic, the potential impacts that could result from adoption and development under the Specific Plan, relevant plans and policies, and Standard Conditions of Approval that would minimize or avoid potential adverse environmental effects that could result, and identifies mitigation measures necessary to reduce the potential impacts resulting from adoption and development under the Specific Plan.

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

4.01 Environmental Topics

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

- | | |
|---|--|
| 4.1 Aesthetics, Shadow and Wind | 4.8 Hydrology and Water Quality |
| 4.2 Air Quality | 4.9 Land Use, Plans and Policies |
| 4.3 Biological Resources | 4.10 Noise |
| 4.4 Cultural Resources | 4.11 Population, Housing and Employment |
| 4.5 Geology, Soils and Geohazards | 4.12 Public Services and Recreation Facilities |
| 4.6 Greenhouse Gases and Climate Change | 4.13 Transportation and Circulation |
| 4.7 Hazardous Materials | 4.14 Utilities and Service Systems |

Agricultural Resources and Mineral Resources were determined not to be directly relevant to the adoption and development under the Specific Plan and are briefly discussed in Chapter 6, *Impact Overview and Growth Inducement*, under Section 6.4, *Effects Found Not to Be Significant*.

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

Each environmental topic section generally includes two main subsections:

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

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

The Impact Classification (discussed below) of the project’s effects prior to implementation of mitigation measures is stated in parentheses immediately following the impact statement. The Impact Classification stated in the parentheses immediately following the impact statement does, however, already incorporate the City’s Standard Conditions of Approval and Uniformly Applied Development Standards, discussed below.

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

4.03 Thresholds/Criteria of Significance

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

The City has established Thresholds/Criteria of Significance Guidelines to help clarify and standardize analysis and decision-making in the environmental review process in the City of Oakland. The Thresholds are offered as guidance in preparing environmental review documents. The City uses these Thresholds unless the location of the project or other unique factors warrants the use of different thresholds. The Thresholds are intended to implement and supplement provisions in the CEQA Guidelines for determining the significance of environmental effects,

including CEQA Guidelines Sections 15064, 15064.5, 15065, 15382, and Appendix G, and form the basis of the City's Initial Study and Environmental Review Checklist¹.

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

CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of "the environment on the project" in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

4.04 Standard Conditions of Approval and Uniformly Applied Development Standards

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

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

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

The Standard Conditions of Approval incorporate development policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland

¹ Although no Environmental Review Checklist was prepared for this EIR, the factors listed for consideration in the Environmental Review Checklist are evaluated in this EIR.

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

4.05 Impact Classifications

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

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

4.06 Environmental Baseline

Overall, pursuant to Section 15125(a) of the CEQA Guidelines, this EIR measures the physical impacts of the proposed project (i.e., the Broadway Valdez Development Program) against a “baseline” of physical environmental conditions at and in the vicinity of the Plan Area. The environmental “baseline” is the combined circumstances existing around the time the NOP of the EIR was published, which is April 2012.² In most cases, the baseline condition relevant to the environmental topic being analyzed is described within each environmental topic section in this

² Except as specified otherwise, any reference to “existing” conditions throughout this EIR refers to the baseline condition as of around April 2012.

chapter. In some cases (such as Section 4.1, *Aesthetics, Wind and Shadow*), discussion of the baseline condition is detailed or restated in the Impacts Analysis to provide the impact analysis in the most reader-friendly format and organization. The baseline also includes the policy and planning context in which adoption and development under the Specific Plan is proposed. This is discussed in detail within Section 4.9, *Land Use, Plans and Policies*, and identifies any inconsistencies between the adoption and development under the Specific Plan and applicable, currently adopted plans and policies.

4.07 Cumulative Analysis

4.07.1 Approach to the Cumulative Analysis

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

4.07.2 Cumulative Context

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

Generally, the City of Oakland’s Major Projects list June 2012 (provided as Appendix B to this Draft EIR), as well as cumulative development beyond the Plan Area that could potentially result in an incremental impact when added to the development under the Specific Plan, was used to identify past, present, existing, approved, pending and reasonably foreseeable future projects in the vicinity of the Plan Area. Example major cumulative projects located within or near the Plan Area include the Broadway West Grand Mixed-Use Project, the Shops at Broadway Project, Kaiser Center Office Project, Alta Bates Summit Medical Center Master Plan Project, Kaiser

Permanente Oakland Redevelopment Project, City Walk/City Center T-10 Project, Jack London Square Redevelopment Project, the Lake Merritt BART Station Area Plan Project. However, the Major Projects List is not intended as an inclusive list of cumulative projects considered in this EIR. As discussed above, cumulative projects considered in the cumulative context can vary by environmental topic; therefore, some of the Major Projects listed may not be directly relevant to the cumulative context, depending on the environmental topic.

In some cases, the cumulative context may include more development than listed in the Major Projects list. A primary example is the transportation analyses (and transportation-related traffic and air quality), which use the Alameda County Transportation Commission travel demand model, which reflects traffic from projects citywide and the broader regional context.

Alternatively, as mentioned above, the aesthetics analysis would primarily consider projects within the viewsheds of the Plan Area, which may not, for example, include projects on the list that are located in distant Oakland areas, particularly low-rise development not affecting the Oakland skyline. Further, projects contributing to potential cumulative effects to cultural resources, for example, could consider development in and near the Plan Area as well as development citywide (in the case of impacts to resource types such as libraries, railroad-related resources, and ethnic sites found throughout the city, although not the case for the development analyzed in this EIR).

The cumulative discussions in each topical section throughout this Chapter describe the cumulative geographic context considered for each topic.

4.1 Aesthetics, Shadow and Wind

This section describes the existing visual, shadow, and wind conditions of the Specific Plan Area and analyzes how the adoption and development under the Specific Plan may affect those conditions. The analysis includes how the adoption and development under the Specific Plan may affect the visual quality and visual character of the Plan Area, as well as scenic vistas and resources viewed from surrounding public areas, and lighting and glare. Potential changes to shadow and wind conditions are also analyzed. This section describes the environmental and regulatory setting relevant to aesthetics, shadow, and wind issues in the Plan Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.1.1 Environmental Setting

Visual Character of the Plan Area

The 95-acre Plan Area is situated in a shallow valley that slopes down from the north to the south. The underlying street grid is made up of an irregular block pattern that is characterized by a series of triangular and trapezoidal shape blocks as a result of Broadway bisecting the Plan Area into eastern and western portions. The irregularity of block shapes and sizes has led to a predominance of small parcels (75 percent of the parcels in the Plan Area are less than 0.25 acres), which contribute to the overall visual quality of the Plan Area since they allow for a more fine-grained development pattern than can be found in the Downtown, for instance, and provide a greater sense of visual interest at the street level. Among other unique Plan Area features that help to define its visual character are the several distinctively designed ‘flat-iron’ buildings, such as the historic Arnstein-Field & Lee Star Showroom at the intersection of Broadway and Webster Street and a number of extra wide sidewalks, such as at 27th and Broadway, and 25th and Broadway, which are used for a combination of public space and automobile showcases.

In general, the development pattern in the Plan Area is less uniform than that found in the City’s Downtown. The overall lower lot coverage reflects the concentration of automotive uses in the area that devote large areas to sales lots and vehicle storage, and to the Plan Area’s greater dependence on surface parking. The dedication of large areas to surface parking and automobile sales lots results in a development that is dispersed and fragmented, lacks consistent physical form, and contributes to a poorly defined public realm. Few blocks in the Plan Area have sections where buildings form a consistent street wall that frames the street with active storefronts, without major gaps. The few places where there is a consistent street wall, such as along Broadway between 25th and 26th Streets, the presence of automotive-related showrooms and repair garages undermine the pedestrian environment with physical distractions such as curb cuts, driveways and roll-up garage doors and uses that provide limited visual interest at the street level. Thus, the overall visual character of the Plan Area reveals that it was once cohesive in its emphasis of automobile-related uses and yet it can now be described as irregular and inconsistent in terms of the physical forms it contains.

The Plan Area is bordered to the north by the I-580 elevated freeway segment, which run in an east-west direction approximately 20 feet above street grade and creates a visual edge along this Plan Area boundary. This I-580 segment obscures northerly views from the Plan Area onto the neighboring areas and further contributes to the automobile-oriented quality experienced in this portion of the Plan Area.

Vegetation in the Plan Area is minimal and is limited to street trees as well as small ornamental lawns in front of commercial and residential buildings.

As noted above, the building character in the Plan Area is diverse, although some overarching themes do exist. The majority of the buildings are older (constructed prior to 1950) and most were designed for automotive sales and service type uses, and therefore have large, open floorplates and tall ceilings. These older buildings contribute to the Plan Area's sense of visual character and identity due to the quality of their construction and craftsmanship, which is distinguishable from more modern buildings, which tend to have a generic, non-descript quality. Residential uses are limited and generally exist as detached single-family homes. In terms of architectural styles, commercial buildings include Beaux Arts, Art Deco, Moderne, 1920s decorative brick, and early 20th century utilitarian service garages, while residential buildings include a mix of Craftsman, Colonial Revival, or Mission Revival styles.

In terms of building heights, the majority (90 percent) are low-rise, with most ranging between one and four stories. However, the Plan Area also contains about a dozen taller buildings ranging from 3 to 12 stories, which are scattered throughout the area. These include structures such as the Valdez Plaza Residences, Broadway Webster Medical Plaza, YMCA, and 180 Grand Parking Garage, and are generally newer and are denser than other buildings. Earlier, pre-1920 structures are primarily masonry buildings, while those built after 1920 are generally built with concrete or concrete block.

Designated historic buildings represent important visual landmarks. Buildings such as the First Presbyterian Church, the Queen Anne-style mixed use building at Broadway/29th, the Packard Lofts Building at Broadway/24th, and the two flat-iron buildings at Broadway/28th Street and Broadway/Piedmont Avenue add visual interest to the Plan Area.

Views of the Plan Area and Scenic Resources

Due to the built urban environment, short-range views of the Plan Area (those less than 0.25 mile from the area) are limited to surrounding streets and from the nearby public open spaces such as Oak Glen Park, Adams Park/Veterans Memorial and the public areas surrounding the northern portion of Lake Merritt. Short-range views are also available to motorists and others traveling along Broadway and other smaller streets throughout the Plan Area, as well as motorists traveling along the elevated I-580, adjacent to the Plan Area, and I-880, approximately one mile to the south. Mid- and long-range views of the Plan Area (approximately 0.5 mile from the area) are available primarily from various streets throughout the City of Oakland.

A site reconnaissance was conducted to document existing visual/aesthetic conditions and to identify representative viewpoints of the Plan Area and through the Plan Area toward the City's scenic resources as designated in the General Plan (the Oakland/Berkeley Hills, Downtown Oakland and San Francisco, Bay Area bridges, Lake Merritt, and the SF Bay and Oakland Estuary). Several representative views of the Plan Area were selected for analyses and are depicted with adoption and development under the Specific Plan. A viewpoint location map of the selected views is provided in **Figure 4.1-1**. **Figures 4.1-2** through **4.1-4** show existing views from these viewpoints alongside conceptual simulations of the development under the Specific Plan. These viewpoints were selected as they provide clear visual access to the Plan Area, through the Plan Area to the Oakland Hills. Viewpoints considered but rejected include views southward from the Mountain View Cemetery, views northward from I-980 and 27th Street up Broadway, and views northward from the east side of Lake Merritt (a map of the rejected viewpoints and rough images of views from these points is provided in Appendix C). It was determined that development under the Specific Plan would scarcely be perceptible from each of these rejected vantage points because the Plan Area was too far away and/or obscured from view.

Figure 4.1-2 illustrates a view of the Plan Area from an elevated vantage point along I-580, looking south. As shown in this figure, the view of Broadway is dominated by the wide expanse of the asphalt right-of-way, which visually downplays the prominence of the structures on either side. The irregularity of the Broadway street wall is exemplified, in this particular view, by a five-story commercial building located adjacent to an automotive dealership in the foreground. In general, views of auto-related uses are typical throughout the Plan Area, both in the form of surface parking lots and other types of auto-related commercial uses enclosed in commercial and light industrial buildings. A view of mid- and high-rise office buildings associated with Downtown can be seen in the background. In general, this view lacks any distinctive or unique visual characteristics and instead conveys a fairly generic urban landscape with the aforementioned focus on the automobile.

Another existing view of Broadway is presented from 24th Street, looking north (in Figure 4.1-3). Similar to the view described above, the predominant features from this vantage point are likewise associated with automotive uses, with a surface parking lot and "Auto Row" signs visible in the left foreground. In addition, low-rise nondescript commercial buildings line both sides of the street, although most of these buildings are at least partially obscured by street trees. A church spire is visible in the distance, although the numerous light poles along both sides of the street form the more prominent vertical features in the overall landscape. This view is similar to the one described above in that it conveys a generally urban, auto-centered character; however, it is softened somewhat by the presence of vegetation, a church in the mid-ground, and the Berkeley hills in the background, elements that convey a more pedestrian-friendly character.

It is noted that Broadway is the main thorough-fare through the Plan Area. Other streets throughout the Plan Area are narrower and contain different land use mixes, representing different visual patterns and characteristics.



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-1
Viewpoint Map



Existing View from I-580 at Broadway Looking South



Conceptual Simulation

Note: This conceptual visual simulation is intended to portray conceptual building massing and does not represent specific architectural design.



Existing View from Broadway at 24th Street Looking North



Conceptual Simulation

Note: This conceptual visual simulation is intended to portray conceptual building massing and does not represent specific architectural design.



Existing View from Lake Merritt Path Looking Northwest



Conceptual Simulation

Note: This conceptual visual simulation is intended to portray conceptual building massing and does not represent specific architectural design.

SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-4

Existing View and Computer Simulation of Viewpoint 3

Lastly, a view from the Lake Merritt public path looking northwest is presented in the top image of Figure 4.1-4 (from outside of Plan Area boundaries). Given the large size of the Citicorp building at 180 Grand Avenue visible in the foreground, the relative low-rise nature of the structures in the Plan Area, and the intervening vegetation visible within this public open space, views of the Plan Area are largely obscured from this vantage point.

Although views eastward from the Plan Area include the Oakland Hills, overall, view corridors through the Plan Area provide limited views of protected scenic resources, as identified in the City's General Plan (see Policy OS-10.1 below). Although, as noted below, I-580 is a designated scenic highway, views from the highway, as depicted in Figure 4.1-2, is not characterized as scenic or unique.

Light and Glare

The Plan Area is located in a built-out urban environment that has existing sources of light and glare associated with land uses typical for an urban setting. Light and glare are associated with outdoor automotive sales lots, in particular, which are equipped with 15- to 20-foot pole-mounted lights to illuminate the parked for-sale vehicles. Light and glare are also associated with street lights along Broadway and other streets throughout the Plan Area, as well as I-580, a major interstate highway that borders the Plan Area to the north.

Shadow

Shadow conditions within the Plan Area are typical of shadow conditions in built-out urban environments. As expected, shadow is most prevalent in the portions of the Plan Area that contain taller buildings, such as in the Valdez Triangle, where shadow under existing conditions is extensive especially during the morning and afternoon hours during late fall and early winter, when the sun is lowest on the horizon. Taller buildings in the area, including the Valdez Plaza Residences, Broadway Webster Medical Plaza, YMCA, and 180 Grand Parking Garage, also cast longer shadows during this time. (See existing shadows delineated in Figures 4.1-5 through 4.1-16, presented in the Shadow Analysis, further in this section.)

Wind

General Wind Conditions

The Plan Area lies within a climatological sub region of the San Francisco Bay Area Air Basin where the marine air that travels through the Golden Gate, as well as across San Francisco and the San Bruno Gap, is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of marine air to split off to the north and south of Oakland; this phenomenon tends to diminish wind speeds in Oakland.

Wind flow is generally from the west, and average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during

winter. Together, the west, north-northwest and south-southeast winds are the most frequent winds that exceed 25 miles per hour (mph).

Wind conditions within the City result from the interaction of the approaching wind with the physical features of the environment – buildings, topography and landscape. In cities, groups of structures tend to slow the winds near ground level, due to the friction and drag of the structures themselves, but this leaves the air mass that flows well overhead to continue with little slowing. However, a building that is much taller than surrounding buildings will intercept and redirect winds that might otherwise flow overhead, and bring those winds down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and also relatively turbulent, and can be incompatible with the intended uses of nearby ground level spaces such as plazas and sidewalks. Moreover, structures that present very large surfaces square to strong winds can create ground-level winds that can be hazardous to pedestrians.

4.1.2 Regulatory Setting

Local

City of Oakland General Plan

City of Oakland General Plan policies that pertain to aesthetics, shadow, and wind relevant to the Specific Plan include the following:

Open Space, Conservation and Recreation (OSCAR) Element

- ***Policy OS-4.4:*** Elimination of Blighted Vacant Lots: Discourage property owners from allowing vacant land to become a source of neighborhood blight, particularly in residential areas with large vacant lots.
- ***Policy OS-9.3:*** Gateway Improvements: Enhance neighborhood and city identity by maintaining or creating gateways. Maintain view corridors and enhance a sense of arrival at the major entrances to the city, including freeways, BART lines, and the airport entry. Use public art, landscaping, and signage to create stronger City and neighborhood gateways.
- ***Policy OS-10.1:*** View Protection: Protect the character of existing scenic views in Oakland, paying particular attention to (a) views of the Oakland Hills from the flatlands; (b) views of downtown and Lake Merritt; (c) views of the shoreline; and (d) panoramic views from Skyline Boulevard, Grizzly Peak Road, and other hillside locations.
- ***Policy OS-10.2:*** Minimize Adverse Visual Impacts: Encourage site planning for new development which minimizes adverse visual impacts and take advantage of opportunities for new vistas and scenic enhancement.
- ***Policy OS-10.3:*** Underutilized Visual Resources: Enhance Oakland's underutilized visual resources, including the waterfront, creeks, San Leandro Bay, architecturally significant buildings or landmarks, and major thoroughfares.

- **Policy OS-11.1:** Access to Downtown Open Space: Provide better access to attractive, sunlit open spaces for persons working or living in downtown Oakland. The development of rooftop gardens is encouraged, especially on parking garages.

Land use and Transportation Element (LUTE)

- **Policy T6.2:** Improving Streetscapes: The city should make major efforts to improve the visual quality of streetscapes. Design of the streetscape, particularly in neighborhoods and commercial centers, should be pedestrian-oriented and include lighting, directional signs, trees, benches, and other support facilities.
- **Policy D2.1:** Enhancing the Downtown: Downtown development should be visually interesting, harmonize with its surroundings, respect and enhance important views in and of the downtown, respect the character, history, and pedestrian-orientation of the downtown, and contribute to an attractive skyline.

In addition, policies from the Historic Preservation Element are listed in Sections 4.4, *Cultural Resources*; and 4.6, *Greenhouse Gases*.

Scenic Highways Element

The City's Scenic Highways Element of the General Plan (adopted 1974) includes a number of policies that pertain to visual resources identified as part of the Caltrans Scenic Highway Program. Policies within the City's Scenic Highways Element aim to limit signage and visual intrusions and protect panoramic vistas along scenic corridors, and to ensure that new construction within scenic corridors demonstrate "architectural merit" and are "harmonious" with the surrounding landscape. The entire length of MacArthur Freeway (I-580) within Alameda County is identified as part of the Caltrans Scenic Highways Program. It is adjacent to the Plan Area to the north.

Redevelopment Plans

The Plan Area falls within the Project Area of two redevelopment plans: the Broadway/MacArthur/San Pablo Redevelopment Plan and the Central District Urban Renewal Plan. The overall general goal of these plans is to eliminate blight within the respective Project Areas.

Broadway/MacArthur/San Pablo Redevelopment Plan

The Broadway/MacArthur/San Pablo Redevelopment Plan Project Area encompasses the entire northern portion of the Plan Area southward to 27th Street. The majority of goals and objectives outlined within this plan do not directly pertain to aesthetics, shadow, and wind aside from requiring conformity with existing City sign ordinances and design review standards (see Oakland Planning Code, below). However, the Plan states that, "One of the objectives of this Plan is to create an attractive and pleasant environment in the Project Area." In addition, this Redevelopment Plan lists the following major goal:

- **I:** The establishment and implementation of performance criteria to assure high site design standards and environmental quality and other design elements which provide unity and integrity to the entire Project.

Central District Urban Renewal Plan

The Central District Urban Renewal Plan encompasses the southern portion of the Plan Area northward to 27th Street. This Redevelopment Plan lists the following major goal pertaining to aesthetics:

- **G:** Improved environmental design within the Project Area, including creation of a definite sense of place, clear gateways, emphatic focal points and physical design which expresses and respects the special nature of each subarea.

Oakland Planning Code

The designs of new projects in Oakland are subject to performance criteria that are utilized as part of the City's design review process. These criteria address the projects related to the surrounding visual character, as well as public and private investments in the area. Projects are evaluated based on site, landscaping, height, bulk, arrangement, texture, materials, colors, appurtenances, and other characteristics. Conformance with the Oakland General Plan and any other design guidelines or criteria is also considered.

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

The City's Standard Conditions of Approval (SCA) that directly pertain to reducing visual, light and glare, wind, and shade/shadow impacts and that apply to the adoption and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs would be adopted as conditions of approval and required, as applicable, of the adoption and development under the Specific Plan to help ensure no significant impacts occur to aesthetic resources. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

- **SCA 12: Required Landscape Plan for New Construction and Certain Additions to Residential Facilities**
Prior to issuance of a building permit. Submittal and approval of a landscape plan for the entire site is required for the establishment of a new residential unit (excluding secondary units of five hundred (500) square feet or less), and for additions to Residential Facilities of over five hundred (500) square feet. The landscape plan and the plant materials installed pursuant to the approved plan shall conform to all provisions of Chapter 17.124 of the Oakland Planning Code, including the following:
 - a) Landscape plan shall include a detailed planting schedule showing the proposed location, sizes, quantities, and specific common botanical names of plant species.
 - b) Landscape plans for projects involving grading, rear walls on downslope lots requiring conformity with the screening requirements in Section 17.124.040, or vegetation management prescriptions in the S-11 zone, shall show proposed landscape treatments for all graded areas, rear wall treatments, and vegetation management prescriptions.
 - c) Landscape plan shall incorporate pest-resistant and drought-tolerant landscaping practices. Within the portions of Oakland northeast of the line formed by State

Highway 13 and continued southerly by Interstate 580, south of its intersection with State Highway 13, all plant materials on submitted landscape plans shall be fire-resistant. The City Planning and Zoning Division shall maintain lists of plant materials and landscaping practices considered pest-resistant, fire-resistant, and drought-tolerant.

- d) All landscape plans shall show proposed methods of irrigation. The methods shall ensure adequate irrigation of all plant materials for at least one growing season.

- **SCA 13: Landscape Requirements for Street Frontages (Residential Construction)**

Prior to issuance of a final inspection of the building permit:

- a) All areas between a primary Residential Facility and abutting street lines shall be fully landscaped, plus any unpaved areas of abutting rights-of-way of improved streets or alleys, provided, however, on streets without sidewalks, an unplanted strip of land five (5) feet in width shall be provided within the right-of-way along the edge of the pavement or face of curb, whichever is applicable. Existing plant materials may be incorporated into the proposed landscaping if approved by the Director of City Planning.
- b) In addition to the general landscaping requirements set forth in Chapter 17.124, a minimum of one (1) fifteen-gallon tree, or substantially equivalent landscaping consistent with city policy and as approved by the Director of City Planning, shall be provided for every twenty-five (25) feet of street frontage. On streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet, the trees to be provided shall include street trees to the satisfaction of the Director of Parks and Recreation.

- **SCA 15: Landscape Maintenance (Residential Construction)**

Ongoing. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. All required fences, walls and irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- **SCA 17: Landscape Requirements for Street Frontages (Commercial and Manufacturing)**

Prior to issuance of a final inspection of the building permit, on streets with sidewalks where the distance from the face of the curb to the outer edge of the sidewalk is at least six and one-half (6 ½) feet and does not interfere with access requirements, a minimum of one (1) twenty-four (24) inch box tree shall be provided for every twenty-five (25) feet of street frontage, unless a smaller size is recommended by the City arborist. The trees to be provided shall include species acceptable to the Tree Services Division.

- **SCA 18: Landscape Maintenance (Commercial and Manufacturing)**

Ongoing. All required planting shall be permanently maintained in good growing condition and, whenever necessary, replaced with new plant materials to ensure continued compliance with applicable landscaping requirements. All required irrigation systems shall be permanently maintained in good condition and, whenever necessary, repaired or replaced.

- **SCA 19: Underground Utilities**

Prior to issuance of a building permit, the project applicant for projects under the Specific Plan shall submit plans for review and approval by the Building Services Division and the Public Works Agency, and other relevant agencies as appropriate, that show all new electric and telephone facilities; fire alarm conduits; street light wiring; and other wiring, conduits, and similar facilities placed underground. The new facilities shall be placed underground along the project applicant's street frontage and from the project applicant's structures to the point of service. The plans shall show all electric, telephone, water service, fire water service, cable, and fire alarm facilities installed in accordance with standard specifications of the serving utilities.

- **SCA 20: Improvements in the Public Right-of-Way (General)**

Approved prior to the issuance of a P-job or building permit

- a) The project applicant for projects under the Specific Plan shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details, locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.
- b) Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition.
- c) The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
- d) The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

- **SCA 21: Improvements in the Public Right-of Way (Specific)**

Approved prior to the issuance of a grading or building permit. Final building and public improvement plans submitted to the Building Services Division shall include the following components:

- a) Install additional standard City of Oakland streetlights.
- b) Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.
- c) Reconstruct drainage facility to current City standard.
- d) Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.

- e) Construct wheelchair ramps that comply with Americans with Disabilities Act requirements and current City Standards.
 - f) Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.
 - g) Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.
- **SCA 40: Lighting Plan**
Prior to the issuance of an electrical or building permit. The proposed lighting fixtures shall be adequately shielded to a point below the light bulb and reflector and that prevent unnecessary glare onto adjacent properties. Plans shall be submitted to the Planning and Zoning Division and the Electrical Services Division of the Public Works Agency for review and approval. All lighting shall be architecturally integrated into the site.

4.1.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Have a substantial adverse effect on a public scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, located within a state or locally designated scenic highway;
3. Substantially degrade the existing visual character or quality of the site and its surroundings;
4. Create a new source of substantial light or glare which would substantially and adversely affect day or nighttime views in the area;
5. Introduce landscape that would now or in the future cast substantial shadows on existing solar collectors (in conflict with California Public Resource Code Section 25980-25986);
6. Cast shadow that substantially impairs the function of a building using passive solar heat collection, solar collectors for hot water heating, or photovoltaic solar collectors;
7. Cast shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space;
8. Cast shadow on an historic resource, as defined by CEQA Section 15064.5(a), such that the shadow would materially impair the resource's historic significance by materially altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion on or eligibility for listing in the National Register of Historic Places, California Register of Historical Resources, Local register of historical resources, or a historical resource survey form (DPR Form 523) with a rating of 1-5;

9. Require an exception (variance) to the policies and regulations in the General Plan, Planning Code, or Uniform Building Code, and the exception causes a fundamental conflict with policies and regulations in the General Plan, Planning Code, and Uniform Building Code addressing the provision of adequate light related to appropriate uses; or
10. Create winds exceeding 36 mph for more than one hour during daylight hours during the year. The wind analysis only needs to be done if the project's height is 100 feet or greater (measured to the roof) and one of the following conditions exist: (a) the project is located adjacent to a substantial water body (i.e., Oakland Estuary, Lake Merritt or San Francisco Bay); or (b) the project is located in Downtown.

Impacts

Scenic Vistas and Scenic Resources

Impact AES-1: Adoption and development under the Specific Plan would not adversely affect scenic public vistas or views of scenic resources (Criteria 1 and 2). (Less than Significant)

Adoption and development under the Specific Plan would not be expected to block or otherwise adversely affect scenic views or scenic resources. As stated above, the Plan Area itself is fully built out, and is generally limited terms of scenic views. Private projects would be built within existing property lines and would not be expected to visually obstruct existing view corridors along City streets. New structures would be added throughout the Plan Area in a way that is intended to fill in the gaps in the street wall and result in a more cohesive overall look.

The Specific Plan proposes revisions to the zoning and height and bulk districts that would, over time, encourage or discourage specific land uses within each of the Plan Area subareas and would channel specific uses according to areas where they have been determined to be most appropriate (the proposed land use designations, zoning, and height areas are discussed in detail in Chapter 3, *Project Description*). The proposed land use changes would also allow for increases in urban density and could result in construction of different building types, scales, and architectural designs in certain areas over time as compared to existing conditions. For instance, much of the Valdez subarea would designated as a part of the *Central Business District*, with height districts revised to accommodate structures up to 250 feet in height. Such changes would support the destination retail district envisioned in this area, and would, over time, result in much larger structures to be constructed than currently exist there. The majority of the North End subarea would be rezoned to *Community Commercial* and to height and bulk districts ranging from 45 feet (to accommodate the residential district) to 200 feet further north.

However, as discussed in the Project Description, for purposes of maintaining flexibility, this EIR is based on the Broadway Valdez Development Program, which sets forth a *reasonably foreseeable development* anticipated in the Plan Area over its lifespan. These proposed height limits, in combination with the proposed Maximum Base Heights, existing step-back requirements, and the City's projected Broadway Valdez Development Program inform the Physical Height Model, which is the basis for analysis within this EIR (see Figure 3-11 in Chapter 3, *Project Description*). However, the Physical Height Model shows more modest heights as most of the Plan Area is

expected to be built out to 65 feet or less in height. The tallest structures identified in the Physical Height Model would be located along the southernmost parcels of the Valdez subarea and the northernmost parcels of the North End subarea, areas where mid- and high-rise buildings already exist and where new towers are not expected to adversely affect views within or through the Plan Area. Although taller new buildings would be noticeable to residents, workers, and visitors in the immediate vicinity of individual development projects, these developments would not result in substantial changes to the overall urban scale considering the existing variable nature of the buildings heights and volumes throughout the Plan Area and surrounding neighborhoods. The overall scale of much of the area would remain mid-rise and urbanized in character.

In addition, the Specific Plan would undertake a number of public realm improvements, such as sidewalk widening, and would promote active street frontages, which, together, would result in smaller-scaled, more pedestrian-focused streets and would create visual interest at the street level. This is expected to have a beneficial effect on scenic vistas within the Plan Area.

Three visual simulations from representative viewpoints were prepared to illustrate possible changes to views as a result of adoption and development under the Specific Plan. Figure 4.1-2 (bottom image) illustrates a view from I-580 looking south over Broadway. Although this viewpoint is located on a segment of I-580 designed as a scenic route, as discussed above, this particular view is not considered scenic or unique. As shown, new development along the western sidewalk in the foreground and along both sidewalks in the background would visibly change how Broadway is perceived from this vantage point. While the new structures would partially obstruct views of the sky, such changes would not represent a substantial adverse effect on views, since no views considered scenic or unique (as defined by CEQA) and no visual access to protected scenic resources (as defined by the General Plan) would be obstructed. Furthermore, the new structures would create a more consistent street wall and add visual interest at the street level, enhancing the public views experienced by individuals traversing Broadway. As shown, the new buildings would be set back from the Broadway façade above the sixth story and landscaping would be installed along the Broadway street frontage. In general, the changes anticipated under the Specific Plan would create a more pedestrian-oriented aesthetic as seen both from this mid-range vantage point as well as experienced along Broadway.

Figure 4.1-3 illustrates a view from Broadway at 24th Street looking north. As shown, adoption and development under the Specific Plan would replace some of the existing low-rise auto dealerships and surface parking lots with new structures and landscaping. As shown, the views of Oakland Hills, a protected scenic resource, would remain largely unobstructed. Although the façade of the First Presbyterian Church would be partially obscured, the spire would remain visible against the sky. Changes to this view would not be considered substantial or adverse, since the underlying visual characteristics that make up this view (i.e., urban streetscape set against the backdrop of hills), would remain largely unchanged.

Figure 4.1-4 illustrates a view from Lake Merritt public path (outside of the Plan Area boundaries) looking northwest toward the Plan Area. As shown, the new structure would alter the public views into the Plan Area and partially block views of the sky. However, such changes would not be

considered significant or adverse, since the new structure would be of similar massing to the existing building that dominates the left field of this view. Construction of another high-rise building would further intensify this area, but would nevertheless remain consistent with the overall dense urban look and feel of this area.

All future development within the Plan Area would be subject to the proposed *Design Guidelines for the Broadway Valdez Specific Plan Area* (Design Guidelines), a document that includes guidelines and standards related to urban form and visual quality. Over time, adherence to the Design Guidelines for particular projects and the required consistency of those projects with the policies articulated in the Specific Plan would result in new development that is cohesive in architectural style and form. However, the mix of building styles area-wide would be generally preserved. Moreover, physical changes would be incremental and would occur gradually over time, as individual project sponsors find opportunities to implement their projects.

Renovation or construction of future projects under the Specific Plan would be required to adhere to the General Plan policies and SCAs described in the Regulatory Setting, above, that would effectively mitigate potential impacts to scenic views and vistas to less-than-significant levels. Based on the above, the adoption and development under the Specific Plan would not adversely affect scenic public vistas or views of protected scenic resources.

Mitigation: None Required.

Visual Character

Impact AES-2: Adoption and development under the Specific Plan would not substantially degrade the existing visual character or quality of the site and its surroundings (Criterion 3). (Less than Significant)

Overall, almost 40 percent of the developable land within the Plan Area is considered underutilized and the predominance of automobile-related uses, including long stretches of surface parking lots and abundant private driveways, contribute to the overall uninviting pedestrian environment of the Plan Area (see Section 4.9, *Land Use, Plans and Policies*). Adoption and development under the Specific Plan would be intended, among other objectives, to improve the visual character of the Plan Area by activating the street frontage and improving the physical appearance of existing structures and public realm. Although the specific designs of individual development projects are not yet known, these future projects under the Specific Plan would be analyzed to determine their individual effect on the visual character of the surrounding environment during the design review process. The *Design Guidelines for the Broadway Valdez Specific Plan Area* would guide future development and serve as the basis for design review approval findings by City staff, and when necessary, the City Planning Commission and the City Council. The *Design Guidelines* would apply to all new development projects and major rehabilitation projects located in the Plan Area and would ensure that adoption and development under the Specific Plan would be compatible with the existing built form and

architectural character of the Plan Area as a whole, and compatible with the distinctive visual character of individual areas.

In addition, future development would be required to align with and incorporate existing General Plan policies and SCAs relevant to visual quality and described in the Regulatory Setting, above. For these reasons, adoption and development under the Specific Plan would not be expected to degrade the visual character of the Plan Area, and this impact would be less than significant.

Mitigation: None Required.

Light and Glare

Impact AES-3: Adoption and development under the Specific Plan would result in new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area (Criterion 4). (Less than Significant)

Adoption and development under the Specific Plan would create new sources of light or glare, but these new sources would be consistent with the existing light and glare conditions in the area. The Plan Area is already an urbanized environment with associated light and glare. Over time, surface parking lots and associated flood lighting would be replaced with taller buildings. These structures would introduce light from upper story office and residential uses as well as ground level lighting associated with commercial uses and office or residential entryways. Individual developments would not be expected to change or affect day or nighttime views as a result of increased light or glare to a significant extent. Such projects would be subject to standard project review and approval processes as required by the City of Oakland, and may require additional design review. Individual projects would be required to implement SCA 40, *Lighting Plan*, which would minimize potential impacts resulting from lighting and ensure that lighting and glare effects remain less than significant.

Mitigation: None Required.

Shadow

Impact AES-4: Adoption and development under the Specific Plan could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light (Criteria 5 through 9). (Conservatively Significant and Unavoidable)

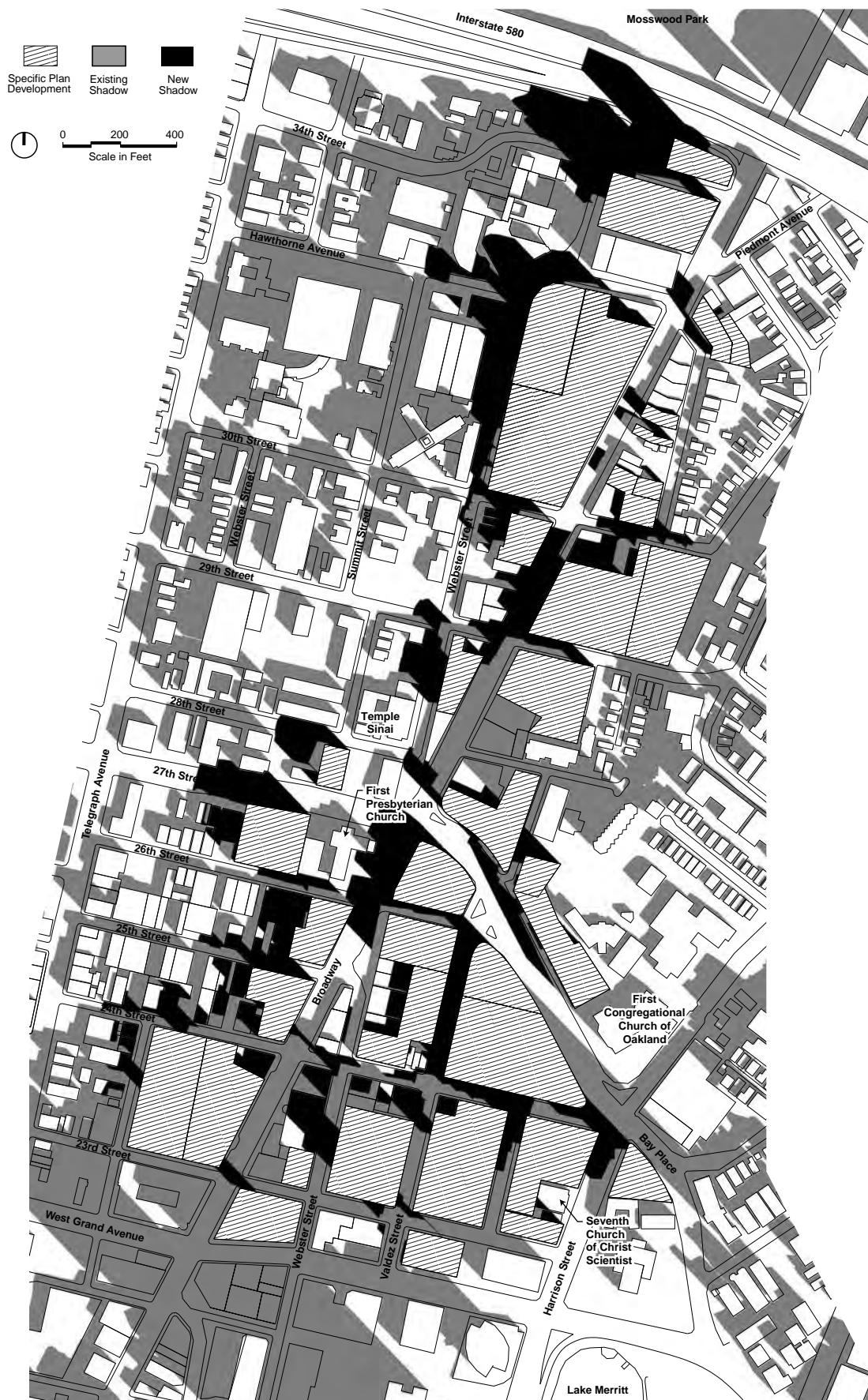
Adoption and development under the Specific Plan could include mid- and high-rise buildings that may cast shadow on public open spaces, solar collector, and historic resources. While the exact details associated with future development proposals is unknown at this time, a generalized shadow study was prepared that is based upon the Physical Height Model. As noted above,

although the proposed height limits, proposed maximum base heights, existing step-back code requirements inform the Physical Height Model, heights depicted in the Physical Height Model, and thus used as the basis for shadow analysis, are more modest than the height maximums in the proposed rezoning and most of the Plan Area is expected to be built out to 65 feet or less in height. However, heights and general building envelopes depicted in the Physical Height Model are considered conservative in that they include slightly more building area than would be required to accommodate the *maximum feasible development* assumed for the EIR analysis (i.e. the Broadway Valdez Development Program) (see Chapter 3, *Project Description*). Shadow study graphics are presented in **Figures 4.1-5** through **4.1-16**, which show the maximum extent of shadow that would occur at 9 a.m., noon, and 3 p.m. on December 21st, March 21st, June 21st and September 21st. As shown in these graphics, shadow from the new buildings would extend to the west in the mornings, north around the noon hour, and to the east in the afternoons.

Winter shadow is the longest and, thus, during the winter months, some new shadow would extend almost the length of a full block, with the highest buildings casting the greatest amount of new shadow. This would occur primarily in the Valdez Triangle (area to be re-designated as Central Business District) as well as blocks in the northern portion of the North End subarea. New shadow during the summer, fall, and spring months would fall within the range of winter shadow, with the majority of the new shading extending over the adjacent parcels and sidewalks.

The City's 2013 inventory of solar facilities identifies addressed for passive solar heat collectors, solar collectors for hot water heating, and photovoltaic solar collectors in the City of Oakland. This inventory identified solar collectors on the Humanist Church building located at 411 28th Street within the Plan Area. These collectors are on the south-facing portion of the roof along 27th Street. As shown on Figures 4.1-5, 4.1-8, 4.1-11, and 4.1-14, implementation of the Broadway Valdez Development Program would introduce new shading on this structure in the morning hours during all months of the year. New development on the south side of 27th Street could also add new shadow to the solar collectors during the afternoon hours in winter months (see Figure 4.1-7).

In general, solar collectors collect sun power during the period from two hours prior and two hours post solar noon—the time at which the sun is directly south. Due to daylight savings, this period is approximately 10am to 2pm during winter months and 11am to 3pm during summer months. During the winter months, the majority, if not all potential new shading would be gone from the affected solar collectors by 10am (see Figure 4.1-5). Although some shading would return by 3pm from new development across 27th Street (Figure 4.1-7), there is very little sun power left at this time on December afternoons. The collectors would be completely exposed at and around noon during winter months. Spring through autumn, new shading in the morning hours would move off of the solar collectors by between 11am and noon or earlier. It is likely the collectors would be exposed during the entirety of the important 11am to 3pm time period. While this additional shading may slightly reduce the ability of solar collectors at this address to collect sun power, the new shadow would not substantially compromise their effectiveness and thus would not result in a substantial loss of power, income, or use from the collectors. Moreover, the new shading would not substantially impair the function the solar collectors as they contribute to the Humanist Church building and the impact is considered less-than-significant.



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-5
Shadow Study for 9:00 a.m., December 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-6

Shadow Study for 12:00 noon, December 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522
Figure 4.1-7
 Shadow Study for 3:00 p.m., December 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-8

Shadow Study for 9:00 a.m., March 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-9

Shadow Study for 12:00 noon, March 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-10

Shadow Study for 3:00 p.m., March 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-11

Shadow Study for 9:00 a.m., June 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-12

Shadow Study for 12:00 noon, June 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-13

Shadow Study for 3:00 p.m., June 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-14

Shadow Study for 9:00 a.m., September 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-15
Shadow Study for 12:00 noon, September 21



SOURCE: Environmental Vision

Broadway Valdez District Specific Plan . 208522

Figure 4.1-16
Shadow Study for 3:00 p.m., September 21

In addition, the City's inventory identified four addresses in the Plan Area vicinity—3223 Telegraph Avenue, 2781 Telegraph Avenue, 32 Randwick Avenue, and 59 Grand Avenue—with solar collectors. As shown in the shadow diagrams in Figures 4.1-5 through 4.1-16, new shadows from the Broadway Valdez Development Program would not reach these structures at a time when they are not already in shadow from existing development. As shown in Figure 4.1-7, new shadow would not be expected to reach Mosswood Park at a time when it is not already shaded by the I-580 overpass and the existing high-rise medical building just north of the overpass. Glen Oak Park is tree-lined and mostly shaded at all times. Nonetheless, and in part due to existing and proposed height restrictions in the residential neighborhood surrounding Glen Oak Park, shadows from adoption and development under the Specific Plan are not likely to reach that park. Lake Merritt, southeast of the Plan Area, would not be exposed to potential shading from adoption and development under the Specific Plan. Early morning shadows, in the winter months when shadows are longer, could add shade to the public plaza on the northwest side of 27th and Broadway. However, the potential for this brief and passing new shadow on the plaza is not likely to limit the public use of the space.

In terms of historic resources, the City of Oakland's CEQA thresholds of significance state that a significant impact would occur if a project were to shade designated historic resources such that the new shadow would materially impair the resource's historic significance. While access to light is not typically an important characteristic of most historic buildings, it may be of historic places of worship where the light, specifically the light through stained glass windows, conveys its historical significance. Blockage of that light at certain times of day that coincide with designated times of worship could materially impair its historic significance and lead to a significance impact. Therefore, under this criterion, new, prolonged shading of stained glass windows during designated worship periods, on places of worship that are considered historic resources under CEQA, would result in a significant impact when the access to natural light during those times is a material character defining element of the historic resource.

There are four CEQA Historic Resources that are also places of worship in and adjacent to Plan Area boundaries. These resources were examined in the context of the shadow study are the First Presbyterian Church, located at 2601-19 Broadway, the Seventh Church of Christ Scientist, located at 2333 Harrison Street, Temple Sinai, located adjacent to the Plan Area boundary at 356 28th Street, and the First Congregational Church of Oakland, located adjacent to the Plan Area boundary at 2501 Harrison Street.

As shown in Figures 4.1-6 through 4.1-16, the new shadow on First Presbyterian Church would occur primarily in the winter months, with parcels across Broadway and 26th Street (anticipated for buildout with buildings reaching 65-feet in height) casting new shadow on the eastern façade of the church building during the early morning hours and on the southern façade of the church building during late morning through afternoon hours. However, the stained glass windows, which are located along the church's northern façade, would not incur new shadow as a result of the adoption and development under the Specific Plan and, thus, no significant impact with respect to shading a historic resource would occur.

The Seventh Church of Christ Scientist would incur new shadow as a result of adoption and development under the Specific Plan specifically on adjacent parcels to the south and adjacent parcels to the west and north. New shadow would occur during the winter morning hours, and noon and afternoon hours year-round. However, based on observations, this church contains a relatively small amount of clear glass doors and windows within an entry vestibule along its eastern façade, rather than large areas of stained glass windows on any one facade. As such, access to light through these front doors and windows does not appear to be one of the characteristics which convey the historical significance of this building, in particular. New shadow would not be expected to materially impair its historic significance, since the glass doors and windows do not convey its historic significance such that their shading would negatively affect the building's historic status. Therefore, new shadow would not result in a significant impact with respect to this historic resource.

Temple Sinai, just north of the Plan Area boundary, would incur new shadow during late afternoon hours in the winter and early mornings throughout much of the year. The temple contains stained glass windows in the southern portion of its eastern façade. At days and hours when services are being held within that portion of the temple, these stained glass windows, as illuminated by the direct sunlight, are considered a material character defining feature that convey its historical significance. These windows would remain largely unshaded from development under the Specific Plan, except for early morning hours (prior to 9 a.m.) in the spring, summer and fall, when new shadow from parcels across Webster Street to the northeast (anticipated for buildout at 65 feet) could extend south enough to shade them. While the project would obscure direct sunlight for a limited time during morning hours, it would not prevent all light from entering the windows, because ambient light from the sky as well as light reflected from other building surfaces would continue to illuminate the window. Although, the duration of new shading would be brief and would occur during the early morning hours, according to the Temple's website, prayer services are scheduled for as early as 7:30 in the morning (Temple Sinai, 2013). Therefore, shading of the temple's stained glass windows during this time would materially impair this resource's historic significance by altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion in the California Register of Historic Resources. As such, the impact would be significant. Implementation of Mitigation Measure AES-4, below, would be required.

The First Congregational Church of Oakland, just north of the Plan Area boundary at the intersection of Bay Place, 27th Street and Harrison Street, is a historic resource on the City of Oakland's Preservation Study list, and has an A-rated historic status (eligible for listing as a City Landmark). The stained glass windows which line the southwestern façade of this historic property would incur new shadow in the winter months between 3:00 p.m. and sunset when new shadows from parcels across Bay Place to the south (anticipated for buildout at 65 feet) would extend northward across the street (see Figure 4.1-7). In addition to the new shadows being brief and at a time when the Plan Area is almost entirely shaded, the church's southwestern façade is lined with tall trees which also shade the southwestern façade of this church. Existing trees and landscaping were not modeled in the shadow study and thus the shade they create is not captured as existing shading. It is likely that by the time new shading resulting from adoption and

development under the Specific Plan would reach the southwestern façade of the church, it would largely be shaded by these trees. Furthermore, any new shading would occur at a time when the church is not heavily used (after 3:00 p.m., well after morning church services). Therefore, new shadow would not result in a significant impact with respect to this historic resource.

Overall, new shading generated from buildout of the Broadway Valdez Development Program would result in less than significant shadow impacts with the exception of potential shading on the Temple Sinai. Therefore, Mitigation Measure AES-4 is recommended.

Mitigation Measure AES-4: Shadow Analysis. Project sponsors for projects proposed for development on the parcel bounded by Webster Street, 29th Street, Broadway, and 28th Street shall conduct a shadow analysis to evaluate the shadowing effects of the proposed project on the stained glass windows on the eastern façade of the Temple Sinai. Should the initial shadow analysis reveal new shading would occur on the stained glass windows of the Temple Sinai during morning worship periods, the project sponsor shall, if feasible, modify project designs and reduce proposed building heights, as necessary, until a revised shadow analysis demonstrates that new shading on Temple Sinai would not materially impair this resource's historic significance (i.e., would avoid Temple Sinai's stained glass windows during morning worship periods, which are generally from 7:30 a.m. to 12:00 p.m.).

Conclusion with Mitigation: At this time, it cannot be known with certainty that a project redesign would eliminate the potential for new shading on Temple Sinai that would materially impair this resource's historic significance. For this reason, Mitigation Measure AES-4 would not ensure less-than-significant impacts. Therefore, the impact is conservatively deemed significant and unavoidable.

Significance after Mitigation: Conservatively Significant and Unavoidable.

Wind

Impact AES-5: Adoption and development under the Specific Plan has the potential to result in adverse wind conditions (Criterion 10). (Conservatively Significant and Unavoidable)

Development under the Specific Plan could be tall enough to result in adverse wind conditions. Although new high-rise structures amidst existing or other new high-rise structures can sometimes result in general reductions in wind speed and the number and durations of occurrence of wind hazard, other building characteristics, such as location relative to other nearby buildings and/or open spaces, façade articulation, etc., are also considered and, together, can result in increases in adverse wind conditions.

Detailed wind studies are required of individual projects at least 100 feet tall and located within Downtown. Approval of the Specific Plan would include an amendment to the General Plan, including an extension of the *Central Business District* land use designation northward to

27th Street and throughout the Valdez subarea. Therefore, Mitigation Measure AES-5, Wind Analysis, is identified.

Mitigation Measure AES-5: Wind Analysis. Project sponsors proposing buildings 100 feet tall or taller within the portion of the Plan Area designated *Central Business District* shall conduct detailed wind studies to evaluate the effects of the proposed project. If the wind study determines that the proposed project would create winds exceeding 36 mph for more than one hour during daylight hours during the year, the project sponsor shall incorporate, if feasible, measures to reduce such potential effects, as necessary, until a revised wind analysis demonstrates that the proposed project would not create winds in excess of this threshold. Examples of measures that such projects may incorporate, depending on the site-specific conditions, include structural and landscape design features and modified tower designs: wind protective structures or other apparatus to redirect downwash winds from tall buildings, tree plantings or dense bamboo plantings, arbors, canopies, lattice fencing, etc.

Conclusion with Mitigation: At this time, however, there are not sufficient details available to analyze specific impacts and it cannot be known with certainty that a project redesign would eliminate the potential for new adverse wind impacts. For this reason, Mitigation Measure AES-5 would not ensure less-than-significant impacts. Therefore, the impact is conservatively deemed significant and unavoidable.

Significance after Mitigation: Conservatively Significant and Unavoidable.

Cumulative Impacts

Impact AES-6: Adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area, would result in significant cumulative wind, and shadow impacts. (Conservatively Significant and Unavoidable)

Geographic Context

The cumulative geographic context includes the Plan Area, viewsheds visible within and across the Plan Area, and surrounding areas potentially shaded by adoption and development under the Specific Plan.

Impacts

Adoption and development under the Specific Plan is intended to increase public and private investment within the plan boundaries, which would improve the overall visual quality of the area. When combined with other cumulative development in and around the Plan Area (as discussed in Section 4.07.2, *Cumulative Context*, at the beginning of Chapter 4 of this Draft EIR), the cumulative effects would not result in a significant adverse aesthetics impact, due to past, present and future developments' adherence to the General Plan policies and SCAs described earlier in the Setting section, as well as compliance with conditions identified through the City's

design review and environmental review processes, when applicable. Present and reasonably foreseeable development would be generally consistent with adopted plans and the overall vision of the City and the Plan Area. Other cumulative projects would be analyzed for their potential impacts to light and glare, views, and visual character – through design review and/or the environmental review process, when applicable. If potential project-level, adverse aesthetics effects are identified through these processes, the project's effects will be reduced to less than significant to the extent feasible through adherence to project-specific design measures, including design modifications, identified through those processes. Therefore, although the effect of cumulative development may change the overall aesthetic character of the Plan Area and surrounding neighborhoods, it would not be expected to be adverse and result in significant cumulative impacts for the reasons discussed above and throughout this analysis. The impact related to aesthetics would be less than significant.

However, as noted above, due to the uncertainty of available mitigation, adoption and development under the Specific Plan would result in significant and unavoidable impacts related to shadows and wind. Therefore, adoption and development under the Specific Plan, when combined with other cumulative development in and around the Plan Area, would contribute to cumulative shadow and wind effects and would result in significant and unavoidable cumulative shadow and wind impacts.

Mitigation Measure AES-6: Implement Mitigation Measures AES-4 and AES-5.

Significance after Mitigation: Conservatively Significant and Unavoidable.

4.1.4 References

- California Department of Transportation, 2013. The California Scenic Highway System, <http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>, accessed February 18, 2013.
- City of Oakland, 1974. *General Plan, Scenic Highways Element*, adopted September 1974.
- City of Oakland, 1996. *General Plan, Open Space, Conservation and Recreation (OSCAR) Element*, June 1996.
- City of Oakland, 1998. *General Plan, Land Use and Transportation Element (LUTE)*, March 24, 1998, as amended.
- City of Oakland, 2010. Planning Code, Section 17.136.050, *Design Review Procedure*, April 15, 2010.
- Temple Sinai, 2013. Temple Sinai – Master Calendar, <http://www.oaklandsinai.org/calendar.aspx>, accessed February 25, 2013.

4.2 Air Quality

This section presents an overview of information related to air quality, including a description of current air quality conditions in the vicinity of the Plan Area and sensitive land uses that could be affected by air pollution. The impact analysis discusses the expected emissions associated with adoption and development under the Specific Plan, evaluates potential effects on sensitive receptors in the vicinity, and includes appropriate City Standard Conditions of Approval (SCAs) and recommended measures to further implement SCAs, followed by identification of the residual impact significance after SCAs and recommended measures are implemented.

4.2.1 Environmental Setting for Air Quality

Climate and Meteorology

Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. The Plan Area is located in the City of Oakland and is within the boundaries of the San Francisco Bay Area Air Basin (Bay Area). The Bay Area Air Basin encompasses the nine-county region including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the Bay Area is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone and secondary particulates, such as nitrates and sulfates.

More specifically, the Plan Area lies approximately two miles east of San Francisco Bay in the Northern Alameda and Western Contra Costa Counties climatological subregion. This subregion extends from Richmond to San Leandro with San Francisco Bay as its western boundary, and its eastern boundary defined by the Oakland-Berkeley Hills. In this area, marine air traveling through the Golden Gate, as well as across San Francisco and the San Bruno Gap (a gap in the Coastal Range between the ocean and the San Francisco Airport), is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off to the north and south of Oakland, which causes diminished wind speeds. The air pollution potential in this subregion is relatively low for portions close to the Bay, due to the largely good ventilation and less influx of pollutants from upwind sources (Bay Area Air Quality Management District [BAAQMD], 2012a).

Wind measurements taken at Oakland International Airport indicate that the predominant wind flow is out of the west-northwest. Northwest winds occur approximately 46 percent of the time. Average wind speeds vary from season to season with the strongest average winds occurring during summer and the lightest average winds during winter. Average wind speeds are 9.7 miles per hour (mph) during summer and 7.4 mph during winter. Temperatures in Oakland average

58 °F annually, ranging from an average of 40°F on winter mornings to an average of mid-70s in the late summer afternoons. Daily and seasonal oscillations of temperature are small because of the moderating effects of the nearby ocean. In contrast to the steady temperature regime, rainfall is highly variable and confined almost exclusively to the “rainy” period from early November to mid-April. Oakland averages 18 inches of precipitation annually, but because much of the area’s rainfall is derived from the fringes of mid-latitude storms, a shift in the annual storm track of a few hundred miles can mean the difference between a very wet year and near drought conditions.

Existing Air Quality

The BAAQMD operates a regional monitoring network that measures the ambient concentrations of the six criteria air pollutants. Existing and probable future levels of air quality in Oakland can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearby monitoring stations. The monitoring stations closest to the Plan Area are the West Oakland and International Boulevard stations in Oakland, approximately 1.0 mile southwest and 7.3 miles southeast from the Plan Area, respectively. The West Oakland station began monitoring fine particulate matter (PM_{2.5}), nitrogen oxides (NO_x), and sulfur dioxide (SO₂) in 2009, ozone (O₃; (1-hour and 8-hour) in 2010, and the International Boulevard station monitors these same pollutants and for previous years.

Since the major pollutants of concern in the San Francisco Bay Area are O₃ and PM, **Table 4.2-1** shows a four-year summary of monitoring data (2009 through 2012) for these pollutants from the West Oakland and International Boulevard stations. Due to the proximity of the Plan Area to the stations in Oakland, air quality measurements gathered in Oakland are understood to be generally representative of conditions within the Specific Plan Area. Table 4.2-1 also compares measured pollutant concentrations with State and national ambient air quality standards (see Regulatory Setting below).

Criteria Air Pollutants

Ozone (O₃)

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x). ROG and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

**TABLE 4.2-1
AIR QUALITY DATA SUMMARY (2008-2011) FOR THE SPECIFIC PLAN AREA^a**

Pollutant	State Standard ^b	National Standard ^b	Monitoring Data by Year			
			2009	2010	2011	2012
Ozone hourly						
Highest 1-hour average, ppm ^c	0.09	NA	0.092	0.040	0.057	0.061
Days over State Standard			0 ^f	0	0	0
Ozone 8-hour						
Highest 8-hour average, ppm ^c	0.07	0.075	0.062	0.035	0.048	0.048
Days over National Standard			0	0	0	0
Days over State Standard			0	0	0	0
Carbon Monoxide (CO) 8-hour						
Highest 8-hour average, ppm ^c	9.0	9	1.96	1.69	2.65	2.4
Days over National Standard			0	0	0	0
Days over State Standard			0	0	0	0
Nitrogen Dioxide (NO ₂)						
Highest 1-hour concentration, ppm ^c	0.18	0.10	0.057	0.069	0.062	0.053
Days over National Standard			0	0	0	0
Days over State Standard			0	0	0	0
Sulfur Dioxide (SO ₂)						
Highest 24-hour concentration, ppm ^c	0.04	0.14	0.005	0.004	0.003	0.008
Days over National Standard			0	0	0	0
Days over State Standard			0	0	0	0
PM _{2.5}						
Highest 24-hour average, µg/m ^{3c}	NA	35	27.9	35.2	43.1	33.6
Estimated days over National Standard ^d			0	0	1	0

^a Ozone data for 2009 are from the BAAQMD's International Boulevard station in Oakland, approximately 7.3 mile southeast from the Plan Area; data for 2010, 2011, and 2012 are from the BAAQMD's West Oakland station at 1100 21st Street in Oakland, approximately 1.0 mile southwest of the Plan Area; All other pollutant data are from West Oakland for 2009 through 2012 except for 2012 PM_{2.5}, which is from International Boulevard. PM₁₀ data was not available near the Plan Area.

^b Generally, State standards and national standards are not to be exceeded more than once per year.

^c ppm = parts per million; µg/m³ = micrograms per cubic meter.

^d Exceedance based on the previous National Standard of 65µg/m³.

^e The CARB states that an exceedance is not necessarily a violation.

^f A violation occurs only if the standard is exceeded. Because 0.092 rounds to 0.09, it is not considered a violation. A recorded concentration of 0.095 or greater would constitute a violation of the State standard.

NA = Not Available or Not Applicable.

SOURCE: CARB, 2013.

Carbon Monoxide (CO)

Ambient carbon monoxide concentrations normally are considered a local effect and typically correspond closely to the spatial and temporal distributions of vehicular traffic. Wind speed and atmospheric mixing also influence carbon monoxide concentrations. Under inversion conditions, carbon monoxide concentrations may be distributed more uniformly over an area that may extend some distance from vehicular sources. When inhaled at high concentrations, carbon monoxide combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia, as well as for fetuses.

Carbon monoxide concentrations have declined dramatically in California due to existing controls and programs and most areas of the state including the Plan Area region have no problem meeting the carbon monoxide state and federal standards. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, fewer emissions from new vehicles, and improvements in fuels. The clear success in reducing CO levels is evident in the first paragraph of the executive summary of the California Air Resources Board (CARB) *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan for Ten Federal Planning Areas* (CARB, 2004), shown below:

“The dramatic reduction in carbon monoxide (CO) levels across California is one of the biggest success stories in air pollution control. Air Resources Board (ARB or Board) requirements for cleaner vehicles, equipment and fuels have cut peak CO levels in half since 1980, despite growth. All areas of the State designated as non-attainment for the federal 8-hour CO standard in 1991 now attain the standard, including the Los Angeles urbanized area. Even the Calexico area of Imperial County on the congested Mexican border had no violations of the federal CO standard in 2003. Only the South Coast and Calexico continue to violate the more protective State 8-hour CO standard, with declining levels beginning to approach that standard.”

Nitrogen Dioxide (NO₂)

NO₂ is a reddish brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO₂. NO₂ may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Nitrogen dioxide is an air quality concern because it acts as a respiratory irritant and is a precursor of ozone. Nitrogen dioxide is a major component of the group of gaseous nitrogen compounds commonly referred to as nitrogen oxides (NO_x). Nitrogen oxides are produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, nitrogen oxides emitted from fuel combustion are in the form of nitric oxide (NO) and nitrogen dioxide (NO₂). NO is often converted to NO₂ when it reacts with ozone or undergoes photochemical reactions in the atmosphere. Therefore, emissions of NO₂ from combustion sources are typically evaluated based on the amount of NO_x emitted from the source.

Sulfur Dioxide (SO₂)

SO₂ is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO₂ is also a precursor to the formation of atmospheric sulfate, particulate matter, and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain.

Particulate Matter (PM)

PM₁₀ and PM_{2.5} consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause

adverse health effects. Some sources of particulate matter, such as wood burning in fireplaces, demolition, and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates also can damage materials and reduce visibility. Large dust particles (diameter greater than 10 microns) settle out rapidly and are easily filtered by human breathing passages. This large dust is of more concern as a soiling nuisance rather than a health hazard. The remaining fraction, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and state ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus, are able to penetrate to the deepest parts of the lungs. Scientific studies have suggested links between fine particulate matter and numerous health problems including asthma, bronchitis, acute and chronic respiratory symptoms such as shortness of breath and painful breathing. Recent studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Children are more susceptible to the health risks of PM_{10} and $PM_{2.5}$ because their immune and respiratory systems are still developing.

Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health (Dockery and Pope, 2006).

Lead (Pb)

Ambient lead concentrations meet both the federal and state standards in the Plan Area. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline products. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. Adoption and development under the Specific Plan would not introduce any new sources of lead emissions; consequently, lead emissions are not required to be quantified and are not further evaluated in this analysis.

Toxic Air Contaminants (TACs)

Toxic Air Contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs do not have ambient air quality standards, but are regulated by the BAAQMD using a risk-based approach. This approach uses a health risk assessment to determine what sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis of

exposure to toxic substances and human health risks from exposure to toxic substances is estimated, based on the potency of the toxic substances.¹

The BAAQMD provides a publicly available inventory of TAC-related health risks for permitted stationary sources throughout the San Francisco Bay Area Air Basin as well as for freeways. The inventory presents community risk and hazards from screening tools and tables that are intentionally conservative. The screening-level risk factors derived from the BAAQMD's tool are intended to indicate whether additional review related to the impact is necessary and are not intended to be used to assess actual risk for all projects. The BAAQMD's most recently updated (May 2012) Google Earth-based inventory of stationary source risks and hazards indicates 14 permitted TAC sources within and adjacent to the Plan Area. These sources are predominantly associated with commercial and office uses in the area, such as emergency diesel generators, gasoline dispensing facilities, boilers, as well as automobile service and repair uses. Conservatively estimated increased cancer risk values for these sources vary from less than 0.01 in one million up to 55 in one million, depending on the source. **Table 4.2-2** presents these existing sources and their conservatively estimated risk and hazard values. Risk and hazard values are at the fence line of the facility.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency and intensity of the source; wind speed and direction; and the sensitivity of receptors. The CEQA Guidelines recommends that odor impacts be considered for any proposed new odor sources located near existing receptors, as well as any new sensitive receptors located near existing odor sources. Generally, increasing the distance between the receptor and the source would mitigate odor impacts.

The BAAQMD provides examples of odor sources which include wastewater treatments plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries and chemical plants. Few odor sources currently exist in the Plan Area, however, most of the Plan Area is within maximum buffer areas delineated in accordance with the BAAQMD factors.

In accordance with the recommendations in the BAAQMD Guidelines, the City mapped known odor sources within its jurisdiction. Most of the Plan Area is located on the furthest fringes of the BAAQMD-recommended two-mile buffer zone of two chemical manufacturing plants. The Plan Area is not within the BAAQMD-recommended one-mile buffer zone of greenwaste/recycling or food processing facilities nor within the BAAQMD-recommended two-mile buffer zone of the EBMUD Waste Treatment Facility located in West Oakland (see **Figure 4.2-1**) (City of Oakland, 2010).

¹ A health risk assessment is required for permitting approval if the BAAQMD concludes that projected emissions of a specific air toxic compound from a proposed new or modified source suggest a potential public health risk. In these instances, a health risk assessment for the source in question must be prepared. Such an assessment generally evaluates chronic, long-term effects, calculating the increased risk of cancer as a result of exposure to one or more TACs.

**TABLE 4.2-2
HEALTH IMPACTS FROM STATIONARY SOURCES WITHIN THE PLAN AREA**

Source #	Facility Type	Address	Conservatively Estimated Risk Levels from Screening Tools and Tables		
			Cancer Risk (persons per million)	Chronic Hazard Impact	PM _{2.5} Concentration (µg/m ³)
7476	Label Art	290 27th Street	0	0	0
13705	Saint Paul's Tower	100 Bay Place	18.27	0.006	0.004
14195	Caltrans	111 Grand Avenue	54.85	0.019	0.097
19467	Brandywine Realty Trust	155 Grand Avenue	18.84	0.007	0.004
16640	Calsteers	180 Grand Avenue	26.42	0.009	0.047
19971	Essex Portfolio LLC	100 Grand Avenue	16.28	0.006	0.004
19344	VIP Auto Collision Repair	293 27th Street	0	0	0
15482	Autotrends	300 24th Street	0	0	0
12498	Oakland Acura	277 27th Street	0	0	0
G9464	Oakland Fleet Fueling Facility	401 27th Street	No data ^a		
20013	MPower Communications	23rd & Waverley Street	2.12	0.001	0.004
12434	Q & S Automotive	2345 Broadway	0	0	0
15483	Autotrends	2840 Broadway	0	0	0
15919	Collision Service Center of Oakland	295 29th Street	0	0	0
Highest Source Impact			54.85	0.019	0.097

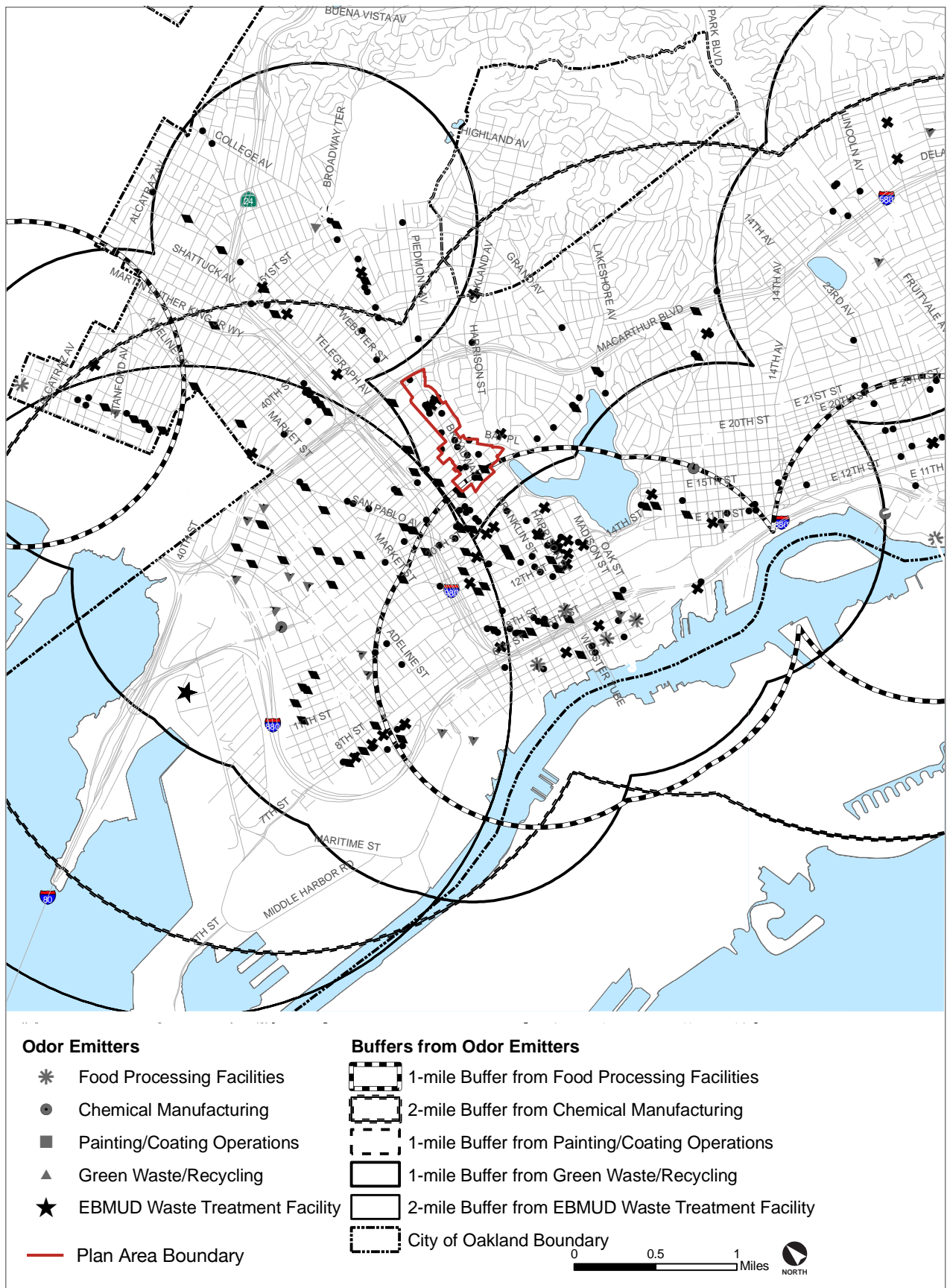
^a Although this facility continues to operate as a garage for the State of California, the fueling facility is no longer in operation per the BAAQMD.

SOURCE: BAAQMD, 2012c and ESA.

Sensitive Land Uses

Some receptors are considered more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions source, or duration of exposure to air pollutants. Land uses such as schools, children's day care centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress and other air quality-related health problems. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences, resulting in greater exposure to ambient air quality conditions.

The BAAQMD specifically defines sensitive receptors as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as



SOURCE: City of Oakland, 2010; PBS&J, 2010

Broadway Valdez District Specific Plan . 208522

Figure 4.2-1
Odor Emitters

children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas. The Plan Area consists of a mixture of commercial, retail and office space as well as residential dwellings, day care facilities, and senior community facilities.

4.2.2 Regulatory Setting

Federal

Ambient Air Quality Standards

The Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (USEPA) to identify National Ambient Air Quality Standards (NAAQS or “national standards”) to protect public health and welfare. National standards have been established for ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), respirable particulate matter (PM₁₀ and PM_{2.5}), and lead (Pb). Pursuant to the 1990 FCAA amendments, the USEPA classifies air basins (or portions thereof) as “attainment” or “nonattainment” for each criteria air pollutants, based on whether or not the NAAQS had been achieved.

Table 4.2-3 shows current national and State ambient air quality standards and provides a brief discussion of the related health effects and principal sources for each pollutant. **Table 4.2-4** shows the current attainment status in the Plan Area vicinity.

The FCAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The FCAA amendments added requirements for states containing areas that violate the NAAQS to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the FCAA amendments and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Air Contaminants

Regulation of TACs termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal, State and local controls on individual sources. The 1977 FCAA amendments required the USEPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPs) to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. There is uncertainty in the precise degree of hazard.

**TABLE 4.2-3
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS, EFFECTS, AND SOURCES**

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	---	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when reactive organic gases (ROG) and nitrogen oxides (NO _x) react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm	0.075 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO ₂)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Avg.	0.030	0.053 ppm		
Sulfur Dioxide (SO ₂)	1 hour	0.25 ppm	.075 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	---	0.5 ppm		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Avg.	---	0.03 ppm		
Respirable Particulate Matter (PM ₁₀)	24 hours	50 µg/m ³	150 µg/m ³	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Avg.	20 µg/m ³	---		
Fine Particulate Matter (PM _{2.5})	24 hours	---	35 µg/m ³	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO _x , sulfur oxides, and organics.
	Annual Avg.	12 µg/m ³	15 µg/m ³		
Lead (Pb)	30-Day Avg.	1.5 µg/m ³	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	---	1.5 µg/m ³		
	Rolling 3-Month Avg.		.15 µg/m ³		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Geothermal Power Plants, Petroleum Production and refining	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)
Sulfates	24 hour	25 µg/m ³	No National Standard	Produced by the reaction in the air of SO ₂ .	Breathing difficulties, aggravates asthma, reduced visibility
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, discourages tourism.	See PM _{2.5}

ppm = parts per million; µg/m³ = micrograms per cubic meter.SOURCE: California Air Resources Board, 2012, <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>

**TABLE 4.2-4
BAY AREA ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone (O ₃) – one hour	No Federal Standard ¹	Nonattainment
Ozone (O ₃)– eight hour	Nonattainment	Nonattainment
PM ₁₀	Unclassified	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Maintenance	Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Attainment
Sulfur Dioxide (SO ₂)	Attainment	Attainment
Lead (Pb)	No Designation	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

¹ Federal One Hour Ozone National Ambient Air Quality Standard was revoked on June 15, 2005.

² The State 8-hour ozone standard was approved by the CARB on April 28, 2005, and became effective May 17, 2006.

SOURCE: BAAQMD, 2013.

State

The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. CARB establishes state ambient air quality standards and vehicle emissions standards.

Ambient Air Quality Standards

As shown in Tables 4.2-1 4.2-3, and 4.2-4, California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants and include air quality standards for some pollutants for which there is no corresponding national standard. Under the California Clean Air Act (CCAA) patterned after the FCAA, areas have been designated as attainment or nonattainment with respect to the state standards.

Toxic Air Contaminants

The Health and Safety Code defines TACs as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) HAPs adopted in accordance with AB 2728. The Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. “High-priority”

facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines (diesel particulate matter, or DPM) as TACs. CARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000). The document represents proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra low sulfur diesel fuel on diesel-fueled engines.

In April 2005, CARB published *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB, 2005). This handbook is intended to give guidance to local governments in the siting of sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, near sources of air pollution. There are TAC sources predominantly associated with commercial and office uses located throughout the Plan Area, including, for example, emergency diesel generators, and gasoline dispensing facilities, in addition to freeways and high-volume roadways. Consistent with CARB guidance, the City of Oakland has adopted Standard Conditions of Approval (SCA B) that reduce the impact of TAC sources and sensitive receptors.

Regional

The regional agency primarily responsible for developing air quality plans for the Bay Area is the Bay Area Air Quality Management District (BAAQMD), the agency with permit authority over most types of stationary emission sources of air pollutants in the Bay Area.

Air Quality Plans

As noted above, the FCAA requires states to prepare SIPs. For states containing areas that violate the NAAQS, regional planning and air pollution control agencies must prepare a regional *Air Quality Plan* to outline the measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve all standards specified in the Clean Air Act. The 1988 CCAA also requires development of air quality plans and strategies to meet state air quality standards in areas designated as non-attainment (with the exception of areas designated as non-attainment for the state PM standards). Maintenance plans are required for attainment areas that had previously been designated non-attainment in order to ensure continued attainment of the standards.

Bay Area plans are prepared by the BAAQMD with the cooperation of the Metropolitan Transportation Commission (“MTC”) and the Association of Bay Area Governments (“ABAG”). Currently, there are three plans for the Bay Area. These are:

- The *Ozone Attainment Plan for the 1-Hour National Ozone Standard* developed to meet federal ozone air quality planning requirements. However, the U.S. EPA revoked the 1-hour ozone standard in 2005.

- The *Bay Area 2010 Clean Air Plan* (CAP) developed to meet planning requirements related to the state ozone standard using a multi-pollutant approach (BAAQMD, 2010); and
- The *1996 Carbon Monoxide Redesignation Request and Maintenance Plan for Ten Federal Planning Areas*, developed by the air districts with jurisdiction over the ten planning areas including the BAAQMD to ensure continued attainment of the federal carbon monoxide standard. In June 1998, the USEPA approved this plan and designated the ten areas as attainment. The maintenance plan was revised most recently in 2004 (CARB, 2004).

The Bay Area addresses all requirements of the national eight-hour standard in the 2010 CAP. For state air quality planning purposes, the Bay Area is classified as a serious non-attainment area for ozone. The “serious” classification triggers various plan submittal requirements and transportation performance standards. One such requirement is that the Bay Area update the CAP every three years to reflect progress in meeting the air quality standards and to incorporate new information regarding the feasibility of control measures and new emission inventory data. The Bay Area’s record of progress in implementing previous measures must also be reviewed. On September 15, 2010, the BAAQMD adopted the most recent revision to the CAP—the 2010 CAP. The goals of the 2010 CAP are:

- Update the Bay Area 2005 Ozone Strategy in accordance with the requirements of the California Clean Air Act to implement “all feasible measures” to reduce ozone;
- Consider the impacts of ozone control measures on PM₁₀ and PM_{2.5}, TACs, and GHGs, in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2009–2012 timeframe.

BAAQMD CEQA Guidelines and Thresholds of Significance

In December 1999, the BAAQMD adopted its *CEQA Guidelines – Assessing the Air Quality Impacts of Projects and Plans*, as a guidance document to provide lead government agencies, consultants, and project proponents with uniform procedures for assessing air quality impacts and preparing the air quality sections of environmental documents for projects subject to CEQA. The *BAAQMD CEQA Guidelines* is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein. The document describes the criteria that the BAAQMD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts.

The BAAQMD updated the 1999 CEQA Air Quality Guidelines in 2010. In May of 2011, the BAAQMD adopted an updated version of its Thresholds of Significance for use in determining the significance of projects’ environmental effects under CEQA (Thresholds), and published their CEQA Guidelines for consideration by lead agencies. The Thresholds lowered the previous (1999) thresholds of significance for annual emissions of ROG, NO_x, and PM₁₀, and set a

standard for PM_{2.5} and fugitive dust. The 2011 CEQA Guidelines also include methodologies for evaluating risks and hazards for the siting of stationary sources and of sensitive receptors. The BAAQMD resolution adopting the significance thresholds in 2010 and 2011 had been set aside by an Alameda County Superior Court judicial writ of mandate as of March 5, 2012. However, on August 13, 2013 the California Court of Appeals issued a full reversal of the judgment. In a published ruling, the Court directed that the Superior Court vacate the writ of mandate issued in March 2012.

The BAAQMD has most recently updated its CEQA Air Quality Guidelines in May of 2012 which continue to provide direction on recommended analysis methodologies but no longer recommend quantitative significance thresholds. In the revised Guidelines, the air district recommends that lead agencies develop their own thresholds of significance. The BAAQMD offers, as possibilities, its previous 1999 Guidelines thresholds and also presents a table of thresholds promulgated by other California air districts, as well as a reference to California Air Pollution Control Officers Association and State Air Resources Board guidance. Lead agencies may also reference the BAAQMD CEQA Thresholds Options and Justification Report developed by district staff in 2009. This latter option provides lead agencies with a justification for continuing to rely on the BAAQMD 2011 thresholds. As such, City Thresholds for air quality are generally based upon the BAAQMD 2011 CEQA Guidelines and Thresholds.

Local

City of Oakland General Plan

The Open Space, Conservation and Recreation (OSCAR) Element of the Oakland General Plan contains the following Air Quality objective and policies that would apply to the adoption and development under the Specific Plan (City of Oakland, 1996).

- ***Objective CO-12: Air Resources:*** To improve air quality in Oakland and the surrounding Bay Region.
- ***Policy CO-12.1:*** Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.
- ***Policy CO-12.4:*** Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.
- ***Policy CO-12.6:*** Require construction, demolition and grading practices which minimize dust emissions.

City of Oakland Municipal Code

Per the City of Oakland Municipal Code, Title 15 Buildings and Construction, Chapter 15.36 Demolition Permits, 15.36.100 Dust Control Measures,

“Best Management Practices” shall be used throughout all phases of work, including suspension of work, to alleviate or prevent fugitive dust nuisance and the discharge of smoke or any other air contaminants into the atmosphere in such quantity as will violate any city or regional air pollution control rules, regulations, ordinances, or statutes. Water or dust palliatives or combinations of both shall be applied continuously and in sufficient quantity during the performance of work and at other times as required. Dust nuisance shall also be abated by cleaning and sweeping or other means as necessary. A dust control plan may be required as condition of permit issuance or at other times as may be deemed necessary to assure compliance with this section. Failure to control effectively or abate fugitive dust nuisance or the discharge of smoke or any other air contaminants into the atmosphere may result in suspension or revocation of the permit, in addition to any other applicable enforcement actions or remedies. (Ord. 12152 Section 1, 1999).

The City of Oakland has implemented Green Building principles in City buildings through the following programs: Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy, water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers.

Standard Conditions of Approval

The City’s Standard Conditions of Approval (SCA) that directly pertain to air quality and that apply to the adoption and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the adoption and development under the Specific Plan to help ensure no significant impacts occur regarding construction period dust (or emissions). Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

- **SCA A: Construction-Related Air Pollution Controls (Dust and Equipment Emissions)**

Ongoing throughout demolition, grading, and/or construction. During construction, the project applicant shall require the construction contractor to implement all of the following applicable measures recommended by the BAAQMD:

- a) Water all exposed surfaces of active construction areas at least twice daily (using reclaimed water if possible). Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.

- b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) Pave all roadways, driveways, sidewalks, etc. as soon as feasible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
- e) Enclose, cover, water twice daily or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
- h) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written idling policy (as required by Title 13, Section 2449 of the California Code of Regulations.)
- i) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- j) Post a publicly visible sign that includes the contractor's name and telephone number to contact regarding dust complaints. When contacted, the contractor shall respond and take corrective action within 48 hours. The telephone numbers of contacts at the City and the BAAQMD shall also be visible. This information may be posted on other required on-site signage.
- k) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- l) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.
- m) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- n) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).
- o) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holidays and weekend periods when work may not be in progress.

- p) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind blown dust. Wind breaks must have a maximum 50 percent air porosity.
 - q) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - r) The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
 - s) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
 - t) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
 - u) Minimize the idling time of diesel-powered construction equipment to two minutes.
 - v) All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449 of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”) must meet Emissions and Performance Requirements one year in advance of any fleet deadlines. The project applicant shall provide written documentation that the fleet requirements have been met.
 - w) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).
 - x) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO_x and PM.
 - y) Off-road heavy diesel engines shall meet the CARB’s most recent certification standard.
- **SCA B: Exposure to Air Pollution (Toxic Air Contaminants)²**
The following condition applies to all projects that meet ALL of the following criteria:
 1. The project involves either of the following sensitive land uses:
 - a. New residential facilities or new dwelling units; or
 - b. New or expanded schools, daycare centers, parks, nursing homes, or medical facilities; and
 2. The project is located within 1,000 feet of one or more of the following sources of air pollution:
 - a. Freeway
 - b. Roadway with significant traffic (at least 10,000 vehicles per day);

² This Standard Condition of Approval (SCA) refines, clarifies, and replaces the City’s previous Exposure to Air Pollution SCAs from the Supplemental Standard Conditions of Approval (dated 7/128/11), specifically SCAs B and C. This SCA better conforms to current guidance from the Bay Area Air Quality Management District (BAAQMD) and the EIR certified for the Plan Bay Area adopted by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC).

- c. Rail line (except BART) with over 30 trains per day;
 - d. Distribution center that accommodated more than 100 trucks per day, more than 40 trucks with operating Transportation Refrigeration Units (TRU) per day, or where the TRU unit operations exceed 300 hours per week;
 - e. Major rail or truck yard (such as the Union Pacific rail yard adjacent to the Port of Oakland);
 - f. Ferry terminal;
 - g. Port of Oakland; or
 - h. Stationary pollutant source requiring a permit from BAAQMD (such as a diesel generator; and
3. The project exceeds the health risk screening criteria after a screening analysis is conducted in accordance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines.

Exposure to Air Pollution (Toxic Air Contaminants)

a. ***Health Risk Reduction Measures***

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose **one** of the following methods:

- 1) The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with the California Air Resources Board (CARB) and the Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.
- 2) The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:
 - Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents, and other sensitive populations, in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
 - Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
 - The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows,

balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods, if feasible.

- Sensitive receptors shall not be located on the ground floor, if feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood (*Sequoia sempervirens*).
- Within the project site, sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Within the project site, existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
- Within the project site, emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
 - Installing electrical hook-ups for diesel trucks at loading docks.
 - Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
 - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
 - Prohibiting trucks from idling for more than two minutes.
 - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit

Initial Approval: Planning and Zoning Division

Monitoring/Inspection: Building Services Division

b. ***Maintenance of Health Risk Reduction Measures***

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: Ongoing

Initial Approval Authority: N/A

Monitoring/Inspection/Enforcement: Building Services Division

The following Standard Condition of Approval that addresses parking and transportation demand management and that applies to all projects that generate 50 or more net new AM or PM peak hour vehicle trips, is stated in full in the assessment of traffic in Section 4.13, *Transportation and Circulation*:

- **SCA 25: Parking and Transportation Demand Management**

4.2.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant air quality impact if it were to:^{3,4}

Project-Level Impacts

1. During project construction result in average daily emissions of 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀;
2. During project operation result in average daily emissions of 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or PM_{2.5} or 15 tons per year of PM₁₀;
3. Contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour [**NOTE:** Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects in which (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000 vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria.];
4. For new **sources** of Toxic Air Contaminants (TACs), during either **project construction or project operation** expose sensitive receptors to substantial levels of TACs resulting in (a) an increase in cancer risk level greater than 10 in one million, (b) an increase in non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM_{2.5} of greater than 0.3 micrograms per cubic meter; or, under cumulative conditions, resulting in (a) a cancer risk level greater

³ Although Specific Plans typically undergo only a plan-level analysis by necessity given the lack of available information on specific projects at the time of analysis, a "hybrid analysis" is performed herein to also provide a project-level analysis, where feasible. The intent is for this Specific Plan EIR to eliminate or minimize any subsequent CEQA review required of projects that occur under the Specific Plan. The discussion and analysis uses both the City's Project- and Plan-Level Thresholds for Air Quality.

⁴ Except for impacts related to Toxic Air Contaminants (TACs) (Significance Criterion 4) and odors (Significance Criterion 6), air quality impacts are, by their nature, cumulative impacts because one project by itself cannot generate air pollution that would violate regional air quality standards. Significance Criteria 1 through 3 pertain to a project's contribution to cumulative impacts but are labeled "Project- Level Impacts" here to be consistent with the terminology used by the BAAQMD.

than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter [NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new TAC sources consider sensitive receptors located within 1,000 feet. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. The cumulative analysis should consider the combined risk from all TAC sources.];

5. Expose new **sensitive receptors** to substantial ambient levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter [NOTE: Pursuant to the BAAQMD CEQA Guidelines, when siting new sensitive receptors consider TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, airports, seaports, ferry terminals, and rail lines. For this threshold, sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers]; or
6. Frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people [NOTE: For this threshold, sensitive receptors include residential uses, schools, daycare centers, nursing homes, and medical centers (but not parks)].

Plan-Level Impacts

7. Fundamentally conflict with the primary goals of the Bay Area Clean Air Plan (CAP);
8. Not include special overlay zones containing goals, policies, and objectives to minimize potential Toxic Air Contaminant (TAC) impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips; or
9. Not identify existing and planned sources of odors with policies to reduce potential odor impacts.

Approach to Analysis

As described above, the City has generally relied on the BAAQMD's 2011 guidelines to develop significance thresholds for air quality. As such, the City Thresholds for air quality are generally based upon the BAAQMD 2011 CEQA Guidelines and Thresholds.

The analysis of potential air quality impacts uses both the project-level and the plan-level methodology identified by the BAAQMD, the regional agency primarily responsible for developing air quality plans for the Bay Area, including the City of Oakland. This methodology is outlined in the BAAQMD document *California Environmental Quality Act Air Quality Guidelines* (BAAQMD, 2012a). Although individual projects developed under the Specific Plan may undergo separate environmental review under CEQA, this hybrid of a project-level and plan-level analysis considers potential individual construction and operational emissions from future projects, and represents adequate environmental analysis under CEQA for individual development projects under the Broadway Valdez Development Program (see Chapter 3, *Project Description*).

The health risk analysis contained herein relied on the BAAQMD's conservative screening-level data to screen out low-emitting existing sources of TACs that pose no substantial threat to increased cancer risk level exposure. For TAC sources not eliminated through this screening process, a more refined concentration modeling analysis was conducted and the result evaluated.

Moreover, CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of "the environment on the project" in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

Impacts

Project-Level Impacts

Impact AIR-1: Construction associated with adoption and development under the Specific Plan would result in average daily emissions of 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀ (Criterion 1). (Conservatively Significant and Unavoidable)

Project-related construction would generate air emissions through the use of heavy-duty construction equipment, from vehicle trips hauling materials, and from construction workers traveling to and from the project site. Mobile source emissions, primarily NO_x, would be generated from the use of construction equipment such as excavators, bulldozers, wheeled loaders, and cranes. During the finishing phase, paving operations and the application of asphalt, architectural coatings (i.e., paints) and other building materials would release ROG. The assessment of construction air quality impacts considers each of these sources, and recognizes that construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions.

The City of Oakland anticipates that adoption and development under the Specific Plan would occur over the next 20 to 25 years. The timing and sequence of development would depend upon numerous factors, including future market conditions, public investment, and private initiative and investment. As a conservative analysis, construction activities are assumed to occur over a default construction period calculated by the CalEEMod land use emissions model based on the number of residential units and square feet of non-residential development. The temporal distribution of land use construction reflects the assumptions of the transportation analysis which envisions a specific portion of net new land use by year 2020 and the remainder by year 2035. Although the Broadway Valdez Development Program likely would be developed at a slower pace through 2035, for the purposes of conservative analysis, construction periods are condensed to typical project-level construction periods. Following this conservative approach, the assumed construction period spans from 2015 to 2023, representing two equivalent 4-year construction periods.

Construction emissions from adoption and development under the Specific Plan were estimated using the CalEEMod land use emissions model, which separates the construction process into stages: demolition, grading, paving, structural building, and architectural coating. The grading phase is separated into emissions from fugitive dust, emissions from off-road equipment, and worker vehicle trips. The paving phase estimates emissions from off-road equipment, on-road trucks worker vehicle trips, as well as off-gassing of ROG emissions from asphalt (primarily parking lot and roadway surfaces).⁵ Emissions from the structural building phase would consist of off-road equipment emissions, worker vehicle trips and vendor vehicle trips. Grading activities were assumed to have been conducted prior to the other activities. The construction duration for each stage and scenario are detailed in CalEEMod printout sheets, which are included in Appendix E.

Daily construction-related criteria pollutant emissions resulting from adoption and development under the Specific Plan are presented in **Table 4.2-5**. As shown, maximum regional emissions would exceed the BAAQMD daily significance thresholds for ROG during construction. The predominant construction activity associated with the significant ROG emissions (98 percent of emissions) would be application of architectural coatings. The CalEEMod model assumes the application of architectural coatings to occur within a single year period for a particular development project, not, as here, for a Specific Plan with multiple sites under different ownership.⁶ As a practical matter, individual development projects under the Specific Plan could be spread out over several years and the peak emissions from application of architectural coatings could be less than that conservatively assumed for years 2019 and 2023 in Table 4.2-5. However, considering the amount by which estimated ROG emissions are estimated to exceed the threshold, a less conservative assumption, and a less aggressive timeline for individual projects, would not reduce the significance. Therefore, the analysis is appropriately conservative. ROG emissions estimated in Table 4.2-5 were adjusted to account for reduced ROG content of architectural coatings under Regulation 8, Rule 3 of the BAAQMD and the requirements of the 2010 Green Building Code (also contained in SCA A {w}).

In addition, SCA A would implement the BAAQMD Best Management Practices for fugitive dust control and would be required for all construction activities within the Plan Area. Further, to implement SCA A, the following additional measure is recommended:

Recommended Measure AIR-1: During construction, the project applicant shall require the construction contractor to use prefinished materials and colored stucco, as feasible.

Conclusion: A conservative estimate of emissions in the Plan Area associated with construction of development under the Specific Plan shows a significant impact. Even with the inclusion of SCA A and Recommended Measure AIR-1, it cannot reliably be demonstrated that ROG emissions from application of architectural coatings would be reduced to 54 pounds per day or less. Therefore, this impact would be significant and unavoidable.

⁵ “Off gassing” refers to the release of gaseous compounds from a solid material such as asphalt.

⁶ The CalEEMod model assumes an architectural coating phase duration based on extrapolation of survey data contained in the South Coast Air Quality Management District document *Sample Construction Scenarios for Projects less than Five Acres*, 2005.

**TABLE 4.2-5
AVERAGE DAILY CONSTRUCTION-RELATED EMISSIONS**

	Average Daily Construction Emissions (lb/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2015 (Demolition, Site Preparation, Grading and Building Construction)	6.85	48.70	2.19	2.19
2016 (Building Construction)	11.10	54.59	2.40	2.40
2017 (Building Construction)	10.21	49.73	2.19	2.19
2018 (Building Construction)	9.52	45.75	1.99	1.99
2019 (Building Construction, Paving and Architectural Coatings)	119.79	8.84	.55	0.55
2020 (Demolition, Site Preparation, Grading and Building Construction)	5.55	32.33	1.37	1.30
2021 (Building Construction)	6.71	31.30	1.30	1.23
2022 (Building Construction)	6.37	29.04	1.23	1.16
2023 (Building Construction, Paving and Architectural Coatings)	98.84	14.45	0.68	0.62
Threshold	54	54	82	54
Exceeds Threshold?	Yes	Yes	No	No

SOURCE: ESA, 2013

Significance: Conservatively Significant and Unavoidable.

Impact AIR-2: Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NO_x, or PM_{2.5} or 82 pounds per day of PM₁₀; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or PM_{2.5} or 15 tons per year of PM₁₀ (Criterion 2). (Conservatively Significant and Unavoidable)

Plan Area development would result in an increase in criteria air pollutant and precursor emissions, including ROG, NO_x, PM₁₀ and PM_{2.5} from a variety of emissions sources, including onsite area sources (e.g., natural gas combustion for space and water heating, landscape maintenance, use of consumer products such as hairsprays, deodorants, cleaning products, etc.) and mobile on-road sources. Exhaust emissions from on-road vehicle traffic associated with adoption and development under the Specific Plan were calculated by using the CalEEMod land use emissions model program.

The transportation analysis estimates that adoption and development under the Specific Plan would result in approximately 40,302 net new vehicle trips per day after accounting for use of transit, bicycling, walking and internal trip capture (a 34 percent reduction).

Table 4.2-6 summarizes daily mobile and onsite area emissions of criteria pollutants that would be generated by adoption and development under the Specific Plan by 2035 assuming vehicle trip generation from full buildout of the Broadway Valdez Development Program. It compares these

emissions with City of Oakland significance thresholds. As indicated in Table 4.2-6, development-related operational emissions of ROG, NO_x, and PM₁₀ would exceed the significance thresholds.

**TABLE 4.2-6
AVERAGE DAILY OPERATIONAL EMISSIONS**

	Average Daily Operational Emissions (lb/day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area Sources	105.53	1.72	1.64	1.63
Energy Sources	1.44	12.74	0.99	0.99
Mobile Sources	73.72	182.06	250.69	11.70
Total Emissions	180.69	196.52	253.32	14.32
Threshold	54	54	82	54
Exceeds Threshold?	Yes	Yes	Yes	No

SOURCE: ESA, 2013

Table 4.2-7 summarizes Broadway Valdez Development Program-generated daily maximum annual mobile and onsite area emissions of criteria pollutants in 2035. As indicated in Table 4.2-7, Plan Area development-related operational emissions of ROG, NO_x, and PM₁₀, would exceed the City of Oakland significance thresholds.

**TABLE 4.2-7
MAXIMUM ANNUAL OPERATIONAL EMISSIONS**

	Maximum Annual Operational Emissions (ton/year)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
Area Sources	18.66	0.15	0.10	0.10
Energy Sources	0.26	2.32	0.18	0.18
Mobile Sources	12.43	33.42	36.85	2.12
Total Emissions	31.35	35.89	37.13	2.40
Threshold	10	10	15	10
Exceeds Threshold?	Yes	Yes	Yes	No

SOURCE: ESA, 2013

Under SCA 25, a Transportation Demand Management (TDM) program would be developed and implemented for individual project generating 50 or more a.m. or p.m. peak trips to reduce use of single-occupant vehicles and to increase the use of rideshare, transit, bicycle and walk modes for trips to and from, as well as within the Plan Area (see Section 4.13, *Transportation and Circulation*). Due to uncertainty pertaining to quantifying the effectiveness of implementing TDM strategies, the travel demand analysis used as a basis for calculating vehicle emissions does not assume additional trip reduction due to specific TDM strategies beyond those associated with internal, pass-by, and diverted linked trips. Therefore the analysis is conservative as further reductions through implementation of SCA 25 may occur. Further, to implement SCA 25, the following additional measures are recommended:

Recommended Measure AIR-2: The following measures identified in the 2012 BAAQMD CEQA Guidelines for specific development projects in excess of 50,000 square feet or 325 dwelling units are recommended to be considered and if determined feasible, implemented for those projects:

- Establish a dedicated employee transportation coordinator for each specific development as a condition of occupancy permit/tenancy contract;
- Increase building energy efficiency by 20 percent beyond 2008 Title 24 (reduces NO_x related to natural gas combustion);
- Require use of electrically powered landscape equipment;
- Require only natural gas hearths in residential units as a condition of final building permit;
- Use low VOC architectural coatings in maintaining buildings;
- Require smart meters and programmable thermostats; and
- Install solar water heaters for all uses.

Conclusion: Trip generation estimates for adoption and development under the Specific Plan used in this analysis included adjustments for development scale, density, and diversity of uses, as well as a robust number of alternative transportation trips (walk, bike, and transit) and carpooling. Therefore, many key elements of alternative mode strategies have been incorporated into the trip generation assumptions.

SCA 25 including Recommended Measure AIR-2 would not result in the 60 to 68 percent reductions necessary (for PM₁₀) or 46 to 73 percent (for ROG and NO_x) to reduce the impact to a less-than-significant level as that amount of traffic reduction exceeds the best reduction estimates for TDM and other programs and measures (BAAQMD, 2012b). Consequently, adoption and development under the Specific Plan still would result in significant environmental effects on air quality and contribute substantially to an existing air quality violation (ozone precursors and particulate matter), even with implementation of SCA 25 and Recommended Measure AIR-2. Therefore, this impact would remain significant and unavoidable for emissions of ROG NO_x, and PM₁₀.

Significance: Conservatively Significant and Unavoidable.

Impact AIR-3: Adoption and development under the Specific Plan would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour (Criterion 3). (Less than Significant)

Pursuant to BAAQMD CEQA Guidelines, localized CO concentrations should be estimated for projects in which (a) project-generated traffic would conflict with an applicable congestion management program established by the county congestion management agency or (b) project-generated traffic would increase traffic volumes at affected intersections to more than 44,000

vehicles per hour (or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited, such as tunnels, parking garages, bridge underpasses, natural or urban street canyons, and below-grade roadways). In Oakland, only the MacArthur Maze portion of Interstate 580 exceeds the 44,000 vehicles per hour screening criteria, which is over 2 miles west of the Plan Area. Further, ambient CO standards have not been exceeded in the Bay Area for over a decade, largely due to reformulated fuels in California. Therefore, adoption and development under the Specific Plan would not be required to estimate localized CO concentrations as it would not contribute to CO concentrations exceeding CAAQS. The impact would be less than significant.

Mitigation: None Required.

Impact AIR-4: Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 10 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM_{2.5} concentration of greater than 0.3 micrograms per cubic meter or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter as a result of construction activities or project operations (Criterion 4). (Conservatively Significant and Unavoidable)

Pursuant to the BAAQMD CEQA Guidelines, when siting new TAC sources, receptors located within 1,000 feet of new sources or construction activities should be considered.

Construction Source Impacts on New and Existing Receptors

Project construction activities would produce DPM and PM_{2.5} emissions due to exhaust emissions from equipment such as loaders, backhoes, and cranes, as well as haul truck trips. These emissions could result in elevated concentrations of DPM and PM_{2.5} at nearby receptors (both new and existing residences). These elevated concentrations could lead to an increase in the risk of cancer or other health impacts. Due to the variable nature of construction activity, the generation of TAC emissions in most cases would be temporary, especially considering the short amount of time such equipment is typically within an influential distance that would result in the exposure of sensitive receptors to substantial concentrations.

Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (CARB, 2005). In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. This results in difficulties with producing accurate estimates of increased health risk. The specificity of detail necessary to conduct a health risk assessment is not available at the Specific Plan stage. Notwithstanding this lack of detail, SCA A would implement all construction-related Best Management Practices and mitigation measures identified by the BAAQMD in its 2012 guidance.

Operational Impacts from New Sources Resulting from Adoption and Development Under the Specific Plan on New or Existing Receptors

Adoption and development under the Specific Plan includes a variety of land use types including residential, office, and retail uses. While there are no specific stationary sources of air pollution proposed, as a practical matter, California building code requires back-up diesel generators for all buildings in excess of 70 feet in height for elevator safety. As indicated in Figure 3-11 (see Chapter 3, *Project Description*), buildings in excess of this height would be accommodated in the southernmost and northernmost portions of the Plan Area. Operators of back-up diesel generators would be required to obtain a permit and an Authority to Construct from the BAAQMD who would evaluate emissions based on size and require Best Available Control Technology, if warranted. Per its Policy and Procedure Manual, the BAAQMD would deny an Authority to Construct or a Permit to Operate for any new or modified source of TACs that exceeds a cancer risk of 10 in one million or a chronic or acute hazard index of 1.0.

Notwithstanding the permit restrictions of the BAAQMD, the potential exists for multiple new towers to be developed within a single concentrated portion of the Plan Area. Given the existing elevated cancer risk contributions from existing localized sources in some portion of the Plan Area (see Impact AIR-5), the potential exists for multiple new sources, each with a cancer risk less than 10 in one million, to cumulatively increase cancer risks to greater than 100 in one million. While SCA B would be implemented for new residential development within the Plan Area that could be exposed to locally generated risks greater than 100 in a million, this SCA does not apply to projects with new sources that could impact existing receptors. Therefore, new project sources could result in a significant cumulative risk generation impact.

Mitigation Measure AIR-4: Risk Reduction Plan

Applicants for projects that would include backup generators shall prepare and submit to the City, a Risk Reduction Plan for City review and approval. The applicant shall implement the approved plan. This Plan shall reduce cumulative localized cancer risks to the maximum feasible extent. The Risk Reduction Plan may contain, but is not limited to the following strategies:

- Demonstration using screening analysis or a health risk assessment that project sources, when combined with local cancer risks from cumulative sources with 1,000 feet would be less than 100 in one million.
- Installation of non-diesel fueled generators.
- Installation of diesel generators with an EPA-certified Tier 4 engine or Engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy.

Significance after Mitigation: Conservatively Significant and Unavoidable

Clean diesel generators and other strategies of the Risk Reduction Plan would substantially reduce potential cancer risks associated with DPM. While the residual risk for a given generator would be less than 10 in one million, the degree to which multiple sources, if concentrated on one area would maintain cumulative risks to below 100 in one million cannot be assured. While SCA B would apply to new residential development, the impacts

to existing receptors could potentially remain and with no options other than controlling the source or mitigating the receptor, this impact is conservatively identified as significant and unavoidable.

Impact AIR-5: Adoption and development under the Specific Plan would not expose sensitive receptors to substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) an increase of annual average PM_{2.5} concentration of greater than 0.8 micrograms per cubic meter by siting a new sensitive receptor (Criterion 5). (Less than Significant)

When siting new sensitive receptors, existing TAC sources located within 1,000 feet including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, ports, and rail lines, should be considered. For this threshold, sensitive receptors (new under the Specific Plan or existing) include residential uses, schools, parks, daycare centers, nursing homes, and medical centers.

Operational Impacts of Existing Sources on New Receptors in the Plan Area

As stated above, CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of “the environment on the project” (i.e. siting new receptors near existing TAC sources) in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

There are a number of TAC sources both within and surrounding the Plan Area. In the Valdez subarea, these sources would not contribute substantially to risk levels approaching the cumulative thresholds. There are five stationary sources along Grand Avenue and roadway sources from traffic along Grand Avenue and Broadway. Here, the worst case cumulative exposure would be at 111 Grand Avenue where cumulative risk would be 84.27 in one million considering stationary and roadway sources combined. Cumulative PM_{2.5} concentration contributions would be 0.376 microgram per cubic meter. The cumulative hazard index at this worst case location in the Valdez subarea would be 0.047. Consequently cumulative exposure risks and hazards within the Valdez subarea would be less than significant.

In the North End subarea there are two sources that, according to the BAAQMD’s intentionally conservative estimates, each individually would exceed the 100 in one million cancer risk cumulative threshold within portions of the Plan Area and thus call for refined modeling analysis. The sources are Plants 7780 and 7781 operated by Alta Bates Summit Medical Center and include a total of eight diesel generators. Refined modeling analysis revealed DPM concentrations equal 0.00252 micrograms per cubic meter for an annual average, which results in a cancer health risk increase of approximately 1.5 in one million (see Appendix E). This refined

analysis risk level along with the BAAQMD's conservatively estimated risk levels for non-DPM sources (Gaseous TACs) are presented in **Table 4.2-8**. When combined, the total worst case stationary source cancer risk within the North End subarea, equals approximately 12.1 in one million. Also, when combined with the worst case health risk from I-580, as conservatively estimated by the BAAQMD, the cumulative cancer risk level in the

**TABLE 4.2-8
CUMULATIVE CANCER RISK LEVELS FROM
REFINED MODELING AND SCREENING-LEVEL DATA**

Source	Cancer Risk Level
Plant 7780 and 7781 Refined Modeled DPM Risk	1.5 per million
Plant 7780 and 7781 BAAQMD's Screening Risk non-DPM	10.6 per million
<i>Subtotal</i>	<i>12.1 per million</i>
I-580 – Worst Case @ 10 ft. distance and 6 ft. in height	73.1 per million
Cumulative Development within 1,000 feet of Plan Area	5.6 per million
Grand Total	90.8 per million

SOURCE: ESA, 2013.

North End subarea, and within the Plan Area, reaches approximately 85.2 in one million. Although refined modeling was conducted for stationary source DPM concentrations, the non-DPM and mobile source cancer risk contribution to the estimated 85.2 in one million cancer risk increase is derived from the BAAQMD's screening tools and thus are intentionally conservative. Regardless, the worst case cumulative cancer risk increase of 85.2 in one million is still under the cumulative threshold of 100 in one million.

Additionally, there are eight future or foreseeable projects on the City's list of major projects (see Appendix B) that could be constructed within 1,000 feet of the Plan Area. Five of these projects are residential projects with ground floor commercial uses and would not be expected to be sources of TACs or non-roadway PM_{2.5}. The other three cumulative projects include Alta Bates Medical Center, Kaiser Permanente Hospital at Broadway and MacArthur Boulevard, and Kaiser Center at 300 Lakeside Drive. Air quality analysis conducted for Alta Bates project indicates an additional cancer risk contribution of 4.0 in one million (ESA, 2009). Air quality analysis conducted for Kaiser Permanente Medical Center project indicates an additional cancer risk contribution of 1.6 in one million (ESA, 2006). Air quality analysis conducted for Kaiser Center project indicates that no new stationary sources would be constructed (ESA, 2010). The addition of these cumulative project risks to those calculated above results in the worst case cumulative cancer risk increase of 90.8 in one million which is still under the cumulative threshold of 100 in one million.

As stated in Impact AIR-4, California building code requires back-up diesel generators for all buildings in excess of 70 feet and buildings in excess of this height would be accommodated in the southernmost and northernmost portions of the Plan Area. Notwithstanding the permit

restrictions of the BAAQMD, the potential exists for multiple new towers to be developed within a single concentrated portion of the Plan Area. Given the existing elevated cancer risk contributions from existing localized sources in some portions of the Plan Area, the potential exists for multiple new sources, each with a cancer risk less than 10 in one million, to cumulatively increase localized cancer risks to greater than 100 in one million. If this condition were to occur, SCA B would be implemented to reduce exposure to new sensitive receptors through installation of filtration systems, as necessary.

The combination of screening-level analysis and refined modeling analysis for TAC concentrations reveals that adoption and development under the Specific Plan with SCA B addressing the potential for siting new sensitive receptors within any portion of the Plan Area, would not result in exposure to substantial levels of TACs resulting in (a) a cumulative cancer risk level greater than 100 in a million, (b) a cumulative non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} concentration contributions of greater than 0.8 micrograms per cubic meter and the impact is less-than-significant.

Mitigation: None Required.

Impact AIR-6: Adoption and development under the Specific Plan would not frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people (Criterion 6). (Less than Significant)

The BAAQMD 2012 Guidelines identify wastewater treatment plants, oil refineries, asphalt plants, chemical manufacturing, painting/coating operations, coffee roasters, food processing facilities, recycling operations and metal smelters as odor sources of particular concern, and recommends buffer zones of one to two miles around them to avoid potential odor conflicts. All of these odor sources are present within the City of Oakland. However, odor is a subjective impact and perception of odor can vary depending on receptor sensitivity, climate, wind patterns, topography.

In accordance with the recommendations in the BAAQMD Guidelines, the City of Oakland created a map of known odor sources including: food processing facilities; coffee roasters; chemical manufacturers; asphalt batch plants; and the EBMUD wastewater treatment facility (see Figure 4.2-1) (City of Oakland, 2010). This map presents a reasonable estimation of all the odor sources of concern within the City of Oakland, based upon City's business tax records of the industry categories identified by the BAAQMD. In addition, buffer zones were drawn around the identified sites, based on the aforementioned BAAQMD criteria. There are two chemical plants, located at 1700 6th Street and 1696 West Grand Avenue, whose 2-mile buffer radius overlap the eastern and western portions of the Plan Area. The 2-mile odor buffer areas are considered a maximum screening distance for odor impacts from a particular source. All odor impacts from the source would be expected to occur within these buffers, but the actual area of impact within the buffer is dependent on certain factors including source type, frequency of odor generation, intensity of odor, wind direction, and sensitivity of the receptors.

BAAQMD was contacted regarding the odor history of these two facilities. No odor complaints have been filed for the past 3 years (Rochelle, 2013). Northwest winds occur 46 percent of the time in the Oakland area. Given the location of the Specific Plan Area relative to the sources and wind direction as well as the 1.5 mile distance of these two sources from the Specific Plan Area, the potential for new sensitive receptors within the Plan Area to be impacted by substantial objectionable odors affecting a substantial number of people would be less than significant.

Mitigation: None Required.

Plan-Level Impacts

Impact AIR-7: Adoption and development under the Specific Plan would be consistent with the primary goals of the Bay Area Clean Air Plan (CAP) and would not fundamentally conflict with the CAP because the Specific Plan demonstrates reasonable efforts to implement control measures contained in the CAP (Criterion 7). (Less than Significant)

The 1988 California Clean Air Act, Section 40919(d) requires regions to implement “transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled.” Consistent with this requirement, one of the goals of the 2010 CAP is to reduce the number of trips and vehicle miles Bay Area residents travel in single-occupant vehicles through the implementation of five categories of transportation control measures (TCMs).

Key Goals of the proposed Specific Plan that address reduced trip generation and are consistent with the goals of the CAP include:

- An attractive, regional destination for retailers, shoppers, employers and visitors that serves in part the region’s shopping needs and captures sales tax revenue for reinvestment in Oakland.
- A “complete” mixed-use neighborhood that is economically and socially sustainable—providing quality jobs, diverse housing opportunities, and a complementary mix of retail, dining, entertainment, and medical uses.
- New uses and development that enhance the Plan Area’s social and economic vitality by building upon the area’s existing strengths and successes, and revitalizing and redeveloping underutilized, outdated, and/or nuisance uses or properties.
- A compact neighborhood that is well-served by an enhanced and efficient transit system.
- Quality pedestrian facilities and amenities that create a safe and aesthetically pleasing environment that supports increased pedestrian activity.
- A balanced and complete circulation network of “complete streets” that accommodates the internal and external transportation needs of the Plan Area by promoting walking, biking, and transit while continuing to serve automobile traffic.

- Carefully managed parking that addresses retail needs while not undermining walking, bicycling and public transit as preferred modes of transportation.
- A multi-pronged approach to sustainability that integrates land use, mobility, and design strategies to minimize environmental impact, reduce resource consumption, and prolong economic and social cohesiveness and viability.

The Plan Area's infill location and proximity to transit reduces the distance that customers would drive in motor vehicles to shop by providing increased retail opportunities within the Plan Area. Also, the Plan Area is located in direct proximity to the nearby employment hubs. Taken together, these locational characteristics of the Specific Plan Area help reduce the potential motor vehicle trips. The Plan Area is also located within a priority development area with respect to the Sustainable Communities plan developed for the Bay Area pursuant to SB 375 which has been implemented to reduce emissions through the planning process.

Table 4.2-9 identifies those five categories of TCMs that local governments should implement through local plans to be considered in conformance with the 2010 CAP. A review of the TCM's in Table 4.2-9 indicates that these measures lend themselves to application to large scale land use development projects and would be addressed by City of Oakland SCA 25, *Parking and Transportation Demand Management*, which would apply to development projects under the Specific Plan generating 50 or more net new AM or PM peak hour vehicle trips.

**TABLE 4.2-9
TRANSPORTATION CONTROL MEASURES IN THE 2010 CLEAN AIR PLAN**

- | |
|---|
| 1. Improve Transit Services (TCM A) |
| 2. Improve System Efficiency (TCM B) |
| 3. Encourage Sustainable Travel Behavior (i.e., voluntary employer-based trip reduction program)(TCM C) |
| 4. Support Focused Growth (Bicycle and Pedestrian friendliness) (TCM D) |
| 5. Implement Pricing Strategies (TCM E) |

SOURCE: BAAQMD, 2010.

Specifically, SCA 25 would require an applicant for such projects to submit for review and approval by the Planning and Zoning Division a Transportation Demand Management (TDM) plan containing strategies to reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable. The applicant shall implement the approved TDM plan. The TDM plan shall include strategies to increase bicycle, pedestrian, transit, and carpools/vanpool use and reduce parking demand. All four primary modes of travel shall be considered, as appropriate. Strategies to consider include the following:

- Inclusion of additional bicycle parking, shower, and locker facilities that exceed the requirement.
- Construction of and/or access to bikeways per the Bicycle Master Plan; Priority Bikeway Projects, and on-site signage and bikelane striping.

- c. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient crossing at arterials.
- d. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
- e. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements
- f. Direct on-site sales of transit passes purchased and sold at a bulk group rate
- g. Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.
- h. Provision of an ongoing contribution to AC Transit service to the area between the development and nearest mass transit station.
- i. Guaranteed ride home program for employees, either through 511.org or through a separate program.
- j. Pre-tax commuter benefits (commuter checks) for employees.
- k. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.
- l. On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.
- m. Distribution of information concerning alternative transportation options.
- n. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
- o. Parking management strategies including attendant/valet parking and shared parking spaces.
- p. Requiring tenants to provide opportunities and the ability to work off-site.
- q. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five, eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).
- r. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

Because the requirements of SCA 25 would implement transportation control measures consistent with the 2010 CAP, adoption and development under the Specific Plan would not be considered to fundamentally conflict with the 2010 CAP and would be considered to have a less-than-significant air quality impact with regard to TCM implementation.

Mitigation: None Required.

Impact AIR-8: Adoption and development under the Specific Plan would include special overlay zones containing goals, policies, and objectives to minimize potential Toxic Air Contaminant (TAC) impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips (Criterion 8). (Less than Significant)

In some cases, CARB makes recommendations for specific buffer zones around certain types of TAC emitters of particular concern, as is the case for dry cleaners (500 feet) and chrome platers (1,000 feet). The BAAQMD Guidelines recommend special overlay zones containing goals, policies, and objectives to minimize potential TAC impacts in areas located within 1,000 feet of existing and planned TAC sources. As discussed in Impact AIR-5, residential development areas within the Plan Area are within areas of concern from the TAC emissions from one or more of the stationary TAC sources as well as from high volumes of vehicle traffic on I-580. While high-volume roadways exist throughout the Plan Area, data from the transportation analysis indicates that none of the other major roadways in the area have volumes approaching 100,000 vehicles per day either existing or under cumulative conditions. Also, no rail yards, trucking distribution facilities or major port activities—major TAC emission sources that exist primarily in other areas of the City—are located in proximity to the Plan Area.

The City's SCA B, *Exposure to Air Pollution (Toxic Air Contaminants)*, would apply to residential development located near sources of PM_{2.5} and DPM and within 1,000 feet of stationary and mobile sources of TACs. In accordance with the BAAQMD Guidelines, when a residential development project is proposed within 1,000 feet of a stationary TAC source, the potential health risk to the project residents would be evaluated using the BAAQMD's recommended screening criteria. If the project were to exceed the screening criteria a project-specific HRA would be prepared to quantify the project-specific health risk; this requirement is incorporated in SCA B. Adoption and development under the Specific Plan would be required to implement any project-specific recommendations to reduce the potential health risk.

Recommendations may include having the future project applicant install, operate and maintain a central heating and ventilation (HV) system or other air take system in the building or in each individual residential unit, that meets or exceeds an efficiency standard of MERV 13; using HEPA filters; or using ASHRAE 85% supply filters. Therefore, SCA B functions as an overlay zone with specific requirements to reduce exposure to TACs and reduce related TAC impacts. Because SCA B would be incorporated as part of the Specific Plan, adopted as a condition of approval, and required, as applicable, of the development under the Specific Plan, the impact would be less-than-significant.

Mitigation: None Required.

Impact AIR-9: Adoption and development under the Specific Plan would not identify existing and planned sources of odors with policies to reduce potential odor impacts (Criterion 9). (Less than Significant)

There are no sources of odor identified by the City's database of potential odor generating facilities sources within the Plan Area. Potential sources of odor near the Plan Area are addressed in Impact AIR-6. As discussed in Impact AIR-6, the potential for sensitive receptors within the Plan Area to be impacted by substantial objectionable odors affecting a substantial number of people would be less than significant.

Mitigation: None Required.

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4.3 Biological Resources

This section identifies the existing biological resources within the Specific Plan Area and analyzes how the adoption and development under the Specific Plan may affect those resources. This section describes the environmental and regulatory setting relevant to biological resources in the Plan Area including the federal, state, and local regulations pertaining to biological resources within the region. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.3.1 Environmental Setting

Regional Setting

The Plan Area is located in the Bay Area-Delta Bioregion, as defined by the State's Natural Communities Conservation Program. This designation identifies the broader ecosystem in which the Plan Area resides. This bioregion extends from the Sacramento and San Joaquin Bioregions to the Pacific Coast (CERES, 2013). The climate is Mediterranean with relatively mild, wet winters and warm, dry summers.

Project Setting

As noted above, the Plan Area is located in a heavily trafficked area with Oakland's Uptown District to the south, Kaiser Permanente to the north, Lake Merritt to the southeast, and the 25th Street Garage District to the west. The Plan Area includes a combination of commercial, (highlighting the presence of the auto industry), mixed-use development, residential, and roadways. Due to the urban nature of the 95 acre Plan Area, there is a lack of suitable habitat in this area. Over the years, natural habitats that once occurred in the Plan Area have since shifted towards nearby settings, such as the waterfront along the East Bay shoreline and Lake Merritt. The natural landscape prior to the influx of urban development included a mix of coastal prairie, coastal scrub, and riparian habitats. Biological surveys for this analysis included areas within and adjacent to the Plan Area that would be directly and indirectly impacted by the adoption and development under the Specific Plan.

Habitat Types within the Plan Area

Urban

The Plan Area is urban, saturated with a built environment allowing for no naturally occurring biological communities to currently exist. Features of this setting are made up of structures, roadways, concrete, and asphalt that do not encourage flora or fauna to flourish. Exceptions include, weedy plants adapted to harsh conditions, as well as formalized plantings incorporated by city and community organizations. Urban wildlife species in the Oakland area include: common raven (*Corvus corax*), crow (*Corvus corone*), northern mockingbird (*Mimus polyglottos*), raccoon (*Procyon lotor*), Norway rat (*Rattus norvegicus*), and Virginia opossum (*Didelphis virginiana*), and white-tailed deer (*Odocoileus virginianus*). On occasion, the following may occur: red-tailed hawks

(*Buteo jamaicensis*), Cooper's hawks (*Accipiter cooperi*) and peregrine falcons (*Falco peregrines anatum*) as they all prey on rodents and/or birds found in urban areas. For example, peregrine falcons have been observed roosting on Oakland City Hall and the California State Building and just outside the Plan Area boundary on the Kaiser Center building (Lowe, 2010; Nevill, 2007). Although this species is known to use tall buildings and bridges in highly urbanized areas for nesting, there are no known peregrine nesting sites in the Specific Plan Area (CDFW, 2013).

Creeks and Riparian

Glen Echo Creek, a channelized stream with mature riparian trees and vegetated banks, runs north to south along the eastern boundary of the Plan Area between 28th and 30th Streets, as well as beneath the Plan Area. North of the intersection of Richmond Boulevard (and Randwick Avenue), the creek is the central feature of Oak Glen Park, which includes a significant stand of native oaks. North of 29th Street, Glen Echo Creek is daylighted, while south of 29th Street, the creek flows into a subterranean culvert until it reaches Adams Park, where the stream daylights for a short distance before flowing under Grand Avenue and into Lake Merritt.

The creek does not support a native fishery, and impediments to fish passage and wildlife movement make the creek an unlikely location for aquatic resources. However, species found within the Glen Echo Creek watershed, which includes Lake Merritt, are goldfish (*Carassius auratus*), western mosquitofish (*Gambusia affinis*), and three-spine stickleback (*Gasterosteus aculeatus*) (Leidy, 2007).

The riparian areas of the creek, including trees, shrubs, and groundcover, act as suitable wildlife habitat and protection from humans and predators. Glen Echo Creek, designated by the City of Oakland as 'Zone 12 Line B' (PANIL, 2008), merges with Rockridge Creek south of the Plan Area, eventually draining into Lake Merritt.

Landscaped

Habitat provided by a small amount of landscaped areas, occurs sporadically within the Plan Area. These areas can typically provide cover, foraging, and nesting habitat for a variety of bird species, especially those that are tolerant of disturbance and human presence. The roadway triangle along 26th and 27th Avenues and the densely vegetated parcel of land near Webster and 34th south of the I-580 Highway are examples of landscaped areas found within the Plan Area. The Plan Area is near Mosswood Park to the north, however I-580 acts as a deterrent to migration between the two areas. Oak Glen Park and Adams Park are outside of the Plan Area, but are in the vicinity providing suitable habitat for urbanized animals.

Birds found in these areas include the non-native English sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), dark-eyes junco (*Junco hyemalis*), western scrub jay (*Aphelocoma californica*), and Anna's hummingbird (*Calypte anna*).

Sensitive Natural Communities

Sensitive natural communities are designated as such by various resource agencies, such as California Department of Fish and Wildlife (CDFW), or in local policies and regulation. These

communities are generally considered to have important functions or values for wildlife and/or are recognized as declining in extent or distribution and are considered threatened enough to warrant some sort of protection. The California Natural Diversity database (CNDDB) tracks communities it believes to be in need of conservation and these communities are typically considered sensitive for the purposes of CEQA analysis. A CNDDB search of the Plan Area flora and fauna, within the U.S. Geological Survey 7.5-minute topographic quadrangles surrounding Oakland West's Quadrangle, was performed in preparation of this Draft EIR and the results can be found in Appendix F. However, no sensitive natural communities were found within the Plan Area (CDFW, 2013).

Jurisdictional Waters and Wetlands

No formal wetland delineation of the Plan Area has been conducted, and no obvious wetlands or open water habitats are present within the Plan Area.

Special-status Species

Special-status species are protected pursuant to federal and/or State of California endangered species laws, or have been designated Species of Special Concern by CDFW. In addition, Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides a definition (AEP, 2011) of rare, endangered or threatened species that are not included in any listing. For purposes of this Draft EIR, special-status species are defined as:

- Plant and wildlife species listed as rare, threatened or endangered under the federal or state endangered species acts;
- Species that are candidates for listing under either federal or state law;
- Species formerly designated by the USFWS as Species of Concern or designated by CDFW as Species of Special Concern;
- Species protected by the federal Migratory Bird Treaty Act (16 U.S.C. 703-711); and/or
- Species such as candidate species that may be considered rare or endangered pursuant to
- Section 15380(b) of the CEQA Guidelines.

Few species within the Plan Area meet the above criteria, therefore do not remain a concern regarding potential impacts from adoption and development under the Specific Plan.

Appendix F provides a comprehensive list of the special-status species that have been documented from, or have potential to occur in, suitable habitat within or near the Plan Area. These lists include occurrences documented by the CNDDB (CDFW, 2013), the CNPS Electronic Inventory (CNPS, 2013), and the USFWS database (USFWS, 2013). Based on review of the biological literature of the region, information presented in previous environmental documentation, and an evaluation of the habitat conditions of the Plan Area, most of these species were eliminated from further evaluation because (1) the Plan Area does not and/or never has provided suitable habitat for the species, or (2) the known range for a particular species is outside of the Plan Area.

The remaining special-status species presented in **Table 4.3-1** include those that are documented as occurring within the Plan Area or for which potential habitat (i.e., general habitat types) could occur within the Plan Area. Species for which generally suitable habitat occurs but that were nonetheless determined to have low potential to occur in the Plan Area are also listed in Table 4.3-1. This table also provides the rationale for each potential-to-occur determination. Species observed with a moderate to high potential to occur in the Plan Area are discussed in further detail below.

Special-Status Animals

Twelve special-status wildlife species were identified in Table 4.3-1 as having potential for occurrence within the Plan Area. Please refer to Table 4.3-1 for a summary of each species' habitat preferences and the rationale for determinations with regard to potential for occurrence within the Plan Area. These species, therefore, are evaluated in the impact analysis:

- Peregrine falcon
- Cooper's hawk
- Red-shouldered hawk
- Red-tailed hawk
- Pallid bat
- Silver-haired bat
- Hoary bat
- Big free-tailed bat

These species are described in further detail below.

Mammals

Peregrine falcon (*Falco peregrinus anatum*). The peregrine falcon is a federal and State-Delisted Endangered Species¹ and a California Fully Protected Species. It is known throughout California and is a year-around resident along the Pacific coast. The peregrine is a specialist, preying primarily on mid-sized birds, such as pigeons and doves, in flight. Occasionally these birds will take insects and bats. Although typical nesting sites for the species are tall cliffs, preferably over or near water, peregrines are also known to use urban sites, including the Bay Bridge and tall buildings in San Francisco and San Jose (Peeters, 2005). Nesting peregrines were also recently documented from the Fruitvale Avenue Bridge on the Oakland-Alameda border, approximately 3.5 miles southeast of the Plan Area; one breeding pair was observed at this site in 2010 (Nevill, 2010). No peregrine nesting sites are documented in downtown Oakland but the species has been observed perching and roosting on several buildings in downtown Oakland including Kaiser Center, Oakland City Hall, and the California State building (Lowe, 2010; Nevill, 2007). Many of the tall buildings and structures within the Plan Area provide potential nesting habitat for this species. The abundance of prey and suitable perching habitat provide highly suitable habitat for peregrine falcons.

¹ The peregrine falcon was listed as federally endangered on June 2, 1970, and then federally delisted on August 25, 1999. This species was also listed as state endangered on June 27, 1971, and then state delisted on November 4, 2009.

**TABLE 4.3-1
SPECIAL-STATUS SPECIES CONSIDERED**

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/CNPS	General Habitat	Potential for Occurrence in Plan Area
Species Listed and Proposed for Listing			
ANIMALS			
Birds			
Peregrine falcon <i>Falco peregrinus anatum</i>	Delisted FE/ Delisted CE/ Fully Protected	Nests on ledges on cliffs, bridges, and tall buildings. In SF Bay area the species is known to nest on the Bay Bridge and buildings in San Francisco and San Jose.	High. This species has been observed foraging and roosting at multiple sites within downtown Oakland (Lowe, 2010; Nevill, 2007; CDFW, 2013). However, there are no known nesting sites for this species in Oakland (CDFW, 2013). Few buildings within the Plan Area provide potentially suitable nesting habitat for this species.
Cooper's hawk <i>Accipiter cooperii</i>	--/CDFW WL	Commonly nests in conifers and riparian woodland but also known to nest in large trees in urban areas throughout the East Bay, especially near riparian corridors.	High. Known to nest within Lakeside Park, which is within vicinity of the Plan Area (CDFW, 2013). May forage or nest within the Plan Area.
Red-shouldered hawk <i>Buteo lineatus</i>	--/3503.5	Commonly nests in riparian corridors but becoming increasingly common in urban areas throughout the East Bay, nesting in large trees.	High. Fairly common locally in urban areas. May nest within wooded areas of Peralta Park or other parks south of the Plan Area.
Red-tailed hawk <i>Buteo jamaicensis</i>	--/3503.5	Nests in large oaks and conifers. The Bay Area's most common urban raptor.	High. Known to occur in downtown Oakland. May nest within tall trees in the various parks within the Plan Area.
Mammals			
Pallid bat <i>Antrozous pallidus</i>	FSC/CSC BLM Sensitive/ WBWG_H	Occurs in various habitats including grasslands, scrubs, woodlands, mixed conifer forests, but it is most common in open, dry habitats with rocky areas for roosting. Day roosts include hollow trees, buildings, caves, crevices, and mines.	Moderate to High. Suitable roosting habitat occurs within the parks within the Plan Area and foraging habitat is present over park turfgrass and Lake Merritt. May forage and roost near the Plan Area but not expected to breed there.
Silver-haired bat <i>Lasionycteris noctivagans</i>	FSC/ WBWG_M	Roost almost exclusively in trees – in natural hollows and bird excavated cavities or under loose bark of large diameter snags.	Moderate to High. Suitable roosting habitat occurs within the parks near the Plan Area and foraging habitat is present over park turfgrass and Lake Merritt. May forage and roost near the Plan Area but not expected to breed there.
Hoary bat <i>Lasiurus cinereus</i>	--/WBWG_M	Prefers open habitats or habitat mosaics, with trees for cover and open areas or habitat edges for feeding. Prefers to roost in dense foliage of medium to large trees.	Moderate to High. Suitable roosting habitat occurs within the parks within the Plan Area and foraging habitat is present over park turfgrass and Lake Merritt. May forage and roost near the Plan Area but not expected to breed there.

TABLE 4.3-1 (Continued)
SPECIAL-STATUS SPECIES CONSIDERED

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFW/CNPS	General Habitat	Potential for Occurrence in Plan Area
Species Listed and Proposed for Listing			
ANIMALS			
Mammals (cont.)			
Big free-tailed bat <i>Nyctinomops macrotis</i>	--/CSC/ WBWG_M	Found in habitats such desert shrub, woodlands, and evergreen forests. Mostly roosts in cliff crevices, but documented in buildings, caves, and tree cavities.	Moderate to High. Suitable roosting habitat occurs within the parks near the Plan Area and foraging habitat is present over park turfgrass and Lake Merritt. May forage and roost near the Plan Area but not expected to breed there.

STATUS CODES:

FEDERAL: (U.S. Fish and Wildlife Service)

- FE = Listed as Endangered (in danger of extinction) by the Federal Government.
- FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.
- FP = Proposed for Listing as Endangered or Threatened.
- FC = Candidate to become a *proposed* species.
- FSC = former Federal Species of Concern. Species so designated as such were listed by the Sacramento FWS office until 2006 but Sacramento FWS no longer maintains this list. These species are still considered to be at-risk by other federal and state agencies, as well as various organizations with recognized expertise such as the Audubon Society.

STATE: (California Department of Fish and Wildlife)

- CE = Listed as Endangered by the State of California
- CT = Listed as Threatened by the State of California
- CSC = California Species of Special Concern
- 3503.5 = Protection for nesting species of Falconiformes (hawks) and Strigiformes (owls) under section 3503.5 CDFW code.
- Fully Protected = California Department of Fish and Wildlife Fully Protected Species
- CDFW WL = on CDFW watch list for "Taxa to Watch"

WBWB_M = on the Western Bat Working Group (WBWG) "Medium Priority" list. This designation, made by the WBWG, indicates a level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats.

WBWB_H = on the Western Bat Working Group (WBWG) "High Priority" list. This designation, made by the WBWG, should result in these species being considered the highest priority for funding, planning, and conservation actions. These species are imperiled or are at high risk of imperilment.

Delisted = Species that were formally federally or state listed as endangered or threatened species.

SOURCES: CDFW, 2011; USFWS, 2013, WBWG 2013

Cooper's hawk (*Accipiter cooperi*). Cooper's hawks are protected under section 3503.5 of CDFW code (nesting Falconiformes). Cooper's hawk ranges over most of North America and may be seen throughout California, most commonly as a winter migrant. Nesting pairs have declined throughout the lower-elevation, more populated parts of the state. Cooper's hawk forages in open woodlands and wooded margins and nests in tall trees, often in riparian areas (Ehrlich et al., 1988; Sibley, 2001).

Red-tailed hawk (*Buteo jamaicensis*). Red-tailed hawks are protected under section 3503.5 of CDFW code (nesting Falconiformes). They are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as on small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural habitats. Large

trees located within parks such as Peralta Park potentially provide suitable nesting habitat for red-tailed hawks.

Red-shouldered hawk (*Buteo lineatus*). Red-shouldered hawks are protected under section 3503.5 of CDFW code (nesting Falconiformes). They are relatively common in both rural and urban situations and can be found in residential neighborhoods and along riparian corridors or other waterbodies. These hawks hunt primarily for mammals, reptiles, and amphibians (Sibley, 2000). Large trees near the Plan Area, particularly those within parks, provide potential nesting habitat for red-shouldered hawks.

Special status bat species. The Plan Area provides potential foraging and roosting habitat for four special-status bat species, all of which have been documented within or near the Plan Area. These four bat species may utilize trees or abandoned buildings for roosting and turfgrass for foraging in any of the parks within the Plan Area during migratory periods but are not expected to breed and reproduce there.

Pallid bat (*Antrozous pallidus*) ranges throughout western North America, from British Columbia to Mexico and east to Texas. This species is most abundant in arid lands, including deserts and canyonlands, shrub-steppe grasslands, and higher elevation coniferous forests and is therefore only likely to occur within the Plan Area on a transient basis during spring and summer migrations. Pallid bats may roost alone or in groups in trees in cavities or under bark and structures such as bridges and buildings. Pallid bats forage over open areas and are opportunistic feeders on a wide variety of insects, foraging both on surfaces and in the air. Prey includes beetles, centipedes, crickets, moths, and rarely, lizards, and small rodents (WBWG, 2005a).

Silver-haired bat (*Lasionycteris noctivagans*) occurs throughout most of North America and is primarily associated with conifer and mixed conifer/hardwood forests. This species would most likely be found in the Plan Area during winter and seasonal migrations. Silver-haired bats roost almost exclusively in cavities and under the bark of tree, although they are sometimes found in structures as well. Moths are apparently the primary prey for this species, although they have been documented as feeding on a wide variety of insects. Seasonal records suggest considerable north to south migration, with animals moving to warmer, more southern climates in the winter (WBWG, 2005b).

The **hoary bat** (*Lasiurus cinereus*) is the most widespread of all North American bats. This species ranges from Canada to South America and is primarily associated with forested habitats. Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, often at the edge of a clearing. The species is highly migratory but neither wintering sites nor migratory routes are well documented. Hoary bats reportedly have a strong preference for moths, but are also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG, 2005c).

The **big free-tailed bat** (*Nyctinomops macrotis*) ranges from South America to the southwestern United States. This species is found in a variety of habitats including desert shrub, woodlands, and evergreen forests. It mostly roosts in cliff crevices, but has been documented in buildings,

caves, and tree cavities (WBWG, 2005d). This species may occur within the Plan Area as a seasonal migrant.

Special-Status Plants

No special-status plant species are expected to occur within the Plan Area. Although a number of special-status plant species are identified in Appendix F as occurring within the vicinity of the Plan Area, there are no intact native communities remaining within the Plan Area, and therefore, no suitable habitat for these species is present. Many plant species presented in Appendix F are considered by CNPS (2013) to be extirpated from the Plan Area due to a long-standing history of disturbance.

4.3.2 Regulatory Setting

This subsection briefly describes federal, state, and local regulations, permits, and policies pertaining to biological resources as they apply to the Plan Area.

Federal

Endangered Species Act

The United States Fish and Wildlife Service (USFWS), which has jurisdiction over plants, wildlife, and most freshwater fish, and the National Marine Fisheries Service (NMFS), which has jurisdiction over anadromous fish, marine fish, and mammals, oversee implementation of the Federal Endangered Species Act (FESA). Section 7 of the FESA mandates that all federal agencies consult with the USFWS and NMFS to ensure that federal agencies actions do not jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat for listed species. A federal agency is required to consult with USFWS and NMFS if it determines a “may effect” situation will occur in association with the project. The FESA prohibits the “take”² of any fish or wildlife species listed as threatened or endangered, including the destruction of habitat that could hinder species recovery.

Under Section 9 of the FESA, the take prohibition applies only to wildlife and fish species. However, Section 9 prohibits the removal, possession, damage or destruction of any endangered plant from federal land. Section 9 also prohibits acts to remove, cut, dig up, damage, or destroy an endangered plant species in nonfederal areas in knowing violation of any state law or in the course of criminal trespass. Candidate species and species that are proposed or under petition for listing receive no protection under Section 9 of the FESA.

² “Take,” as defined in Section 9 of the FESA, is broadly defined to include intentional or accidental “harassment” or “harm” to wildlife. “Harass” is further defined by the USFWS as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, and sheltering. “Harm” is defined as an act which actually kills or injures wildlife. This may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

Section 10 of the FESA requires the issuance of an “incidental take” permit before any public or private action may be taken that would potentially harm, harass, injure, kill, capture, collect, or otherwise hurt (i.e., take) any individual of an endangered or threatened species. To offset the take of individuals that may occur incidental to implementation of a proposed project, the permit requires preparation and implementation of a habitat conservation plan that provides for the overall preservation of the affected species through specific mitigation measures.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

State

California Endangered Species Act

Under the California Endangered Species Act (CESA), California Department of Fish and Wildlife Service (CDFW) has the responsibility for maintaining a list of threatened and endangered species (California Fish and Wildlife Code Section 2070). CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains lists of “species of special concern,” which serve as “watch lists.” Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may affect a candidate species.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.” The NPPA gave the California Fish and Wildlife Service the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals – but not all rare plants – into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

California Fish and Wildlife Code

Under Section 3503 of the California Fish and Wildlife Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Section 3503.5 of the California Fish and Wildlife Code prohibits

take, possession, or destruction of any birds in the orders *Falconiformes* (hawks) or *Strigiformes* (owls), or of their nests and eggs.

Fish and Wildlife Code Sections 3511, birds; 4700, mammals; 5050, reptiles and amphibians; and 5515, fish) allows the designation of a species as Fully Protected. This is a greater level of protection than is afforded by the California Endangered Species Act, since such a designation means the listed species cannot be taken at any time.

Bats and other non-game mammals are protected in California. Section 4150 of the Fish and Wildlife Code states that all non-game mammals or parts thereof may not be taken or possessed except as otherwise provided in the code or in accordance with regulations adopted by the commission. Thus, destruction of an occupied, non-breeding bat roost, resulting in the death of bats, or disturbance that causes the loss of a maternity colony of bats (resulting in the death of young), is prohibited.

Sensitive Natural Communities

Sensitive natural communities are identified as such by CDFW's Natural Heritage Division and include those that are naturally rare and those whose extent has been greatly diminished through changes in land use. The CNDDDB tracks 135 such natural communities in the same way that it tracks occurrences of special-status species: information is maintained on each site's location, extent, habitat quality, level of disturbance, and current protection measures. CDFW is mandated to seek the long-term perpetuation of the areas in which these communities occur. While there is no statewide law that requires protection of all special-status natural communities, CEQA requires consideration of a project's potential impacts on biological resources of statewide or regional significance. There are no Sensitive Natural Communities in the Plan Area.

Jurisdictional Waters

Definitions

The following represents definitions applicable to the Specific Plan.

Waters of the United States. The term "waters of the United States," as defined in the Code of Federal Regulations (33 CFR§ 328.3[a]; 40 CFR § 230.3[s]), refers to:

1. All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
 - which are or could be used by interstate or foreign travelers for recreational or other purposes; or

- from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - which are used or could be used for industrial purposes by industries in interstate commerce.
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
 5. Tributaries of waters identified in paragraphs (1) through (4).

U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Regulations

The Corps and the USEPA regulate the discharge of dredged or fill material into waters of the United States, including wetlands, under Section 404 of the Clean Water Act (CWA). Projects that would otherwise result in the placement of dredged or fill material into waters of the United States require a Section 404 permit from the Corps. Some classes of fill activities may be authorized under General or Nationwide permits if specific conditions are met. Nationwide permits do not authorize activities that are likely to jeopardize the existence of a threatened or endangered species (listed or proposed for listing under the FESA). In addition to conditions outlined under each Nationwide Permit, project specific conditions may be required by the Corps as part of the Section 404 permitting process. When a project's activities do not meet the condition for a Nationwide Permit, an Individual Permit may be issued.

Section 401 of the CWA requires an applicant for a Corps permit to obtain state certification that the activity associated with the permit will comply with applicable state effluent limitations and water quality standards. In California, water quality certification, or a waiver, must be obtained from the Regional Water Quality Control Board (RWQCB) for both Individual and Nationwide Permits.

State Policies and Regulations

State regulation of activities in waters and wetlands resides primarily with the CDFW and the State Water Resources Control Board (SWRCB). In addition, CDFW is authorized under the California Fish and Wildlife Code, Section 1600-1616, to enter into a Streambed Alteration Agreement with applicants and develop mitigation measures when a proposed project would obstruct the flow or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource including intermittent and ephemeral streams. The SWRCB, acting through the nine Regional Water Quality Control Boards, must certify that a USACE permit action meets state water quality objectives (CWA, Section 401).

Local

City of Oakland General Plan

The Open Space, Conservation, and Recreation (OSCAR) Element of the City of Oakland General Plan was adopted in 1996. OSCAR policies pertaining to natural resources with potential relevance to adoption and development under the Specific Plan include the following:

- ***Policy CO-6.1:*** Protect Oakland's remaining natural creek segments by retaining creek vegetation, maintaining creek setbacks, and controlling bank erosion. Design future flood control projects to preserve the natural character of creeks and incorporate provisions for public access, including trails, where feasible. Strongly discourage projects which bury creeks or divert them into concrete channels.
- ***Policy CO-7.1:*** Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a way which prevents or mitigates adverse impacts to these communities.
- ***Policy CO-7.3:*** Make every effort to maintain the wooded or forested character of tree-covered lots when development occurs on such lots.
- ***Policy CO-7.4:*** Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.
- ***Policy CO-9.1:*** Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.
- ***Policy CO-11.1:*** Protect wildlife from the hazards of urbanization, including loss of habitat and predation by domestic animals.
- ***Policy CO-11.2:*** Protect and enhance migratory corridors for wildlife. Where such corridors are privately owned, require new development to retain native habitat or take other measures which help sustain local wildlife population and migratory patterns.

The following policy was adopted in the 1998 Land Use and Transportation (LUTE) element of the General Plan LUTE:

- ***Policy W3.3:*** Native plant communities, wildlife habitats, and sensitive habitats should be protected and enhanced.

City of Oakland Tree Ordinance

City of Oakland Tree Preservation and Removal Ordinance (Oakland Municipal Code [OMC] Chapter 12.36) permits removal of protected trees under certain circumstances. To grant a tree removal permit, the City must determine that removal is necessary in order to accomplish one of the following objectives:

- to ensure public health and safety,
- to avoid an unconstitutional taking of property,

- to take reasonable advantage of views,
- to pursue acceptable professional practice of forestry or landscape design, or
- to implement the vegetation management prescriptions in the S-11 site development review zone.

Protected trees include the following:

- *Quercus agrifolia* (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except *Eucalyptus* and *Pinus radiata* (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be Protected trees.

City of Oakland Creek Ordinance

Title 13, Chapter 13.16, City of Oakland Creek Protection, Storm Water Management, and Discharge Control Ordinance, provides a high level of protection for creeks within Oakland's city limits.

The ordinance defines a creek as "...a watercourse that is a naturally occurring swale or depression, or engineered channel that carries fresh or estuarine water either seasonally or year around."

In addition, under the ordinance definition, a creek channel must be hydrologically connected to a waterway above or below a project site, and the channel must exhibit a defined bed and bank. A creek protection permit is required whenever work is to be undertaken on a creekside property. The ordinance prohibits, among other things, the discharge of concentrated stormwater or other modification of the natural flow of water in a watercourse, development within a watercourse or within 20 feet from the top of the bank, and the deposition or removal of any material within a watercourse without a permit. Depending on the type of activity being permitted, conditions of approval may include the submittal of a creek protection plan and/or a hydrology report, revegetation with native plant species, the use of soil bioengineering techniques for bank stabilization and erosion control, and implementation of stormwater quality protection measures.

The following activities, among others, are typically not permitted:

- Removal of riparian vegetation;
- Culverting or undergrounding of a creek;
- Moving the location of a creek;
- Structures spanning a creek; and/or
- Riprap, rock gabions, or concrete within the bed or on the creek banks.

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

The Standard Conditions Approval (SCAs) relevant to the biological resources that could be significantly impacted by adoption and development under the Specific Plan are listed below. If the Specific Plan is approved by the City, all applicable SCAs would be adopted as conditions of approval and required, as applicable, of adoption and development under the Specific Plan to help

ensure less-than-significant impacts to biological resources. The SCAs are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures.

- **SCA 43: Tree Removal Permit on Creekside Properties.**

Prior to issuance of a final inspection of the building permit. Prior to removal of any tree located on the project site which is identified as a creekside property, the project applicant must secure the applicable creek protection permit, and abide by the conditions of that permit.

- **SCA 44: Tree Removal During Breeding Season.**

Prior to issuance of a tree removal permit. To the extent feasible, removal of any tree and/or other vegetation suitable for nesting of raptors shall not occur during the breeding season of March 15 and August 15. If tree removal must occur during the breeding season, all sites shall be surveyed by a qualified biologist to verify the presence or absence of nesting raptors or other birds. Pre-removal surveys shall be conducted within 15 days prior to start of work from March 15 through May 31, and within 30 days prior to the start of work from June 1 through August 15. The pre-removal surveys shall be submitted to the Planning and Zoning Division and the Tree Services Division of the Public Works Agency. If the survey indicates the potential presences of nesting raptors or other birds, the biologist shall determine an appropriately sized buffer around the nest in which no work will be allowed until the young have successfully fledged. The size of the nest buffer will be determined by the biologist in consultation with the CDFG, and will be based to a large extent on the nesting species and its sensitivity to disturbance. In general, buffer sizes of 200 feet for raptors and 50 feet for other birds should suffice to prevent disturbance to birds nesting in the urban environment, but these buffers may be increased or decreased, as appropriate, depending on the bird species and the level of disturbance anticipated near the nest.

- **SCA 45: Tree Removal Permit.**

Prior to issuance of a demolition, grading, or building permit. Prior to removal of any protected trees, per the Protected Tree Ordinance, located on the project site or in the public right-of-way adjacent to the project, the project applicant must secure a tree removal permit from the Tree Division of the Public Works Agency, and abide by the conditions of that permit.

- **SCA 46: Tree Replacement Plantings.**

Prior to issuance of a final inspection of the building permit. Replacement plantings shall be required for erosion control, groundwater replenishment, visual screening and wildlife habitat, and in order to prevent excessive loss of shade, in accordance with the following criteria:

- 1) No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.
- 2) Replacement tree species shall consist of *Sequoia sempervirens* (Coast Redwood), *Quercus agrifolia* (Coast Live Oak), *Arbutus menziesii* (Madrone), *Aesculus californica* (California Buckeye) or *Umbellularia californica* (California Bay Laurel) or other tree species acceptable to the Tree Services Division.
- 3) Replacement trees shall be at least of twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

- 4) Minimum planting areas must be available on site as follows:
 - For *Sequoia sempervirens*, three hundred fifteen square feet per tree;
 - For all other species listed in #2 above, seven hundred (700) square feet per tree.
 - 5) In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee as determined by the master fee schedule of the City may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.
 - 6) Plantings shall be installed prior to the issuance of a final inspection of the building permit, subject to seasonal constraints, and shall be maintained by the project applicant until established. The Tree Reviewer of the Tree Division of the Public Works Agency may require a landscape plan showing the replacement planting and the method of irrigation. Any replacement planting which fails to become established within one year of planting shall be replanted at the project applicant's expense.
- **SCA 47: Tree Protection during Construction.**
Prior to issuance of a demolition, grading, or building permit. Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:
 - 1) Before the start of any clearing, excavation, construction or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the City Tree Reviewer. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.
 - 2) Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the City Tree Reviewer from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.
 - 3) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the Tree Reviewer from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the tree reviewer. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.
 - 4) Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

- 5) If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Agency of such damage. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.
- 6) All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

- **SCA-72: Vegetation Management Plan on Creekside Properties.**

Prior to issuance of a demolition, grading, and/or construction and Ongoing. The project applicant shall submit a vegetation management plan for review and approval by the Planning and Zoning Division, Fire Services Division, and Environmental Services Division of the Public Works Agency that includes, if deemed appropriate, the following measures:

- a) Identify and do not disturb a 20-foot creek buffer from the top of the creek bank. If the top of bank cannot be identified, leave a 50-foot buffer from the centerline of the creek or as wide a buffer as possible between the creek centerline and the proposed site development.
- b) Identify and leave "islands" of vegetation in order to prevent erosion and landslides and protect nesting habitat.
- c) Leave at least 6 inches of vegetation on the site.
- d) Trim tree branches from the ground up (limbing up) and leave tree canopy intact.
- e) Leave stumps and roots from cut down trees to prevent erosion.
- f) Plant fire-appropriate, drought-tolerant, preferably native vegetation.
- g) Err on the side of caution. If you don't know if a plant, tree or area is sensitive, ask for a second opinion before you cut.
- h) Provide erosion and sediment control protection if cutting vegetation on a steep slope.
- i) Leave tall shrubbery at least 3-feet high.
- j) Fence off sensitive plant habitats and creek areas to protect from goat grazing.
- k) Obtain a tree protection permit for a protected tree (includes all mature trees except eucalyptus and Monterey pine).
- l) Contact the City Tree Department (615-5850) for dead trees.
- m) Do not clear-cut vegetation. This can lead to erosion and severe water quality problems and destroy important habitat.
- n) Do not remove vegetation within 20-feet of the top of bank. If the top of bank cannot be identified, do not cut within 50-feet of the centerline of the creek or as wide a buffer as possible between the creek centerline and the proposed site development.

- o) Do not trim/prune branches that are larger than 4 inches in diameter.
- p) Do not remove tree canopy.
- q) Do not dump cut vegetation in a creek.
- r) Do not cut tall shrubbery to less than 3-feet high.
- s) Do not cut of short vegetation (grasses, ground-cover) to less than 6-inches high.

- **SCA-82: Erosion, Sediment, and Debris Control Measures.**

Prior to issuance of demolition, grading, or construction-related permit. The project applicant shall submit an erosion and sedimentation control plan for review and approval by the Building Services Division. All work shall incorporate all applicable “Best Management Practices (BMPs) for the construction industry, and as outlined in the Alameda Countywide Clean Water Program pamphlets, including BMP’s for dust, erosion and sedimentation abatement per Chapter Section 15.04 of the Oakland Municipal Code. The measures shall include, but are not limited to, the following:

- On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.
- In accordance with an approved erosion control plan, the project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.
- Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.
- All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.
- Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the Engineering Division at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.
- Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.
- Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

- Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.
 - Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.
 - Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.
 - Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, stormdrains.
 - All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Board (RWQB).
 - Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of Planning and Zoning.
 - All erosion and sedimentation control measures shall be monitored regularly by the project applicant. The City may require erosion and sedimentation control measures to be inspected by a qualified environmental consultant (paid for by the project applicant) during or after rain events. If measures are insufficient to control sedimentation and erosion then the project applicant shall develop and implement additional and more effective measures immediately.
- **SCA 83: Creek Protection Plan.**
Prior to and ongoing throughout demolition, grading, and/or construction activities.
 - The approved creek protection plan shall be included in the project drawings submitted for a building permit (or other construction-related permit). The project applicant shall implement the creek protection plan to minimize potential impacts to the creek during and after construction of the project. The plan shall fully describe in plan and written form all erosion, sediment, stormwater, and construction management measures to be implemented on-site.
 - If the plan includes a stormwater system, all stormwater outfalls shall include energy dissipation that slows the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. The project shall not result in a substantial increase in stormwater runoff volume to the creek or storm drains.

- **SCA-86: Creek Landscaping Plan.**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek.

The project applicant shall develop a final detailed landscaping and irrigation plan for review and approval by the Planning and Zoning Division prepared by a licensed landscape architect or other qualified person. Such a plan shall include a planting schedule, detailing plant types and locations, and a system for temporary irrigation of plantings.

- Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.
- All landscaping indicated on the approved landscape plan shall be installed prior to the issuance of a Final inspection of the building permit, unless bonded pursuant to the provisions of Section 17.124.50 of the Oakland Planning Code.
- All landscaping areas shown on the approved plans shall be maintained in neat and safe conditions, and all plants shall be maintained in good growing condition and, whenever necessary replaced with new plant materials to ensure continued compliance with all applicable landscaping requirements. All paving or impervious surfaces shall occur only on approved areas.

- **SCA-87: Creek Dewatering and Aquatic Life.**

Prior to the start of and ongoing throughout any in-water construction activity.

- If any dam or other artificial obstruction is constructed, maintained, or placed in operation within the stream channel, ensure that sufficient water is allowed to pass down channel at all times to maintain aquatic life (native fish, native amphibians, and western pond turtles) below the dam or other artificial obstruction.
- The project applicant shall hire a biologist, and obtain all necessary State and federal permits (e.g. CDFW Scientific Collecting Permit), to relocate all native fish/native amphibians/pond turtles within the work site, prior to dewatering. The applicant shall first obtain a project-specific authorization from the CDFW and/or the USFWS, as applicable to relocate these animals. Captured native fish/native amphibians/pond turtles shall be moved to the nearest appropriate site on the stream channel downstream. The biologist/contractor shall check daily for stranded aquatic life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the nearest appropriate downstream site. This condition does not allow the take or disturbance of any state or federally listed species, nor state-listed species of special concern, unless the applicant obtains a project specific authorization from the CDFW and/or the USFWS, as applicable.

- **SCA-88: Creek Dewatering and Diversion.**

Prior to the start of any in-water construction activities. If installing any dewatering or diversion device(s), the project applicant shall develop and implement a detailed dewatering and diversion plan for review and approval by the Building Services Division. All proposed dewatering and diversion practices shall be consistent with the requirements of the Streambed Alteration Agreement issued by the California Department of Fish and Game.

- Ensure that construction and operation of the devices meet the standards in the latest edition of the Erosion and Sediment Control Field Manual published by the Regional Water Quality Control Board (RWQCB).
- Construct coffer dams and/or water diversion system of a non-erodable material which will cause little or no siltation. Maintain coffer dams and the water diversion system in place and functional throughout the construction period. If the coffer dams or water diversion system fail, repair immediately based on the recommendations of a qualified environmental consultant. Remove devices only after construction is complete and the site stabilized.
- Pass pumped water through a sediment settling device before returning the water to the stream channel. Provide velocity dissipation measures at the outfall to prevent erosion.

- **SCA D: Bird Collision Reduction**

Prior to issuance of a building permit and ongoing. The project applicant, or his or her successor, including the building manager or homeowners' association, shall submit plans to the Planning and Zoning Division, for review and approval, indicating how they intend to reduce potential bird collisions to the maximum feasible extent. The applicant shall implement the approved plan, including all mandatory measures, as well as applicable and specific project Best Management Practice (BMP) strategies to reduce bird strike impacts to the maximum feasible extent.

- a) Mandatory measures include **all** of the following:
 - i. Comply with federal aviation safety regulations for large buildings by installing minimum intensity white strobe lighting with three second flash instead of blinking red or rotating lights.
 - ii. Minimize the number of and co-locate rooftop-antennas and other rooftop structures.
 - iii. Monopole structures or antennas shall not include guy wires.
 - iv. Avoid the use of mirrors in landscape design.
 - v. Avoid placement of bird-friendly attractants (i.e. landscaped areas, vegetated roofs, water features) near glass.
- b) Additional BMP strategies to consider include the following:
 - i. Make clear or reflective glass visible to birds using visual noise techniques. Examples include:
 - 1. Use of opaque or transparent glass in window panes instead of reflective glass.
 - 2. Uniformly cover the outside clear glass surface with patterns (e.g., dots, decals, images, abstract patterns). Patterns must be separated by a minimum 10 centimeters (cm).
 - 3. Apply striping on glass surface. If the striping is less than 2 cm wide it must be applied vertically at a maximum of 10 cm apart (or 1 cm wide strips at 5 cm distance).

4. Install paned glass with fenestration patterns with vertical and horizontal mullions of 10 cm or less.
 5. Place decorative grilles or louvers with spacing of 10 cm or less.
 6. Apply one-way transparent film laminates to outside glass surface to make the window appear opaque on the outside.
 7. Install internal screens through non-reflective glass (as close to the glass as possible) for birds to perceive windows as solid objects.
 8. Install windows which have the screen on the outside of the glass.
 9. Use UV-reflective glass. Most birds can see ultraviolet light, which is invisible to humans.
 10. If it is not possible to apply glass treatments to the entire building, the treatment should be applied to windows at the top of the surrounding tree canopy or the anticipated height of the surrounding vegetation at maturity.
- ii. Mute reflections in glass. Examples include:
1. Angle glass panes toward ground or sky so that the reflection is not in a direct line-of-sight (minimum angle of 20 degrees with optimum angle of 40 degrees).
 2. Awnings, overhangs, and sunshades provide birds a visual indication of a barrier and may reduce image reflections on glass, but do not entirely eliminate reflections.
- iii. Reduce Light Pollution. Examples include:
1. Turn off all unnecessary interior lights from 11 p.m. to sunrise.
 2. Install motion-sensitive lighting in lobbies, work stations, walkways, and corridors, or any area visible from the exterior and retrofitting operation systems that automatically turn lights off during after-work hours.
 3. Reduce perimeter lighting whenever possible.
- iv. Institute a building operation and management manual that promotes bird safety. Example text in the manual includes:
1. Donation of discovered dead bird specimens to authorized bird conservation organization or museums to aid in species identification and to benefit scientific study, as per all federal, state and local laws.
 2. Production of educational materials on bird-safe practices for the building occupants.
 3. Asking employees to turn off task lighting at their work stations and draw office blinds or curtains at end of work day.
 4. Schedule nightly maintenance during the day or to conclude before 11 p.m., if possible.

4.3.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS;
3. Have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means;
4. Substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
5. Fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan;
6. Fundamentally conflict with the City of Oakland Tree Protection Ordinance (OMC Chapter 12.36) by removal of protected trees under certain circumstances [NOTE: Factors to be considered in determining significance include the number, type, size, location and condition of (a) the protected trees to be removed and/or impacted by construction and (b) protected trees to remain, with special consideration given to native trees.³ Protected trees include *Quercus agrifolia* (California or coast live oak) measuring four inches diameter at breast height (dbh) or larger, and any other tree measuring nine inches dbh or larger except eucalyptus and *pinus radiata* (Monterey pine); provided, however, that Monterey pine trees on City property and in development-related situations where more than five Monterey pine trees per acre are proposed to be removed are considered to be protected trees.];
7. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources. Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of riparian and/or aquatic habitat through: (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) adversely impacting the riparian corridor by significantly altering vegetation or wildlife habitat.

³ Oakland Planning Code section 17.158.280(E)(2) states that “Development related” tree removal permits are exempt from CEQA if no single tree to be removed has a dbh of 36 inches or greater **and** the cumulative trunk area of all trees to be removed does not exceed 0.1 percent of the total lot area.

Approach to Analysis

Potential impacts resulting from adoption and development under the Specific Plan were evaluated on the following sources:

- 1) Existing resource information and aerial photographs of the Plan Area and vicinity;
- 2) Data presented in the CNDDDB (CDFW 2013), CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California (CPNS 2013) for Oakland West, Oakland East, Briones Valley, and Richmond U.S. Geological Survey 7.5-minute topographic quadrangles and USFWS *Official List of Federal Endangered and Threatened Species* for Alameda County (USFWS, 2013) which include the Plan Area and vicinity;
- 3) Standard biological references (e.g., field guides);
- 4) Surveys and environmental documents including specific information on species or habitats found in the Plan Area;
- 5) Other available literature regarding the natural resources of the area.

Based on the Plan Area and its geographical location, adoption and development under the Specific Plan would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

- **Conservation Plans:** There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans that apply to the Plan Area. The Specific Plan would complement the City of Oakland's General Plan, Land Use and Transportation Element (LUTE) by enhancing parameters for future urban development in an existing context not currently fulfilling its potential. Additionally, adoption and development under the Specific Plan would lessen potential impacts to areas protected with habitat and/or natural community conservation plans as it encourages urban growth in an area currently devoid of sensitive natural communities.

Impacts

The Plan Area is located within and immediately adjacent to a fully developed urban environment. The development anticipated in the Broadway Valdez Development Program relative to the proximity of Mosswood Park, Oak Glen Park, and Adams Park is not expected to have direct or indirect impacts on biological resources located within these parks or in the Plan Area. Future analysis for future projects under the Specific Plan, are expected to focus primarily on ensuring landscape trees are removed without disturbing nesting birds, as well as ensuring adherence to local tree preservation ordinances found in the Oakland Municipal Code.

Impact BIO-1: Adoption and development under the Specific Plan could adversely affect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 1). (Less than Significant)

Due to the high level of ongoing activity present, there are few special-status animals that could be impacted in and around the Plan Area. As noted above, species listed in Table 4.3-1 could be of concern however, historically, species richness and densities of individual species frequently decline with an increasing number of buildings, given the urban context (Evans et al., 2009). Species potentially impacted by adoption and development under the Specific Plan are likely to have adapted to continuously evolving environments by which this portion of Oakland is defined. Given the existence of substantial commercial development, including heavy vehicle traffic along Broadway that has occurred for more than 90 years in this area, the site is not a part of an established native resident or migratory wildlife corridor (WRT, 2009). Some species use the Plan Area on occasion, however have established habitats outside the Plan Area.

Adoption and development under the Specific Plan is considered more suitable for the proposed location than adjacent areas since 150 years of urban development has replaced any former native biotic habitats and natural vegetation. For example; because avian populations are more concentrated in other areas within the region; such as the Briones Valley, Oakland Estuary, and the Oakland Harbor; the urban context of the Broadway-Valdez area fails to provide a sufficient migratory environment or habitat.

Overall, the Plan Area environment has not been conducive to natural habits sought by special-status species therefore, the impacts related to the potential loss of habitat is deemed less than significant.

Mitigation: None Required.

Impact BIO-2: Adoption and development under the Specific Plan could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 2). (Less than Significant)

The Glen Echo Creek corridor is located along the eastern boundary of the Plan Area, between 28th and 30th Streets, and is daylighted between 29th and 30th Streets. However, depending on the location of proposed new construction in the Plan Area, construction activities may have the potential to disturb wildlife in this corridor through elevated noise levels, and changes in air and water quality. Additionally, damage to mature trees hanging over 30th Street at Richmond Boulevard could occur if large equipment is driven along that stretch of road. Riparian corridors are protected by the CDFW code 1600-1616, which require a Streambed Alteration Agreement for modification of creek banks and associated vegetation when CDFW determines that a proposed project would substantially adversely affect fish or wildlife resources.

As stated above, there are no natural sensitive communities within the Plan Area. Typically, natural sensitive communities in urban contexts, such as the City of Oakland, often lie within designated Open Space. The Plan Area does not contain Open Space, however designations reside in the immediate vicinity, including Mosswood Park, Oak Glen Park, Lake Merritt and Lakeside Park (Note: Adams Park is not identified as Open Space in the General Plan).

In the Plan Area (i.e., near 30th Street and Richmond Boulevard), the creek's canopy vegetation is mostly dominated by Eucalyptus trees with a few mature remnant coast live oak trees along the banks. Recent restoration activities have been implemented along the western bank at 30th and Richmond Boulevard. A number of animal species adapted to human habitation were found using this area such as: raccoon, striped skunk, Virginia opossum, gray squirrel, American starling, mourning dove, and American robin. There are no recorded sightings of special status animal species in this area, and it is not likely that special status animals would tolerate the elevated human presence in this area, although tree nesting birds including raptors could nest in the taller Eucalyptus trees.

Incorporation of the City's SCAs relating to tree preservation would address potential degradation of natural resources that could result from construction of future projects in the Plan Area and reduce these potential impacts to less-than-significant levels. SCA 43, *Tree Removal Permit on Creekside Properties*; SCA 44, *Tree Removal During Breeding Season*; SCA 45, *Tree Removal Permit*; SCA 46, *Tree Replacement Plantings*; and SCA 47, *Tree Protection during Construction* are relevant and would minimize potential indirect impacts to the Plan Area to less-than-significant levels.

Mitigation: None Required.

Impact BIO-3: Adoption and development under the Specific Plan could have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means (Criterion 3). (Less than Significant)

Adoption and development under the Specific Plan is not expected to increase stormwater runoff since work is only expected to take place on areas that are already fully developed. However, potential increases in transmittal of oil, diesel fuel, transmission fluids, and other toxic materials from construction activities via runoff from the impermeable surfaces of the site, could result in significant adverse impacts to wetlands and/or other waters within the Plan Area.

Incorporation of the City's SCAs relating to erosion control, stormwater management, and hazardous materials would address potential degradation of water quality that could result from construction and reduce these potential impacts to less-than-significant levels. SCA 55, *Erosion and Sedimentation Control Plan*, 35, *Hazards Best Management Practices*, 75, *Stormwater Pollution Prevention Plan*, and 80, *Post-construction Stormwater Management Plan*, are relevant and would minimize potential indirect impacts to water quality in Glen Echo Creek to less-than-

significant levels. These SCAs are discussed in Section 4.5, *Geology, Soils and Geohazards*; Section 4.7, *Hazardous Materials*; and Section 4.8, *Hydrology and Water Quality*, of this Draft EIR. Therefore, adoption and development under the Specific Plan would have a less than significant effect on federally protected wetlands.

Mitigation: None Required.

Impact BIO-4: Adoption and development under the Specific Plan could substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Criterion 4). (Less than Significant)

No aquatic habitats or jurisdictional waters potentially supporting migratory fish or birds are present within the Plan Area. Glen Echo Creek, having only a small segment of channel within or adjacent to the Plan Area, does not support a native fishery, and impediments to fish passage and wildlife movement make the creek an unlikely location for aquatic resources (WRT, 2009). Very little natural vegetation exists, none of which is connected to other nearby natural habitats to constitute a wildlife corridor. Landscape trees in the Plan Area could be considered nursery sites for native nesting birds, but any potential impacts on nesting birds from adoption and development under the Specific Plan would be reduced to less-than-significant levels by SCA 44, *Tree Removal During Breeding Season*. Construction activities associated with the Specific Plan would not have any impacts on native wildlife nursery sites or wildlife corridors. Adoption and development under the Specific Plan is not expected to impact wildlife potentially in the Plan Area, as undisturbed wildlife populations are obsolete.

Mitigation: None Required.

Impact BIO-5: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances (Criterion 6). (Less than Significant)

Portions of the Plan Area may qualify as protected under the City of Oakland Tree Protection Ordinance (Oakland Municipal Code, Title 12, Chapter 12.36). Construction-related activities related to adoption and development under the Specific Plan may potentially impact protected trees through direct removal or through loss from adjacent construction. SCA 46, *Tree Replacement Plantings*, requires replacement plantings for impacted protected trees. SCA 47, *Tree Protection during Construction*, provides for adequate protection, during construction, of any trees that are to remain standing. Both SCA 46 and SCA 47 would be incorporated into development considered under the Broadway-Valdez Development Program and would ensure the impact is less than significant.

Mitigation: None Required.

Impact BIO-6: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources (Criterion 7). (Less than Significant)

Oakland's Creek Protection Ordinance (Oakland Municipal Code, Title 13, Chapter 13.16.120) requires a Creek Protection Permit for construction that would take place within close proximity to a creek, as defined in the Ordinance. As a result, conflicts with the Ordinance would be addressed through this permitting process. Within the Plan Area, Glen Echo Creek would be the only feature protected under the City of Oakland Creek Protection Ordinance. Development or construction in or around the creek would be regulated by this Ordinance and require a Creek Protection Permit if work falls within the following four categories:

- **Category 1:** Interior construction and alterations including remodeling.
- **Category 2:** Exterior work that does not include earthwork and is located more than 100 feet from the centerline of the Creek.
- **Category 3:** Exterior work that is located between 20 feet from the top of the Creek bank and 100 feet from the centerline of the Creek; or Exterior work that includes earthwork involving more than three (3) cubic yards of material, beyond 20 feet from the top of the Creek bank.
- **Category 4:** Exterior work conducted from the centerline of the Creek to within 20 feet from the top of the Creek bank.

Projects exempt from the Creek Protection Permit requirement must comply with the remaining portions of the Ordinance and must incorporate site design/landscape characteristics which maximize infiltration (where appropriate), provide retention or detention, slow runoff, and minimize impervious land coverage (i.e., use hydrologic source controls) to the maximum extent practicable.

Development under the Broadway Valdez Development Program would not directly result in additional culverts or daylighted portions of the creek.⁴ Further, adoption and development under the Specific Plan is not expected to increase stormwater runoff since work is only expected to replace existing structures and within areas that are already fully developed. However, construction related activities could increase sediment deposition into the creek, which could adversely impact the creek.

Any future projects within the Plan Area would comply with the City of Oakland's Creek Protection Ordinance (Oakland Municipal Code, Title 13, Chapter 13.16.120). Also, incorporation of the City's SCAs relating to erosion control, stormwater management, and hazardous materials would address potential degradation of water quality that could result from

⁴ Daylighting is the redirection of a stream into an above-ground channel.

construction. These include SCAs 83, *Creek Protection Plan*; 55, *Erosion and Sedimentation Control Plan*; 57, *Vibrations Adjacent to Historic Structures*; 35, *Hazards Best Management Practices*, 75, *Stormwater Pollution Prevention Plan*, and 80, *Post-construction Stormwater Management Plan*, which would ensure that development under the Specific Plan is in compliance with all aspects of the Creek Protection Ordinance, and would reduce the potential impacts on water quality to less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact BIO-7: Construction activity and operations of adoption and development under the Specific Plan, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects in the Plan Area, would not result in impacts on special-status species, sensitive habitats, wildlife movement corridors, wetlands, and other waters of the U.S. (Less than Significant)

Geographic Context

The cumulative geographical context for biological resources for the Broadway-Valdez Development Program consists of the areas of Glen Echo Creek, Mosswood Park, Adams Park, and Lake Merritt.

Impacts

The cumulative analysis considers the effect of the Broadway-Valdez Development Program in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Plan Area (as described in Major Projects List in Appendix B to this Draft EIR). The Plan Area largely includes areas that have previously been developed. Future projects under the Specific Plan are not anticipated to significantly impact any wetlands and/or other waters.

Incorporation of the City's SCAs relating to erosion control, stormwater management, and hazardous materials (57, *Vibrations Adjacent to Historic Structures*; 35, *Hazards Best Management Practices*; 55, *Erosion and Sedimentation Control Plan*; 75, *Stormwater Pollution Prevention Plan*; and 80, *Post-construction Stormwater Management Plan*) would ensure indirect impacts to wetland and/or other waters are less than significant. Additionally, incorporation of the City of Oakland's SCA 44, *Tree Removal During Breeding Season*; 45, *Tree Removal Permit*; 46, *Tree Replacement Plantings*; 47, *Tree Protection during Construction*; A, *Bird Collision Reduction*; and 83, *Creek Protection Ordinance*, among other applicable requirements, would also ensure that potential impacts to special status resources are less than significant.

Environmentally protective laws and regulations have been applied with increasing rigor since the early 1970s and include the CESA, FESA, and the CWA, as described earlier in this section. Adoption and development under the Specific Plan, as well as other future projects within the

cumulative geographic context of the Plan Area, would be required to comply with local, state, and federal laws and policies and all applicable permitting requirements of the regulatory and oversight agencies intended to address potential impacts on biological resources, including waters of the U.S., and special-status species. Additionally, future projects would be required to demonstrate that they would not have significant effects on these biological resources, although it is possible that some projects may be approved even though they would have significant, unavoidable impacts on biological resources.

Therefore, overall, considering adoption and development under the Broadway-Valdez Development Program, with effects of past, present, pending and reasonably foreseeable future projects within the geographic context for this analysis, the cumulative effect on biological resources would be less than significant.

Mitigation: None Required.

4.3.4 References

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4.4 Cultural Resources

This section provides background information with respect to cultural resources in the Specific Plan Area. Cultural resources are defined as prehistoric or historic-era archaeological sites, historic architectural resources, and paleontological resources. This section describes the environmental and regulatory setting relevant to cultural resources in the Plan Area, and summarizes the relevant and applicable regulations and policies. It identifies known cultural resources in the Plan Area as defined for CEQA purposes. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.4.1 Environmental Setting

An overview of the history and development of the City of Oakland is contained in the *City of Oakland Historic Preservation Element* (1998; pp. 1-2 through 1-9), and is hereby incorporated by reference. The Oakland City Planning Department's Cultural Heritage Survey project has prepared extensive neighborhood histories, thematic context statements, and individual property and district documentation that can be consulted for further information. The following discussion includes a brief summary of the Plan Area's history as adapted in part from the *Historic Preservation Element*, as well as the *Broadway Valdez Specific Plan Historic Resources Inventory* (2009 HRI) (see Appendix D).

There is a moderate potential that prehistoric archaeological resources, including Native American artifacts and sites, are present within the geological zone generally located in a north-south strip between Broadway and the Glen Echo Creek corridor. Although now obscured by recent development, such resources may exist beneath the ground surface, and as such, ground disturbance resulting from adoption of and development under the Specific Plan could inadvertently damage or destroy such resources. There are a number of historic architectural resources in the Plan Area that could be affected by adoption and development under the Specific Plan.

Prehistoric Setting

The Plan Area is now urbanized, although prehistorically it was a biologically rich alluvial plain and estuarine environment between the East Bay Hills and San Francisco Bay. The natural marshland biotic communities along the edges of bays and channels were the principal source for human subsistence and other activities during the prehistory of the San Francisco Bay region.

Many of the original surveys of archaeological sites in the Bay region were conducted between 1906 and 1908 by Stanford (and, later, UC Berkeley) archaeologist N.C. Nelson. Such surveys yielded the initial documentation of nearly 425 "earth mounds and shell heaps" along the littoral zone of the Bay (Nelson, 1909).¹ None of these shellmound sites is located in the Plan Area; the nearest is approximately 1 mile away south of Lake Merritt. From these beginnings, the most notable sites in the Bay region were excavated scientifically, like the Emeryville shellmound (CA-ALA-309), the Ellis Landing Site (CA-CCO-295) in Richmond, and the Fernandez Site

¹ The "littoral zone" is the part of a body of water that is close to the shore.

(CA-CCO-259) in Rodeo Valley (Moratto, 1984). These dense midden² sites, such as CA-ALA-309, have been carbon 14-dated to be 2310 ± 220 years old, but other evidence from around the Bay suggests that human occupation in the region began earlier, at least by around 5000 B.C. (Davis & Treganza, 1959 as cited in Moratto, 1984). These very early sites, from the Paleoindian Period (c. 10,000 to 6000 B.C.) and a subsequent unnamed period (c. 6000 to 2500 B.C.), are not well documented in the Bay Area, as they are believed to exist under alluvial deposits that have reshaped the bayshore since the end of the Pleistocene (Meyer and Rosenthal, 2007).

The Windmill Pattern (c. 2500 B.C. to 1500 B.C.) is characterized by relatively sparse, small sites situated on small knolls above seasonal floodplains on valley floors. Beginning around 2000 B.C., the bayshore and marsh-adapted peoples representing the so-called Berkeley Pattern appeared in the archaeological record. This artifact pattern was represented by minimally-shaped cobble mortars and pestles, dart and atlatl hunting technology, and a well-developed bone carving industry. Given the size of these settlements, it is probable that the populations were denser and more sedentary, yet continued to exploit a diverse resource base from woodland to grassland and marshland, to bayshore and riverine resources throughout the San Francisco Bay Area (King, 1974 as cited in Moratto, 1984). Many of the Berkeley Pattern traits diffused throughout the region and spread to the interior areas of central California during this time period.

The late prehistoric period, appearing in the archaeological record as the Augustine Pattern (c. A.D. 1000 until European contact), shows substantial population growth, increased trade and social exchange networks, increased ceremonial activity, and more intensive use of acorns as a staple food in addition to fish, shellfish, and a wide variety of hunted animals and gathered plant resources. Technological changes are shown in the adoption of the bow and arrow for hunting, and use of bone awls for basketry manufacture. The people of this period were the ancestors of the groups encountered by the first Spanish explorers.

Ethnographic Setting

Prior to Euroamerican contact, the Ohlone (also known by their linguistic group, Costanoan³) occupied the area that is currently Alameda County. Politically, the Ohlone were organized into sovereign groups that held a defined territory and exercised control over the resources within that territory. Oakland and a large surrounding area of the East Bay are located within the territory; at this time, at least four villages were probably settled within the boundaries of modern Oakland, although the exact locations are now unknown.

The Ohlone economy was based on fishing, gathering, and hunting, with the land and waters providing a diversity of resources including acorns, various seeds, salmonids and other fish, deer, rabbits, insects, and quail. The acorn was a very important dietary staple of the Ohlone. Acorns

² A midden is a mound of domestic refuse generally containing culturally darkened soils, shells and animal bones, as well as other indices of past human life and habitation. Middens mark the site of an indigenous settlement, and may contain human burials related to that settlement.

³ “Costanoan” is derived from the Spanish word *Costaños* meaning “coast people.” No native name of the Costanoan-speaking people as a whole existed in prehistoric times as the Costanoan language was shared between multiple ethnic groups and political entities. Most modern descendants of Costanoan-speaking peoples prefer to be known as Ohlone, a name derived from one of the tribal groups that occupied the San Gregorio watershed in San Mateo County.

from several varieties of oaks were ground in mortars to produce a meal that was then leached to remove the bitter tannins. The Ohlone crafted tule reed balsas (a type of raft) for transportation along rivers and through marshlands; ground stone tools such as mortars and metates (a mortarlike flat bowl used for grinding grain); flaked stone arrow points, knives, scrapers, and other tools; and artfully wove and twined basketry. Houses were conical and likely thatched with tule reeds (Levy, 1978).

During the Mission Period, 1770-1835, the Ohlone people experienced cataclysmic changes in almost all areas of their life, particularly a massive decline in population due to introduced diseases and a declining birth rate, resulting in large part from colonization by the Spanish missionaries (Milliken, 1995). Many Chochenyo speakers moved, either by choice or by force, from the Oakland area to Mission San Jose. Following the secularization of the missions by the Mexican government in the 1830s, most Ohlone gradually left the missions to work as manual laborers on the ranchos that were established in the surrounding areas. It is estimated that by the late 1800s, perhaps ten percent of the pre-contact Ohlone population remained (Kroeber, 1932). Today, descendants of these survivors live throughout the Bay Area, and have formed modern tribal groupings to revive and promote their traditional arts, languages, and other cultural elements. There are nine culturally-affiliated tribes or individuals associated with the Oakland area; however none have been federally recognized.

Historic Setting

The Plan Area is within the Rancho San Antonio land grant that was granted to Luis Maria Peralta on August 3, 1820 for his service to the Spanish government. The 43,000-acre rancho included the present-day cities of Oakland, Berkeley, Alameda, Albany, El Cerrito, San Leandro and Piedmont. The Gold Rush and California statehood brought miners, businessmen, lumbermen and other speculators to the area in search of opportunities. Early settlers of that period include Edson Adams, Andrew Moon, and Horace Carpentier, who squatted on 480 acres of Luis Peralta's son Vicente's land. Adams, Moon, and Carpentier subsequently hired Julius Kellersberger, an Austrian-educated Swiss military engineer, to plot a new city—Oakland—which was incorporated in 1852.

The city originally encompassed the area roughly bordered by the Oakland Estuary on the south, Market Street on the west, 14th Street on the north, and the Lake Merritt Channel on the east. Broadway served as the main street, with the majority of the early city dwellers living near the foot of Broadway in proximity to the estuary. In 1869, transcontinental rail service began. With the arrival of the railroad, Oakland was transformed into a commercial and industrial center with a rapidly growing population. The city's population tripled from 10,500 in 1870 to 34,555 in 1880. In the Plan Area, development moved north along street car lines of Broadway and towards the Oakland Hills. Between 1889 and 1928, Saint Mary's College was located at what is now 3093 Broadway. This building is now gone, but the site is California Historical Landmark No. 676.

The 1906 earthquake and fire in San Francisco prompted a population increase in Oakland, and by 1910 the city's population of 150,000 was more than double the 1900 level of 67,000. Older neighborhoods became more densely populated as apartment buildings and apartment conversions became part of Oakland's residential fabric. Shopping districts expanded to meet this demand. The

post-earthquake development boom defined much of central Oakland as it is known today, resulting in most of the city's notable early 20th century architecture.

Broadway's Auto Row

Initially owned solely by the wealthy, automobiles became the standard mode of transportation for many Americans of all classes by the 1920s. By 1920 there were 210,000 registered vehicles in Alameda County. The number of automobile showrooms and service facilities that appeared on Broadway in the early 20th century was related to Oakland's role at the forefront of the West Coast's fledgling automobile industry. General Motors founder William C. Durant joined forces with French racecar driver Louis Chevrolet and formed the Chevrolet Motor Car Company. In 1916, a Chevrolet plant opened in East Oakland.

Both San Pablo and Telegraph Avenue were in existence by 1857 as country roads leading north. By 1870, Broadway was extended north of 14th Street - the original town - when this outlying area was mainly occupied by agricultural uses. The blocks now forming the Plan Area were subdivided and built up with medium sized, single family houses by 1903. At the turn of the century, Sanborn maps show Broadway as having been predominantly occupied by residential buildings, as well as associated schools and hospitals. Garages and other associated automobile buildings began appearing along Broadway by 1911, and the auto service area, with sales centers located along Broadway, had developed a strong presence by the 1920s.

Directories in the early 1910s show Oakland's center for automobile service and sales shifting from 12th, Jackson, and Madison Streets to upper Broadway beyond 20th Street. This pattern continued through and beyond the 1920s, with service and parts becoming concentrated on the side streets in an area roughly bounded by Telegraph Avenue, Webster, and 23rd Streets. Dealerships and service garages along Broadway mirrored the nationwide explosion of automobile ownership.

Broadway developed as an auto row primarily due to its location near to, but immediately outside of, downtown Oakland where commercial real estate was slightly less expensive and dealers were able to assemble fairly large lots for the display of automobiles along a major commercial thoroughfare leading directly into town. Eventually becoming more commercial than residential in focus, the properties along Broadway developed into the second most important automobile retail center in the Bay Area, after Van Ness Avenue in San Francisco.

Broadway and Telegraph Avenue were major roadways connecting Oakland to Berkeley, and streetcars transported residents and commuters from one community to another until the system was dismantled in 1948. As a major roadway leading out of Oakland, Broadway was the route to the outlying prosperous Piedmont and Rockridge residential areas, whose development owed a great deal to the automobile. By 1912, there were reportedly 4,500 automobiles registered in Oakland, and by the mid-1910s, Upper Broadway was referred to as "Broadway Auto Row." The majority of the buildings located within the Broadway Auto Row were constructed between the 1910s and 1940s, and revolved around the growing auto industry. The main building types are identified as Beaux Arts and Moderne automobile showrooms, early 20th century utilitarian service garages, and 1920s decorative brick commercial buildings.

Paleontological Setting

On a regional scale, fossilized plants, animals and microorganisms are prevalent throughout the East Bay Area. Many of the hills in the East Bay are made up of sedimentary bedrock that is known to contain a wide range of fossils, including radiolaria, mollusks, diatoms, foraminifera, and non-marine vertebrates. In addition, even geologically young fluvial deposits have been known to contain freshwater mollusks and extinct late-Pleistocene vertebrate fossils (Graymer, 2000).

The series of stream courses that deposited sediments during the Pleistocene no longer exist, and those ancient sediments have been cut into by modern-day streams. As a result, many of the Pleistocene-age fluvial and alluvial fan deposits exist as subtle topographic highs between the bay margin and the East Bay Hills. The Pleistocene deposits are similar in composition and character to sediments deposited by present-day streams, but owing to their age, they are denser, more consolidated, and have locally preserved the remains of Pleistocene flora and fauna.

In their regional geologic map, Witter and other of the USGS (2006) have identified the Plan Area as primarily underlain by the Pleistocene-age deposits discussed above, except for some areas along the Plan Area's edges, which are younger (less than 10,000 years old) (see **Figure 4.4-1**). Ground-disturbing development within Pleistocene-age deposits which underlay portions of the Specific Plan could affect previously unrecorded paleontological resources.

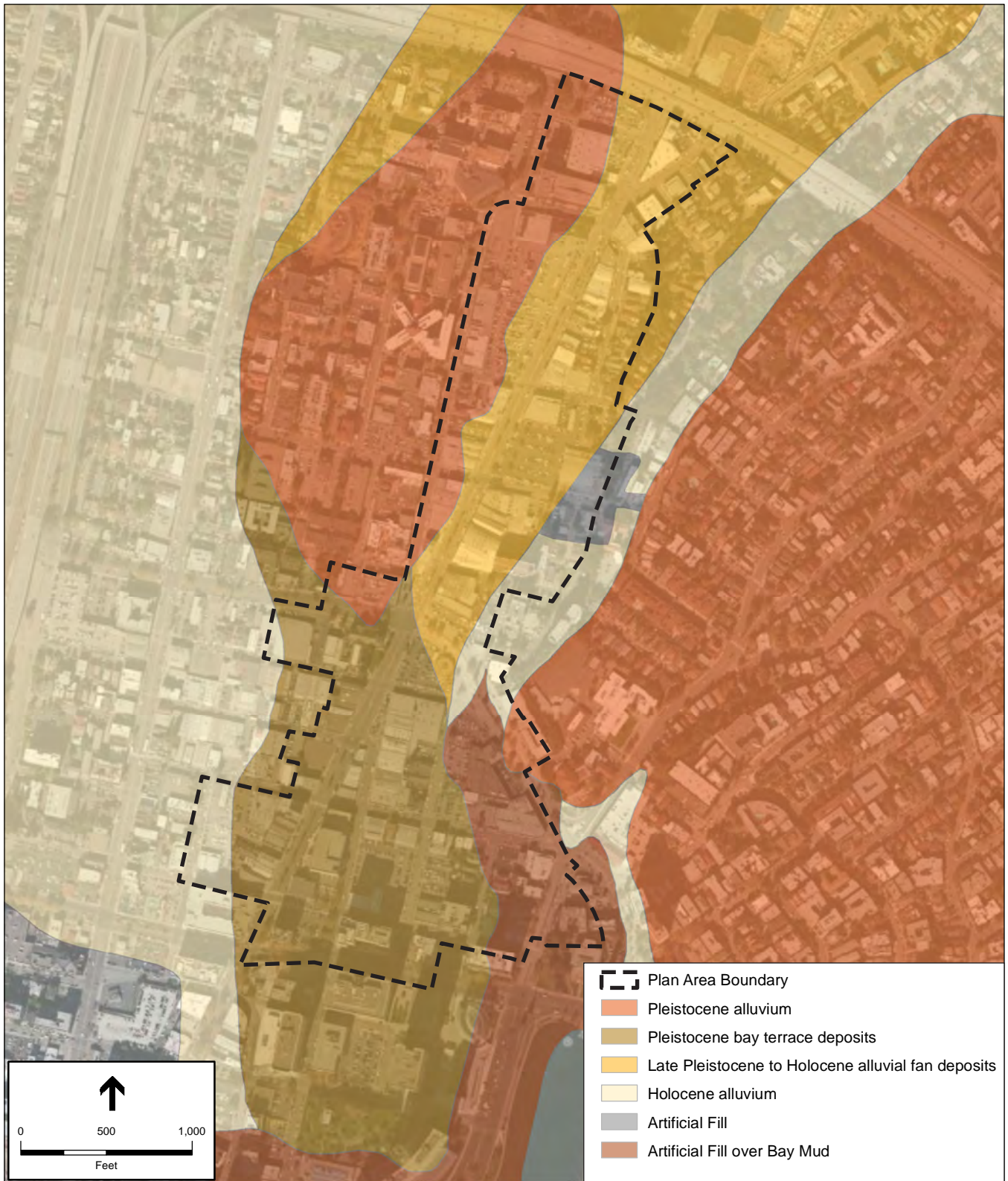
4.4.2 Regulatory Setting

National Historic Preservation Act, National Register of Historic Places, and National Historic Landmarks

National Historic Preservation Act and National Register of Historic Places. The National Historic Preservation Act of 1966 as amended (NHPA) addresses those concerns pertinent to the effect of federal actions on cultural resources (16 USC § 470 *et seq.*). The NHPA sets forth the federal government's policy on historic preservation, including establishing the National Register of Historic Places (NRHP, National Register). The National Register is the nation's official list of cultural resources worthy of preservation. Properties listed in the NRHP include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture.

To be listed on the National Register, a property must be shown to be "significant" at the local, state, or national level under one or more of the following criteria (36 CFR 60.4). Eligible resources are those:

1. That are associated with events that have made a significant contribution to the broad patterns of our history (Criterion A - Event);
2. That are associated with the lives of persons significant in our past (Criterion B - Person);



SOURCE: Witter et al., 2006

Broadway Valdez District Specific Plan . 208522

Figure 4.4-1
Geology in the Plan Area

3. That embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C - Design/Construction); or
4. That have yielded, or may be likely to yield, information important in prehistory or history (Criterion D - Information Potential).

The property must also possess historic “integrity.” Integrity is defined as “the ability of a property to convey its significance.” The National Register criteria recognize seven qualities that define integrity: location, design, setting, materials, workmanship, feeling, and association.

- “Location” refers to the place where the historic property was originally constructed or situated.
- “Design” is the combination of architectural elements that create the form, structure and style of the property.
- “Setting” is the physical environment surrounding a historic resource.
- “Materials” are the original physical components that were combined during a particular period in time and in a particular pattern to form the historic resource.
- “Workmanship” is the physical evidence of the building crafts and skills of a particular culture during a given period.
- “Feeling” is a property’s expression of the aesthetic or historic sense of a particular period of time.
- “Association” is the direct link between an important historic event or person and a cultural resource.

Special considerations apply to moved or reconstructed properties, cemeteries, religious or commemorative properties, and properties achieving significance within the past 50 years. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to an Indian Tribe are eligible for inclusion in the National Register. The National Register eligibility criteria and considerations are used as a standard in other programs such as the California Register of Historic Resources and many local evaluation and designation systems, including Oakland’s.

Section 106 of the NHPA requires review by the Advisory Council on Historic Preservation and/or State Historic Preservation Officer (SHPO) of any federal actions (including federally funded grants or loans) that may adversely affect properties listed on, eligible for, *or potentially eligible* for the National Register. National Register listing is normally initiated by an application to the State Historical Resources Commission. Determinations of eligibility usually take place as part of federally related project reviews. Properties officially determined eligible for the National Register have the same protections and the same standing in environmental review as those properties that have already been listed; however, only listed properties may qualify for a 20 percent federal investment tax credit.

There are no buildings listed in, or determined eligible for listing in, the National Register in the Plan Area. The closest National Register-listed building to the Plan Area is the Paramount Theater, located at 2025 Broadway, approximately 0.2 mile south of the Plan Area.

National Historic Landmarks. National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. National Historic Landmarks are given special protection by Section 110(f) of the NHPA.

There are no NHLs in the Plan Area. The closest designated NHL to the Plan Area is the Paramount Theatre, located at 2025 Broadway and 21st Street, approximately 0.2 mile south of the Plan Area.

California Environmental Quality Act, California Register of Historical Resources, and California State Historical Landmarks

CEQA requires lead agencies in California to consider the effects of proposed actions on historic resources, defined as those resources *meeting the criteria* for listing on the California Register of Historic Resources (CRHR, California Register). This definition of “historic resources” includes buildings, structures, objects, sites, and districts determined to be eligible for or listed on the California Register, the National Register, or a local register of historic resources. A lead agency may also determine a resource to be significant for purposes of CEQA. Section 15064.5 of CEQA assigns special importance to human remains and specifies procedures to be followed when Native American remains are discovered.

The California Register was established as the authoritative guide to the state’s cultural resources, and provides the standards by which properties are considered significant for CEQA purposes. The California Register program encourages public recognition and protection of resources of architectural, historical, archaeological and cultural significance, identifies historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding and affords certain protections under CEQA. The California Register includes resources listed in or formally determined eligible for listing in the National Register; California State Historical Landmarks; and California Points of Historical Interest. The State Office of Historic Preservation (OHP) maintains a list of historical resources by county in their Directory of Properties in the Historic Property Data File. A building or structure identified in OHP’s Directory with a rating of 1 or 2 (on or determined eligible for the National Register) is considered to be “listed” on the California Register. No properties within the Plan Area are listed in or determined eligible for listing in the California Register.

Properties of local significance that have been designated under a local preservation ordinance (i.e., local landmarks), or that have been identified as significant in a local historical resources inventory may also be eligible for listing in the California Register and are presumed to be significant resources for purposes of CEQA.

In order for a resource to meet the criteria for listing in the California Register, it must satisfy all of the following three provisions:

1. It meets one or more of the following four criteria of significance (PRC 5024.1[c] and CEQA Guidelines 15064.5):
 - A. the resource “is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;”
 - B. the resource “is associated with the lives of persons important in our past;”
 - C. the resource “embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;” or
 - D. the resource “has yielded, or may be likely to yield information important in prehistory or history” (this criterion applies primarily to archaeological sites).
2. The resource retains historic integrity; and
3. It is fifty years old or older (except where it can be demonstrated that sufficient time has passed to understand the historical importance of the resource).

California Historical Landmarks recognize sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. The specific standards now in use were first applied in the designation of Landmark #770. California Historical Landmarks #770 and above are automatically listed in the California Register of Historical Resources.

There is one California Historical Landmark in the Plan Area: CHL 676, the site of Saint Mary’s College, which existed from 1889 to 1928 on the parcel now occupied by 3093 Broadway. This site is not listed in the California Register, because only those CHL’s numbered 770 and higher are automatically listed in this register, and this one has not been separately nominated.

Senate Bill (SB) 18

Effective January 2005 and in conformance with SB 18, which was signed into law by the Governor of California in September 2004, starting on March 1, 2005 local governments are required to consult with tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places” (State of California, 2005).

According to the *Tribal Consultation Guidelines: Supplement to General Plan Guidelines* (2005), the following identifies the contact and notification responsibilities of local governments:

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the Native American Heritage Commission [NAHC]) of the opportunity to conduct consultations for the purpose

of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code § 65352.3).

- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code § 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code § 65092).

Local Plans and Policies

In the City of Oakland, a historical resource under CEQA is defined by the City's CEQA Thresholds of Significance as a resource that meets any of the following criteria:

1. A resource listed in, or determined to be eligible for listing in, the California Register of Historic Resources;
2. A resource included in Oakland's Local Register of Historical Resources (defined below), unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
3. A resource identified as significant (e.g., rated 1–5) in a historical resource survey recorded on Department of Parks and Recreation Form (DPR) 523, unless the preponderance of evidence demonstrates that it is not historically or culturally significant;
4. Any object, building, structure, site, area, place, record, or manuscript which the Oakland City Council determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the determination is supported by substantial evidence in light of the whole record. Generally, a resource is considered "historically significant" if it meets the criteria for listing on the California Register of Historical Resources CEQA Guidelines section 15064.5; or
5. A resource that is determined by the City Council to be historically or culturally significant even though it does not meet the other four criteria listed here.

City of Oakland General Plan Historic Preservation Element

In March 1994, the Oakland City Council adopted a Historic Preservation Element (HPE) of the General Plan (amended July 21, 1998), which sets forth goals, objectives, policies, and actions for historic preservation in the City of Oakland. The HPE creates a wide-reaching, multifaceted "Historic Preservation Strategy" that addresses a wide variety of properties and is intended to help revitalize Oakland's districts and neighborhoods. Guiding the HPE are the two broad, ambitious goals at its core:

Goal 1: To use historic preservation to foster the economic vitality and quality of life in Oakland by:

- (1) Stressing the positive community attributes expressed by well-maintained older properties;
- (2) Maintaining and enhancing throughout the City the historic character, distinct charm, and special sense of place provided by older properties;
- (3) Establishing and retaining positive continuity with the past thereby promoting pride, a sense of stability and progress, and positive feelings for the future;
- (4) Stabilizing neighborhoods, enhancing property values, conserving housing stock, increasing public and private economic and financial benefits, and promoting tourist trade and interest through preservation and quality maintenance of significant older properties;
- (5) Preserving and encouraging a city of varied architectural styles and environmental character reflecting the distinct phases of Oakland's cultural, social, ethnic, economic, political, and architectural history; and
- (6) Enriching the quality of human life in its educational, spiritual, social, and cultural dimensions through continued exposure to tangible reminders of the past.

Goal 2: To preserve, protect, enhance, perpetuate, use, and prevent the unnecessary destruction or impairment of properties or physical features of special character or special historic, cultural, educational, architectural or aesthetic interest or value.

The chapters of the HPE address identification, designation, incentives and regulations, preservation in ongoing city activities, and education and information. The HPE sets out a graduated system of ratings and designations based on the Oakland Cultural Heritage Survey (OCHS) information and implemented in the Oakland Planning Code. Incentives and regulations for historic properties are similarly graduated based on the relative importance of the property.

Objectives and policies found in the HPE that are relevant to the Specific Plan are summarized below. They are relevant to the Plan because they provide guidance toward minimizing adverse effects to historic resources, and they have the potential to assist in implementation of beneficial HPE actions. Some of the actions related to these policies have already been completed, while some are ongoing.

Objective 1: Identifying Properties Potentially Warranting Preservation. Policies and actions related to this Objective adopt the Oakland Cultural Heritage Survey rating system, establish inventory goals and guidelines, and define the various types of Designated Historic Properties and Potential Designated Historic Properties (PDHP)s.

Policy 1.2: Potential Designated Historic Properties (PDHPs): The City considers any property with a rating of at least a contingency C or contributing or potentially contributing to a primary or secondary district to "warrant consideration for possible preservation." These are called Potential Designated Historic Properties (PDHPs) and include approximately a fifth to a quarter of all buildings in Oakland. They are intended to be numerous enough to "significantly influence the City's character." The inclusion of contingency-rated properties as PDHPs is intended to highlight their

value as restoration opportunities. District contributors and potential contributors are classified as PDHPs to promote preservation of Oakland's distinctive neighborhoods.

Objective 2: Preservation Incentives and Regulations for Designated Historic Properties. This objective directs the City to develop a system of preservation incentives and regulations for specially designated significant older properties which (i) enhances economic feasibility for preservation; (ii) provides a predictable and appropriate level of protection, based on each property's importance; (iii) reasonably balances preservation with other concerns; and (iv) operates efficiently, avoiding unnecessary regulatory procedures and review periods.

Policy 2.1: The City will use a combination of incentives and regulations to encourage preservation of significant older properties and areas which have been designated as Landmarks, Preservation Districts, or Heritage Properties. The regulations will be applied according to the importance of each property, with the more important properties having stronger regulations. Policy 2.1 is a general policy which is expressed more specifically in this chapter's other policies and their related actions.

Policies 2.2 – 2.5 describe eligibility criteria, designation processes, and alteration and demolition regulations for Landmarks, Heritage Properties, and districts.

Policy 2.6: This policy recommends Preservation Incentives for Landmarks and Preservation District properties, including several financial incentives (e.g., Mills Act contracts, conservation easements, development assistance from historic preservation grants or historical rehabilitation bonds, fee waivers or reductions for City permits), use of the State Historical Building Code to provide more flexible construction standards, a broader range of permitted or conditionally permitted uses, and transferable development rights. Heritage Properties and compatible new development on vacant noncontributing parcels of a Preservation District are eligible for some of the same incentives.

Objective 3: Historic Preservation and Ongoing City Activities. This objective seeks to establish administrative procedures and criteria to promote preservation of significant older properties as a routine part of City-sponsored or assisted projects, programs and regulatory activities.

Policy 3.1: Avoid or minimize adverse historic preservation impacts related to discretionary City actions. Policy 3.1 is a general policy which is expressed more specifically in this Chapter's other policies and their related actions.

Policy 3.2: To the extent consistent with other Oakland General Plan objectives, the City will ensure that all City-owned or controlled properties will, in fact, be preserved, e.g. through designation or a formal historic preservation management procedure.

Policy 3.3: To the extent consistent with other General Plan goals, policies and objectives, as a condition for providing financial assistance to projects involving existing or Potential Designated Historic Properties, the City will require local designation.

Policy 3.4: City Acquisition for Historic Preservation Where Necessary. This policy proposes limited acquisition powers for extremely important properties in dire situations, including acquisition by eminent domain.

Policy 3.5: Historic Preservation and Discretionary Permit Approvals. This policy establishes design review findings for alterations and demolitions of Heritage Properties and PDHPs. This policy applies to both publicly and privately sponsored projects. Related actions include the development of appropriate design guidelines and standard conditions of approval for such projects.

Policy 3.6: Historic Preservation and City-Sponsored or Assisted Projects. This policy recommends that City-sponsored or assisted projects involving an existing or Potential Designated Historic Property “be selected and designed to avoid adverse effects...and to promote preservation and enhancement.” The Secretary of the Interior’s Standards for the Treatment of Historic Properties are used as one criterion for avoiding adverse effects. This policy extends the protections applied to federally related projects under Section 106 of the NHPA to “non-Federally funded City projects and to City projects that involve existing or Potential Designated Historic Properties.

Policy 3.7: As a condition of approval for all discretionary projects involving demolition of existing or Potential Designated Historic Properties, the City will normally require that reasonable efforts be made to relocate the properties to an acceptable site. Actions associated with this policy include preparation of relocation procedures and design guidelines, investigation of assistance programs, and review of permit regulations.

Policy 3.8: Definition of “Local Register of Historic Resources” and historic preservation “Significant Effects” for environmental review purposes. This policy defines the minimum set of historical resources that require consideration in environmental review and declares that complete demolition of a historic resource cannot normally be mitigated to a level of insignificance.

The Local Register is defined as:

All Designated Historic Properties (DHPs - Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties); and

Those Potential Designated Historic Properties (PDHPs) that have an existing rating of “A” or “B,” or are located within an Area of Primary Importance (API).

Measures that may be considered to mitigate significant effects to a Historical Resource may include one or more of the following measures depending on the extent of the proposed addition or alterations⁴:

- 1) Modification of the project design to avoid adversely affecting the character defining elements of the property.
- 2) Relocation of the affected Historical Resource to a location consistent with its historical or architectural character.

If the above measures are not feasible, then other measures may be considered including, but not limited to the following:

- 3) Modification of the project design to include restoration of the remaining historic character of the property.

⁴ Per the provisions of CEQA, determination of whether mitigations are adequate to reduce a significant effect of a historical resource to a level less than significant will be determined by the Lead Agency on a case-by-case basis.

- 4) Modification of the project design to incorporate or replicate elements of the building's original architectural design.
- 5) Salvage and preservation of significant features and materials of the structure in a local museum or within the new project.
- 6) Measures to protect the Historical Resource from effects of on-site or other construction activities.
- 7) Documentation in a Historic American Buildings Survey report or other appropriate format: photographs, oral history, video, etc.
- 8) Placement of a plaque, commemorative, marker, or artistic or interpretive display on the site providing information on the historical significance of the resource.
- 9) Contribution to a Facade Improvement Fund, the Historic Preservation Revolving Loan Fund, the Oakland Cultural Heritage Survey, or other program appropriate to the character of the resource.

Policy 3.9: Consistency of zoning with existing or eligible preservation districts. This policy recommends including a historic preservation component in areawide and specific plans.

Policy 3.10: Historic preservation in response to earthquakes, fires or other emergencies.

Policy 3.11: Historic preservation and seismic retrofit and other building safety programs. Policies 3.10 and 3.11 direct that retrofit and repair be carried out in a manner that minimizes adverse effects on character-defining elements.

Policies 3.12 and 3.13 recommend an extensive program for dealing with substandard and nuisance properties, including repair rather than demolition, earlier intervention, repair with liens, property acquisition and transfer, financial assistance, and improved security of vacant properties.

Policy 3.14: Promotes commercial revitalization programs and California Main Street projects with a specific focus on preserving and enhancing designated and potential designated historic commercial properties and districts.

Objective 4: Archaeological Resources. This objective seeks to develop databases identifying existing and potential archaeological sites and adopt procedures for protecting significant archaeological resources. Related policies and actions describe the measures the City will take to protect significant archaeological resources during ground-disturbing activities associated with discretionary projects.

Objective 5: Information and Education. This objective seeks to provide and encourage informational and educational programs to enhance public and City staff appreciation of older properties and increase the level of technical knowledge. Associated policies and actions promote research and information dissemination programs; public recognition of historic properties and preservation efforts through plaques, certificates, walking tours and guidebooks; City-sponsored design assistance, rehabilitation training and apprenticeship programs, rehabilitation publications, and a preservation-related design and construction bookstore; public school curricula emphasizing Oakland's history and architectural heritage; and improved City records management.

As detailed below, the Plan Area contains 20 individual properties that meet the definition of the City of Oakland's Local Register and are considered significant for purposes of environmental review under CEQA. These resources are shown in **Table 4.4-1** and **Table 4.4-2** below and mapped on **Figure 4.4-2**.

TABLE 4.4-1
SUMMARY TABLE OF CEQA HISTORIC RESOURCES WITHIN PLAN AREA

Key #	Street Address	Year Built	Historic Name/Current Name	OCHS Rating/Survey Type
1	2355 Broadway	1913-14	Packard & Maxwell Don Lee Western Auto Bldg / Packard Lofts	B+1+, Study List, API contributor / Intensive Survey
2	2401 Broadway	1913-14	Pacific Kissel Kar salesroom and garage/Oakland Mitsubishi	Eb-1*, API contingency contributor (restoration potential)/ Intensive Survey
3	2601-19 Broadway	1913-14	First Presbyterian Church/same	A3, Study List/ Intensive Survey
4	2740 Broadway	1929	Pacific Nash Co. auto sales and garage/Volkswagen of Oakland	Cb+2+, proposed B rating in 2009 Survey/ Intensive Survey
5	2801-25 Broadway	1916	Arnstein-Field & Lee Star showroom/none	Cb+2+, proposed B-rating in 2009 Survey/ Intensive Survey
6	2863-69 Broadway	1892	Scherman building/none	B*2+/ Intensive Survey
7	2946-64 Broadway	1930	Firestone Tire & Rubber service station/Mercedes Benz of Oakland	B-2+/ Intensive Survey
8	3074 Broadway	1917	Grandjean Burman GM Co-Alzina garage / Window Tinting Plus	B-2+/ Intensive Survey
9	3330-60 Broadway	1917	Eisenback (Leo)-Strough (Val) showroom/Honda of Oakland	B*2+/ Intensive Survey
10	3093 Broadway	1947	Connell GMC Pontiac Cadillac/Bay City Chevrolet	Cb+2+, proposed B rating in 2009 Survey/ Intensive Survey
11	2332 Harrison St	1925-26	YWCA Blue Triangle Club/Lake Merritt Lodge	A3/ Intensive Survey
12	2333 Harrison St	1915-18	Seventh Church of Christ Scientist/unoccupied	A3/ Intensive Survey
13	2346 Valdez St	1909-10	Newsom Apartments/same	B+2+/ Intensive Survey
14	2735 Webster St	1924	Howard Automobile-Dahl Chevrolet showroom /Infiniti of Oakland	Cb+2+, proposed B-rating in 2009 Survey/ Intensive Survey
15	315 27th St	1962-64	Biff's II Coffee Shop/JJ's - /unoccupied	*b+3, Heritage Property, determined eligible as a Landmark status on 1/13/97 / Intensive Survey
25th Street Garage District (existing API)				

SOURCE: See Appendix D

**TABLE 4.4-2
CEQA HISTORIC RESOURCES WITHIN PLAN AREA IDENTIFIED IN A PREVIOUS EIR**

	Street Address	Year Built	Historic Name/Current Name	OCHS Rating and Notes
16	2335 Broadway	1920	Dinsmore Brothers Auto Accessories Building/Unoccupied	Eb+3. Heavily altered but with rehabilitation potential. Designed by renowned California architect Julia Morgan / Intensive Survey
17	2343 Broadway	1924-25	Kiel (Arthur) auto showroom/Unoccupied	Ec3. Heavily altered but with rehabilitation potential / Intensive Survey
18	2345 Broadway	1920	J.E. French Dodge showroom/Unoccupied	Eb-3. Heavily altered but with rehabilitation potential / Intensive Survey
19	2366-2398 Valley Street	1936	Art Deco warehouse/none	Cb-2+. Rehabilitation potential / Intensive Survey
20	440-448 23rd Street	1919	Elliot (C.T.) Shop-Valley Auto Garage/Unoccupied	Cb+2+. Rehabilitation potential / Intensive Survey

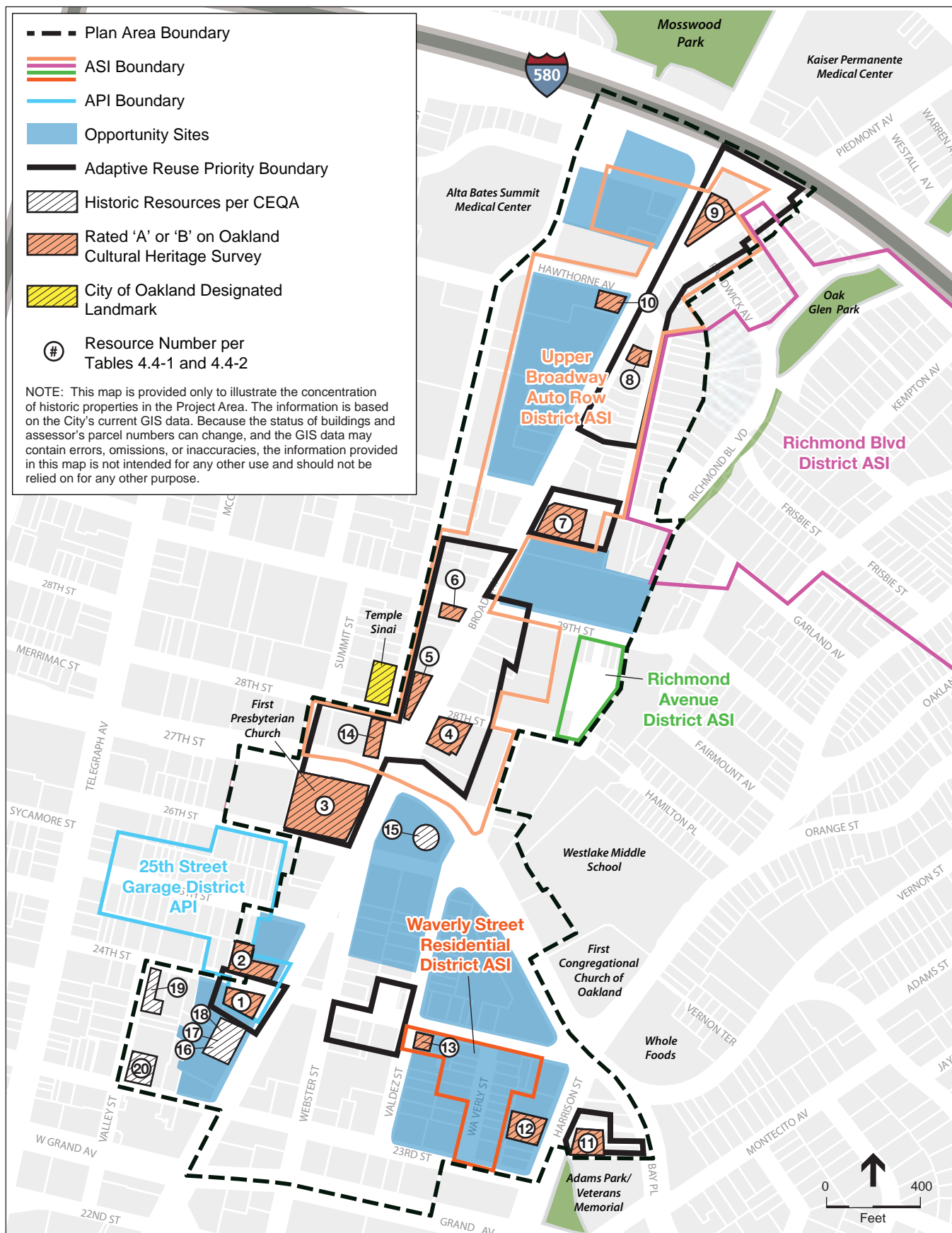
SOURCE: ESA, 2004, 2008

Oakland Cultural Heritage Survey

The Oakland Cultural Heritage Survey (OCHS) is the City Planning Department's comprehensive city-wide inventory of historic buildings and districts. Since 1979, the OCHS has created and maintained an inventory of historic resources throughout the city, providing a basis for many of the policies in the HPE. Every property in Oakland has at least a preliminary rating and estimated construction date from reconnaissance surveys conducted in 1985-1986 and 1996-1997. These preliminary surveys are intended to be confirmed or modified over time by the OCHS Intensive

Survey or project reviews. Most buildings in the Plan Area has been comprehensively researched, evaluated, and documented through intensive -level surveys between 1985 and 2009. Inclusion of a property in the OCHS has no direct regulatory effect; however, the ratings provide guidance to City staff and property owners in design review, code compliance, and similar ongoing City activities, and highest-rated properties are included in the Local Register. The intensive survey formal evaluation is based on the following criteria:

1. **Visual Quality/Design:** Evaluation of exterior design, interior design (if notable and visible), materials and construction, style or type, supporting elements, and importance of designer.
2. **History/Association:** Association with important person or organization, event, or patterns of history, and the age of the building.
3. **Context:** Continuity (district status) and familiarity of the building within the city, neighborhood, or district.
4. **Integrity and Reversibility:** The building's condition, its exterior and interior alterations, and any structural removals.



SOURCE: ESA

Broadway Valdez District Specific Plan . 208522
Figure 4.4-2
 Historic Resources in the Plan Area

Survey ratings describe both the individual building and its neighborhood (district) context. The OCHS rates individual properties using letters A through E plus *, and numbers for district status:

- A: Highest importance:** Of exceptional historical or architectural value, outstanding example, appearing clearly eligible for the National Register.
- B: Major importance:** Major historical or architectural value, fine example, likely eligible for the National Register.
- C: Secondary importance:** Superior or visually important example, very early, or otherwise noteworthy; these properties “warrant limited recognition” but generally do not appear individually eligible for the National Register.
- D: Minor importance:** Typical or representative example of a type, style, convention, or historical pattern.
- E: Of no particular interest:** not representative of any important pattern and visually undistinguished. *There are approximately 22 E-rated buildings in the Plan Area.*

*** or F: Not rated:** Too recent to rate or totally modernized.

Contingency Ratings (lower-case letter, as in “Dc” or “Fb”): potential rating under some condition, such as “if restored” or “when older” or “with more information.”

District status is indicated by numbers:

- 1: In an area of Primary Importance (API)** or National Register quality district.
- 2: In an Area of Secondary Importance (ASI)** or district of local interest.
- 3: Not in an identified district.**

For properties in districts, + indicates contributors, - noncontributors, * contingency contributors.

The HPE describes the district component of a rating as a Multiple Property Rating (1, 2, or 3) based on an assessment of the significance of the area in which the property is located. Properties within an Area of Primary Importance (API: areas that appear eligible for the National Register) are rated “1,” those located in an Area of Secondary Importance (ASI: likely not eligible for the National Register) are rated “2,” and those outside an identified district are rated “3.” A plus (+), minus (-), or asterisk (*) symbol indicates respectively whether the property contributes to the API or ASI, does not contribute, or potentially contributes.

APIs are defined in the HPE as historically or visually cohesive areas or property groupings that usually contain a high proportion of individual properties with ratings of “C” or higher and appear eligible for the National Register, either as a district or as a historically-related complex. At least two-thirds of the properties must be contributors to the API, reflecting the API’s principal historical or architectural themes, and must not have undergone major alterations. APIs and their contributors are included on the Local Register, and as such, are considered ‘historic resources’ for CEQA purposes.

ASIs are similar to APIs; however, remodeled buildings that are potential contributors to the ASI are counted for purposes of the two-thirds threshold as well as contributors. ASIs do not appear eligible for the National Register, usually because they are less intact than, or not as distinct as APIs. Although contributors to an ASI are not considered 'historic resources' by CEQA per se, they may have local importance that is worthy of recognition in specific planning efforts.

All these individual and district ratings are represented among the Plan Area properties:

A: Highest importance: There are three A rated buildings in the Plan Area:

- 1) First Presbyterian Church at 2601-19 Broadway,
- 2) Seventh Church of Christ Scientist at 2333 Harrison Street, and
- 3) YWCA Blue Triangle Club at 2332 Harrison Street.

B: Major importance: There are a total of 10 B rated buildings in the Plan Area. Six buildings in the Plan Area have existing B ratings, unchanged from earlier evaluations. These are:

- 1) Packard & Maxwell Don Lee Western Auto Building at 2355 Broadway (Packard Lofts),
- 2) Firestone Tire & Rubber Service Station at 2946-64 Broadway (Mercedes Benz),
- 3) Grandjean Burman -GM Co. Alzina garage at 3074 Broadway,
- 4) Eisenback (Leo)-Strough (Val) showroom/Honda of Oakland at 3330-60 Broadway,
- 5) Scharman building at 2863-69 Broadway, and
- 6) Newsom Apartments at 2346 Valdez Street.

Four other buildings in the Plan Area have proposed B ratings, revised as a result of the reconnaissance-level inventory completed for the Plan Area in 2009 reported in the 2009 HRI (see Appendix D). They have a proposed B rating because they have been restored or have become 50 years old since they were originally evaluated. These are:

- 7) Pacific Nash Co. Auto Sales and Garage at 2740 Broadway,
- 8) Arnstein-Field & Lee Star showroom at 2801-25 Broadway,
- 9) Connell GMC Pontiac Cadillac at 3093 Broadway, and
- 10) Howard Automobile-Dahl Chevrolet showroom at 2735 Webster Street.

C: Secondary importance: There are approximately 46 C rated buildings located in the Plan Area (out of about 10,000 citywide). Many of these buildings are contributors to the four ASIs (Area of Secondary Importance Historic District) in the Plan Area in addition to their individual PDHP status.

D: Minor importance: Many D and lower-rated properties are Potential Designated Historic Properties (PDHPs), either because they have higher contingency ratings or because they contribute or potentially contribute to a district. There are more than

25,000 D rated citywide, with approximately 60 located in the Plan Area. Many of these buildings are contributors to the four ASIs in the Plan Area.

E, Of no particular interest: There are approximately 22 E-rated buildings in the Plan Area, some with higher contingency ratings (restoration potential).

*** or F, Not rated:** Too recent to rate or totally modernized. Some of these also have higher contingency ratings. There are approximately 23 buildings with * or F ratings in the Plan Area.

APIs: Two parcels in the 25th Street Garage District API are located in the Plan Area. The buildings in this district are predominantly one-story brick and truss-roofed garages built between 1920 and 1929. The district is significant as a concentrated, intact, and homogeneous group of buildings of a distinctive type, dating from a specific period of Oakland's economic development. **2355 Broadway** is rated B+1+, and **2401 Broadway** is rated Eb-1* (contingency contributor, restoration potential). Both meet the HPE definition of Local Register properties: Potential Designated Historic Properties (PDHPs) that have an existing rating of "A" or "B," or are located within an API. Other buildings in the API are also historic resources for CEQA purposes, but they are outside the Plan Area and are not listed here.

ASIs: Four ASIs are wholly or partly in the Plan Area: 1) Broadway Auto Row District, 2) Waverly Street Residential District, 2) Richmond Avenue District, and 4) Richmond Boulevard District. Each of these ASIs is briefly described below, and they are shown on Figure 4.4-2.

The Broadway Auto Row District ASI is a distinctive early 20th century commercial district of approximately 49 buildings on 53 assessor's parcels, all of which are in the Plan Area. Approximately 34 properties contribute to the district's significance. Most buildings date from the 1910s through 1940s, and main property types are Beaux Arts and Moderne automobile showrooms, early 20th century utilitarian service garages, and 1920s decorative brick commercial buildings.

The Waverly Street Residential District ASI is an early twentieth century residential district consisting of 16 contributors on 19 assessor's parcels within the Valdez Triangle portion of the Plan Area. This collection of Colonial Revival and Craftsman-style residences, centered along Waverly Street between 23rd and 24th Streets, was constructed primarily between 1900 and 1925, mostly around 1908. The Newsom Apartments at 2346 Valdez Street is a contributor to this district, and is individually rated B. All contributors to this district are within the Plan Area.

The Richmond Avenue District ASI is a residential district of 13 homes on 13 assessor's parcels. All buildings are Craftsman cottages from the 1910s, either one or one and a half stories in height, and include examples of early residential garages. All contributors to this district are within the Plan Area.

The Richmond Boulevard District ASI is an architecturally distinguished turn of the century residential district of approximately 116 buildings on 137 parcels on seven blocks along Glen Echo Creek and Oak Glen Park. A portion of this district is in the Plan Area. Most buildings date from the 1900s-1920s. The buildings include predominantly Craftsman and Colonial Revival style single family homes, mostly two stories in height. Approximately 13 contributors to the

Richmond Boulevard District are within the Plan Area, including portions of Brook Street and 30th Street.

Designated Historic Properties

The Oakland Planning Code currently provides for five types of historic property designations: Oakland Landmarks, S-7 and S-20 Preservation Combining Zones (historic districts), Preservation Study List, and Heritage Properties. It also establishes the Landmarks Preservation Advisory Board (Landmarks Board) to oversee these properties. Designated Historic Properties (DHPs) are all automatically on the Local Register and are all historic resources for CEQA purposes.

Oakland Landmarks (Section 17.07.030(p) of the Planning Code). Properties designated as Oakland Landmarks are those having “special character or special historical, cultural, educational, architectural, aesthetic or environmental interest or value.” This definition is more specifically interpreted in the Landmark Board’s “Guidelines for Determination of Landmark Eligibility” (City of Oakland 1994: Appendix D of Historic Preservation Element). Designation is through a three-stage application process requiring public hearings and approval by the Landmarks Board, Planning Commission, and City Council. Landmarks are protected by Landmarks Board review of exterior alterations. Demolition of landmarks can be delayed by up to 240 days, and is subject to specific detailed findings.

There are about 150 designated landmarks in the City of Oakland. Although the A and B rated buildings described above are almost certainly eligible as Oakland Landmarks, there are no designated landmarks in the Plan Area. The closest landmark is Temple Sinai adjoining the Plan Area at 362 28th Street at Webster Street.

S-7 and S-20 Preservation Combining Zone (Sections 17.84 and 17.100B of the Planning Code). The S-7 and S-20 Preservation Combining Zones are the City’s historic preservation zoning districts. Areas eligible for S-7 designation are those having “special importance due to historical association, basic architectural merit, or the embodiment of a style or special type of construction, or other special character, interest, or value.” District boundaries can be established by historic tract boundaries and historic natural or man-made features that shaped the district’s development (e.g., the shoreline, railroad tracks), by later intrusion or demolition, or by practical considerations such as existence of an interested group of applicants. The S-20 zone is similar to the S-7 zone, but is designed for larger areas, typically with a large number of residential properties that may not be individually eligible for landmark designation but which as a whole constitute a historic district. Demolition and design regulations for S-7 and S-20 properties are similar to those for landmarks, as described above. In the S-20 zone, most design review follows ordinary City processes, with potential referral to Landmarks Board.

There are currently nine S-7 and S-20 preservation districts containing approximately 1,500 individual properties citywide, none of which is in or near the Plan Area.

Preservation Study List and Heritage Properties (Section 17.102.060 of the Planning Code). The Preservation Study List, used in the first three decades of the Landmarks Board’s existence, was defined as “a list of facilities under serious study for possible landmark designation or for

other appropriate preservation action.” The Landmarks Board, the Planning Commission, or the Planning Director could add properties to the list while it was active. For new listings, the Study List function has been superseded by the Local Register of Historical Resources (HPE Policy 3.5) and Heritage Property designation (HPE Policy 2.5). A new, formal designation called Heritage Property is established in the Preservation Element for “properties which definitively warrant preservation but which are not Landmarks or Preservation Districts.” Properties are eligible for nomination if they have at least an existing or contingency C (secondary) rating or could contribute to a preservation district. Heritage Property can be considered a less exclusive form of Landmark designation.

The Planning Director can postpone demolition of a Study List or Heritage Property for up to 120 days, during which time Landmark or other preservation designations may occur or other means to preserve the property can be investigated.

There are two Preservation Study List properties in the Plan Area:

- 1) *Packard & Maxwell Don Lee Western Auto Bldg at 2355 Broadway (Packard Lofts), and*
- 2) *First Presbyterian Church at 2601-19 Broadway.*

There is one Heritage Property in the Plan Area:

- 1) *Biff's II Coffee Shop at 315 27th Street. Biff's is on the City's Local Register by virtue of Landmarks Board Determination of Eligibility on 1/13/97, which is equivalent to Heritage Property status. An EIR prepared by the City in 1997 for a proposed Chevron/McDonald's project at this site also identified Biff's Coffee Shop as a historic resource for CEQA purposes.*

Potential Designated Historic Properties - PDHPs

Under Policy 1.2 of the HPE, Potential Designated Historic Properties (PDHPs) are any properties that have an OCHS rating of at least a contingency C, or that contribute or potentially contribute to a primary or secondary district. These properties “warrant consideration for possible preservation.” PDHPs are a large group - approximately one-fifth to one-quarter of all buildings in Oakland. They are intended to be numerous enough to “significantly influence the City’s character.” The inclusion of contingency-rated properties as PDHPs is intended to highlight their value as restoration opportunities. District contributors and potential (contingency) contributors are classified as PDHPs to promote preservation of Oakland’s distinctive neighborhoods. *There are approximately 106 PDHPs in the Plan Area. Most of these are rated C or D and many are contributors to the four ASIs in the Plan Area.*

While most PDHPs do not appear obviously eligible for the National or California Registers and therefore (in the absence of Heritage Property designation or some other formal action) do not meet the CEQA definition of “historic resources,” they are recognized and protected under the HPE for their contribution to the Oakland environment, and warrant consideration for possible preservation, as described in the HPE. Chapter 5 (Policies 3.1 through 3.14 and Policy 1.2) of the HPE contain policies and actions for the protection and enhancement of PDHPs.

Local Register of Historical Resources

The HPE provides the following definition of the City of Oakland's Local Register of Historical Resources (Local Register), or properties considered significant for purposes of environmental review under CEQA:

1. All Designated Historic Properties (DHPs - Landmarks, Heritage Properties, Study List Properties, Preservation Districts, and S-7 and S-20 Preservation Combining Zone Properties); and
2. Those Potential Designated Historic Properties (PDHPs) that have an existing rating of "A" or "B," or are located within an Area of Primary Importance (API). An API is a district that appears eligible for the National Register.

In the Plan Area 20 individual properties, including two in an API, meet the criteria for the City of Oakland's Local Register, and are considered significant for purposes of environmental review under CEQA. These resources are shown in Tables 4.4-1, 4.4-2, and Table 4.4-3 and mapped on Figure 4.4-2.

**TABLE 4.4-3
CEQA HISTORIC DISTRICT WITHIN THE PLAN AREA**

District Name	District Contributor Name and Address
25th Street Garage District API	Packard & Maxwell Don Lee Western Auto Bldg / Packard Lofts – 2355 Broadway

City of Oakland Planning Code

In addition to providing definitions and procedures for the Designated Historic Properties (as discussed above under *City of Oakland General Plan Historic Preservation Element*), the Planning Code contains specific regulations for certain types of projects.

17.136.055 Special Regulations for Historic Properties in the Central Business Zones. This chapter of the Code applies to projects within Central Business Zones that involve existing or Potential Designated Historic Properties (PDHPs).⁵ It contains findings applicable to alterations, additions and new construction, and circumstances requiring hearings in front of the Landmarks Board. In short, these projects must ensure that the character-defining elements of a historic property are not adversely affected by the proposed project, and that such projects would be visually compatible with surrounding historic properties (if located in a historic district).

17.136.075 Regulations for Demolition or Removal of Designated Historic Properties and Potentially Designated Historic Properties. This chapter codifies regulations for approval of demolition or removal permits. With the exception of structures declared to be a public nuisance by the Building Official or City Council, Regular Design Review of the demolition or removal of

⁵ While no part of the Plan Area is currently within the Central Business District zoning classification, the rezoning that would accompany adoption of the Specific Plan would add the majority of the Valdez subarea into the Central Business District (see figures 3-3 through 3-6 in Chapter 3, *Project Description*). As such, Planning Code 17.136.055 would pertain to the parcels newly added to the Central Business District.

a Designated Historic Property or PDHP shall only be approved after the Regular Design Review of a replacement project at the subject site has been approved; however, demolition of nuisance structures must still undergo Regular Design Review for demolition. Regular Design Review approval for the demolition or removal of any Local Register property may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and additional criteria set forth in the chapter. Demolition findings and documentation requirements are further spelled out in the Planning Department's "Demolition Findings for Category I / II / III Historic Properties." The Director of City Planning may postpone issuance of a demolition permit for up to 120 days from the date of permit application following Design Review approval.

Planning Code Section 17.136.075 (B) requires Design Review for the demolition or removal of any Landmark, Heritage Property, structure rated A or B by the Oakland Cultural Heritage Survey, or structure on the City's Preservation Study List that is not in an S-7 or S-20 zone or Area of Primary Importance (API). Approval may be granted only if the proposal conforms to the general design review criteria, all other applicable design review criteria, and the following additional criteria:

1. The applicant demonstrates that: a) the existing property has no reasonable use or cannot generate a reasonable economic return and that the development replacing it will provide such use or generate such return, or b) the applicant demonstrates that the structure constitutes a hazard and is economically infeasible to rehabilitate on its present site. For this finding, a hazard constitutes a threat to health and safety that is not immediate;
2. The design quality of the replacement facility is equal or superior to that of the existing facility; and
3. It is economically, functionally, architecturally, or structurally infeasible to incorporate the historic structure into the proposed development

Planning Code Section 17.136.075 (C) requires Regular Design Review for the demolition or removal of any structure in an S-7 or S-20 zone or Area of Primary Importance (API). Approval may be granted only if the proposal conforms the general design review criteria, all other applicable design review criteria, and the following additional criteria:

1. For the demolition of contributors to an S-7 or S-20 zone or API:
 - a. The applicant demonstrates that: i) the existing property has no reasonable use or cannot generate a reasonable economic return and that the development replacing it will provide such use or generates such return, or ii) the applicant demonstrates that the structure constitutes a hazard and is economically infeasible to rehabilitate on its present site. For this criterion, a hazard constitutes a threat to health and safety that is not immediate; and
 - b. It is economically, functionally architecturally, or structurally infeasible to incorporate the historic structure into the proposed development.
2. For the demolition of noncontributors to an S-7 zone, S-20 zone, or API: The existing structure is either: i) seriously deteriorated or a hazard, or ii) the existing design is

undistinguished and does not warrant retention. For this finding, a hazard constitutes a threat to health and safety that is not immediate;

3. For the demolition of any structure in an S-7 zone, S-20 zone or API:
 - a. The design quality of the replacement structure is equal or superior to that of the existing structure; and
 - b. The design of the replacement project is compatible with the character of the district, and there is no erosion of design quality at the replacement project site and in the surrounding area. Specific findings are spelled out.

Planning Code Section 17.136.075 (D) requires Design Review Approval for the demolition or removal of any structure that is rated C by the by the Oakland Cultural Heritage Survey or that contributes to an Area of Secondary Importance (ASI) as determined by OCHS. Approval may be granted only if the proposal conforms to the following general design review criteria (based on HPE Policy 3.5):

1. The design quality of the proposed replacement project is at least equal to that of the original structure and the proposed replacement project is compatible with the character of the neighborhood; or
2. The public benefits of the proposed replacement project outweigh the benefit of retaining the original structure and the proposed replacement project is compatible with the character of the neighborhood; or
3. The existing design is undistinguished and does not warrant retention and the proposed design is compatible with the character of the neighborhood.

City of Oakland Municipal Code Article III – Green Building Compliance Standards

(Section 18.02.100). This regulation requires all buildings or projects to comply with the requirements of the California Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code and includes special provisions for historic buildings. Applicants for any new construction projects resulting in removal of a historic resource or large additions and alterations to historic resources must consult with a Historic Preservation Planner, and seek LEED and Green Building certification, in addition to other specific requirements. The code also offers various incentives, such as lowered green building requirements when avoiding demolition of historic buildings, and conversely, higher green building requirements when demolishing historic buildings.

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

Standard Conditions of Approval (SCAs) relevant to the cultural resources that might be affected by the adoption of and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs will be adopted as conditions of approval to help ensure no significant impacts to cultural resources occur. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

- **SCA 52: Archaeological Resources**

Ongoing throughout demolition, grading, and/or construction

- a. Pursuant to CEQA Guidelines section 15064.5 (f), “provisions for historical or unique archaeological resources accidentally discovered during construction” should be instituted. Therefore, in the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist or paleontologist to assess the significance of the find. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified archaeologist would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Oakland. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards.
- b. In considering any suggested measure proposed by the consulting archaeologist in order to mitigate impacts to historical resources or unique archaeological resources, the project applicant shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while measure for historical resources or unique archaeological resources is carried out.
- c. Should an archaeological artifact or feature be discovered on-site during project construction, all activities within a 50-foot radius of the find would be halted until the findings can be fully investigated by a qualified archaeologist to evaluate the find and assess the significance of the find according to the CEQA definition of a historical or unique archaeological resource. If the deposit is determined to be significant, the project applicant and the qualified archaeologist shall meet to determine the appropriate avoidance measures or other appropriate measure, subject to approval by the City of Oakland, which shall assure implementation of appropriate measures recommended by the archaeologist. Should archaeologically-significant materials be recovered, the qualified archaeologist shall recommend appropriate analysis and treatment, and shall prepare a report on the findings for submittal to the Northwest Information Center.
- d. Archaeological Resources – Sensitive Areas. *Prior to issuance of a demolition, grading, or building permit*, the project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision D (Construction ALERT Sheet). However, if in either case a high potential presence of historic-period archaeological resources on the project site is indicated, or a potential resource is discovered, the project applicant shall also implement all of the following provisions:
 - Provision B (Construction-Period Monitoring),
 - Provision C (Avoidance and/or Find Recovery), and
 - Provision D (to establish a Construction ALERT Sheet if the Intensive Pre-Construction Study was originally implemented per Provision A, or to update and provide more specificity to the initial Construction ALERT Sheet if a Construction ALERT Sheet was originally implemented per Provision D).

Provision A through Provision D are detailed as follows:

- *Provision A: Intensive Pre-Construction Study* – The project applicant, upon approval from the City Planning and Zoning Division, may choose to complete a site-specific, intensive archaeological resources study prior to soil-disturbing activities occurring on the project site. The purpose of the site-specific, intensive archaeological resources study is to identify early the potential presence of history-period archaeological resources on the project site. If that approach is selected, the study shall be conducted by a qualified archaeologist approved by the City Planning and Zoning Division. If prepared, at a minimum, the study shall include:
 - An intensive cultural resources study of the project site, including subsurface presence/absence studies, of the project site. Field studies conducted by the approved archaeologist(s) may include, but are not limited to, auguring and other common methods used to identify the presence of archaeological resources;
 - A report disseminating the results of this research;
 - Recommendations for any additional measures that could be necessary to mitigate any adverse impacts to recorded and/or inadvertently discovered cultural resources.

If the results of the study indicate a high potential presence of historic-period archaeological resources on the project site, or a potential resource is discovered, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, below), implement avoidance and/or find recovery measures (see Provision C, Avoidance and/or Find Recovery, below), and prepare an ALERT Sheet that details what could potentially be found at the project site (see Provision D, Construction ALERT Sheet, below).

- *Provision B: Construction-Period Monitoring* – Archaeological monitoring would include briefing construction personnel about the type of artifacts that may be present (as referenced in the ALERT Sheet, require per Provision D, Construction ALERT Sheet, below) and the procedures to follow if any are encountered, field recording and sampling in accordance with the Secretary of Interior's *Standards and Guidelines for Archaeological Documentation*, notifying the appropriate officials if human remains or cultural resources are discovered, or preparing a report to document negative findings after construction is completed. If a significant archaeological resource is discovered during the monitoring activities, adherence to Provision C, Avoidance and/or Find Recovery, discussed below), would be required to reduce the impact to less than significant. The project applicant shall hire a qualified archaeologist to monitor all ground-disturbing activities on the project site throughout construction.
- *Provision C: Avoidance and/or Find Recovery* – If a significant archaeological resource is present that could be adversely impacted by the proposed project, the project applicant of the specific project site shall either:
 - Stop work and redesign the proposed project to avoid any adverse impacts on significant archaeological resource(s); or,

- If avoidance is determined infeasible by the City, design and implement an Archaeological Research Design and Treatment Plan (ARDTP). The project applicant shall hire a qualified archaeologist who shall prepare a draft ARDTP that shall be submitted to the City Planning and Zoning Division for review and approval. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. The project applicant shall implement the ARDTP. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant.
- *Provision D: Construction ALERT Sheet* – The project applicant, upon approval from the City Planning and Zoning Division, may choose to prepare a construction ALERT sheet prior to soil-disturbing activities occurring on the project site, instead of conducting site-specific, intensive archaeological resources pursuant to Provision A, above. The project applicant shall submit for review and approval by the City prior to subsurface construction activity an “ALERT” sheet prepared by a qualified archaeologist with visuals that depict each type of artifact that could be encountered on the project site. Training by the qualified archaeologist shall be provided to the project’s prime contractor; any project subcontractor firms (including demolition, excavation, grading, foundation, and pile driving); and/or utilities firm involved in soil-disturbing activities within the project site.

The ALERT sheet shall state, in addition to the basic archaeological resource protection measures contained in other standard conditions of approval, that in the event of discovery of the following cultural materials, all work must be stopped in the area and the City’s Environmental Review Officer contacted to evaluate the find: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes); wood structural remains (building, ship, wharf); clay roof/floor tiles; stone walls or footings; or gravestones.

Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, and supervisory personnel.

If the project applicant chooses to implement Provision D, Construction ALERT Sheet, and a potential resource is discovered on the project site during ground disturbing activities during construction, the project applicant shall hire a qualified archaeologist to monitor any ground disturbing activities on the project site during construction (see Provision B, Construction-Period Monitoring, above), implement avoidance and/or find recovery measures (see Provision C, Avoidance and/or Find Recovery, above), and prepare an updated ALERT Sheet that addresses the potential resource(s) and other possible resources based on the discovered find found on the project site.

- **SCA 53: Human Remains**

Ongoing throughout demolition, grading, and/or construction. In the event that human skeletal remains are uncovered at the project site during construction or ground-breaking activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

- **SCA 54: Paleontological Resources**

Ongoing throughout demolition, grading, and/or construction. In the event of an unanticipated discovery of a paleontological resource during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by a qualified paleontologist (per Society of Vertebrate Paleontology standards [SVP 1995,1996]). The qualified paleontologist shall document the discovery as needed, evaluate the potential resource, and assess the significance of the find. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the City determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project on the qualities that make the resource important, and such plan shall be implemented. The plan shall be submitted to the City for review and approval.

- **SCA 56: Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition)**

Prior to issuance of a demolition permit. The project applicant shall make a good faith effort to relocate the affected building(s) to a site acceptable to the Planning and Zoning Division and the OCHS. Good faith efforts include, at a minimum, the following:

- a. Advertising the availability of the building by: (1) posting of large visible signs (such as banners, at a minimum 3' x 6') at the site; (2) placement of advertisements in Bay Area news media acceptable to the City; and (3) contacting neighborhood associations and for-profit and not-for-profit housing and preservation organizations;

- b. Maintaining a log of all the good faith efforts and submitting that along with photos of the subject building showing the large signs (banners) to the Planning and Zoning Division;
 - c. Maintaining the signs and advertising in place for a minimum of 90 days; and
 - d. Making the building available at no or nominal cost (the amount to be reviewed by the Landmarks Preservation Advisory Board) until removal is necessary for construction of a replacement project, but in no case for less than a period of 90 days after such advertisement.
- **SCA 57: Vibrations Adjacent to Historic Structures**
Prior to issuance of a demolition, grading or building permit. The project applicant shall retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could damage the affected historic building(s) and design means and methods of construction that shall be utilized to not exceed the thresholds.

4.4.3 Study Results

Paleontological Resources

Aside from the geologic history of the site, documented fossil discoveries can further elaborate on the paleontological potential of the area. The University of California, Museum of Paleontology (UCMP) maintains the world's largest database of fossil discoveries and collections, with thousands of records for the East Bay. A search of the database by location and age (Quaternary) revealed 72 Pleistocene-age localities and 47 Recent (Holocene) localities within Alameda County. While many of these localities contain no recorded specimens, two localities about one mile from Plan Area report a total of 27 vertebrate fossils from a variety of now-extinct Pleistocene mammals. These were identified during deep excavations for the roadway tunnels connecting the island of Alameda to the mainland. Fourteen invertebrate fossils of Quaternary age were reported from various locations in Oakland, three of which were found in or around Lake Merritt. One plant fossil was also reported in Oakland, although a more specific location could not be determined (UCMP, 2008). Whether or not these fossils were found within the specific geologic units underlying the Plan Area could not be determined from the information in the UCMP database.

Archaeological Resources

A records search of pertinent survey and site data was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System on February 13, 2009 (File No. 08-0943) and updated on January 8, 2013 (File No. 12-0661). The records were accessed by reference to the Oakland West USGS 7.5-minute quadrangle map. The review included the Plan Area along and the area within a ½-mile radius. Previous surveys and studies and archaeological site records were accessed as they pertained to the study area. Records were also accessed and reviewed in the *Directory of Properties in the Historic Property Data File for Alameda County* for information on sites of recorded historical significance. Properties listed include those on the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California*

State Historic Resources Inventory, California Historical Landmarks, and California Points of Historical Interest.

The records search indicated that there were no recorded prehistoric or historic-period archaeological sites within a ½-mile radius of the Plan Area. The nearest recorded prehistoric archaeological site is approximately 1-½ miles to the south, nearer to the historic shoreline of the Bay tidal marshland.

In the Oakland area, known prehistoric sites tend to be located a half mile or less from a present or former water source on relatively stable landforms. Glen Echo Creek is located just east of the Plan Area and the historic tidal estuary of Lake Merritt is located ¼-mile to the south. The Plan Area is mapped as Pleistocene alluvium in the south and west sections and Holocene alluvium on the east side of Broadway toward Glen Echo Creek. Pleistocene landforms do not have the potential to contain deeply-buried archaeological resources, however Holocene alluvium has a high potential to contain buried surfaces that would have once been available for human use and occupation prior to being covered with sediment (Meyer and Rosenthal, 2007). Although no known prehistoric resources have been recorded in the Plan Area, there is a moderate potential that prehistoric archaeological resources are present along the east side of Broadway near the Glen Echo Creek corridor. The potential for containing previously unidentified prehistoric archaeological resources is based on the following factors: (1) the presence of relatively stable Holocene-age terrestrial landform; (2) proximity to the Glen Echo Creek, the Oakland estuary, and other water sources, and (3) the presence of landforms similar to those at nearby previously recorded prehistoric sites. These areas are identified on Figure 4.4-1.

Although no historic-period archaeological resources have been recorded in the Plan Area, there is a moderate potential for historic-period archaeological resources to be present. According to National Park Service guidelines, archaeological sites in urban areas “are likely to be more or less invisible, buried under modern created land surfaces.” Here, “the reconnaissance consists of field checking predictions made on the basis of archival research” (National Park Service, 1985:36). Archaeology undertaken for various projects in an urban environment (Meyer, 2002; Praetzelis, 2001, 2004) has demonstrated that historic-period archaeological features often survive within two feet of the modern ground surface. These features include pits, privies, wells, and sheet refuse associated with buildings shown on early Sanborn and other maps. Urban archaeological experience has also shown that pits and privies are most often located near the back of house lots, while wells tend to be closer to the rear of the building and can sometimes be located within the footprint of the house itself, typically at a rear or side addition. The significance of these features has been illuminated in numerous urban historical archaeology projects in Oakland (Koenig, et al., 2001; Praetzelis, 2001), San Francisco (Byrd et al., 2010; Ziesing, 2000), San Jose (Allen et al., 1999; Allen et al., 2002), and Sacramento (Praetzelis and Praetzelis, 1988) over the past few decades.

Broadway has been a main thoroughfare in Oakland since 1852. The earliest settlement was nearer to the estuary, but early maps show scattered structures in the Plan Area. The development of the Plan Area that began in the 1910s and 1920s may have destroyed subsurface historic-

period archaeological remains; however paved surfaces such as parking lots potentially cap and protect archaeological deposits.

Senate Bill 18 Consultation

In accordance with Senate Bill 18, a request was made to the Native American Heritage Commission (NAHC) for a search of the Sacred Lands file and a list of Native Americans who might have knowledge of cultural resources in the project vicinity. The NAHC identified no sacred lands within or near the Specific Plan Area. The NAHC identified individuals and organizations as Native American contacts for the City of Oakland. On May 16, 2013 the City of Oakland sent letters to each person on the NAHC list to invite them to participate in the local planning process. Consultation efforts will remain ongoing.

Historic Properties

The Plan Area has a high density of CEQA historic resources, primarily concentrated on the North End of the Plan Area, with a few resources in the Valdez Triangle on the southern end of the Plan Area. Figure 4.4-2 maps the CEQA historical resources in the Plan Area. They are also listed in Tables 4.4-1, 4.4-2 and 4.4-3.

CEQA Resources: As described in the Regulatory Setting subsection above, the Plan Area contains a total of 20 individual CEQA historic resources, including three A rated buildings, 10 buildings with existing or proposed B ratings, two buildings on the Preservation Study List, one Heritage Property, and two building in an API historic district. Many of these resources have multiple and overlapping designations. These properties are all identified as historical resources for CEQA purposes.

Five buildings in the southwest corner of the Plan Area, on the block bounded by Broadway, Valley Street, 23rd Street and 24th Street, were identified by the City of Oakland as historic resources in a 2004 EIR for the proposed Broadway-West Grand Mixed Use Development (see Table 4.4-2). A 2008 addendum to this EIR assumed and analyzed the full demolition of each of these resources, as was proposed at the time. As currently proposed and approved in a 2013 addendum to this EIR, this project would rehabilitate and reuse four historic resources including 2335-37 Broadway, 2343 Broadway, 2345 Broadway, and 2366-2398 Valley Street / 467 24th Street. The project would demolish one historic resource at 440-448 23rd Street. The 2004 EIR and subsequent addenda for the Broadway West Grand Mixed Use Project identified significant and unavoidable impacts to these historic resources, and recommended mitigation measures to reduce such impacts. These buildings are considered historic resources for CEQA purposes because they were identified as such in a prior EIR, and remain physically unchanged since 2004.

Other Historic Properties: The Plan Area also contains four ASIs and approximately 106 individual PDHPs. These older buildings and secondary districts, while not meeting the technical definition of a historical resource for CEQA purposes, add texture and variety to the Plan Area, and will be considered in project reviews.

About half of the buildings in the Plan Area, or approximately 80 structures, were constructed prior to 1929, and nearly 90 percent were constructed before 1950. The majority of these buildings evolved out of the auto industry, with the primary building types being Beaux Arts and Moderne automobile showrooms, early 20th century utilitarian service garages, and 1920s decorative brick commercial buildings. Aside from remodeling, remarkably little changed in the latter half of the 20th century. The focus of development in the latter half of the 20th century remained primarily on automobile sales and service, while new, non-auto oriented development was limited. Smaller numbers of historic properties which reflect religious, residential, and non-auto oriented commercial uses are also represented in the Plan Area.

There is one portion of one CEQA Historic District in the Plan Area; the 25th Street Garage District API, containing one contributor (see Table 4.4-3). Although there are many other contributors to this API, they are located outside of the Plan Area, and are not listed here.

4.4.4 Impacts and Mitigation Measures

Significance Criteria

A project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. For purposes of this section, a historical resource is one that meets the City of Oakland's CEQA definitions (see subsection *Local Plans and Policies*, above). The fact that a resource is not listed in or formally determined to be eligible for listing in the NRHP, CRHR, or a local register of historical resources, or not deemed significant pursuant to criteria set forth in subdivision (g) of Section 5024.1 of the Public Resources Code (PRC), shall not preclude the City from determining that the property may be a historical resource for purposes of this EIR.

Specifically, adoption of and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines §15064.5. Specifically, a substantial adverse change includes physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be "materially impaired." The significance of a historical resource is "materially impaired" when a project demolishes or materially alters, in an adverse manner, those physical characteristics of the resource that convey its historical significance and that justify its inclusion on, or eligibility for inclusion on an historical resource list (including the California Register of Historical Resources, the National Register of Historical Resources, Local Register, or historical resources survey form (DPR Form 523) with a rating of 1-5);
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5;
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
4. Disturb any human remains, including those interred outside of formal cemeteries.

Approach to Analysis

Prior to approval of any future development under the Specific Plan, the project would be subject to the City's Standard Conditions of Approval (SCAs) and the goals and policies of the City's General Plan as outlined above. The approach used to analyze potentially significant impacts of the adoption of and development under the Specific Plan on cultural resources included an evaluation of the applicability of the SCAs for the protection of cultural resources, and identification of additional mitigation measures if such SCAs were deemed insufficient to fully mitigate potentially significant impacts. As direct and indirect impacts to cultural resources typically arise from ground-disturbing activities (excavation for building foundations and utilities) as well as new construction and demolition and alteration of existing buildings, the potential for such activities to occur as a result of future Specific Plan projects was the focus of the analysis.

The Broadway Valdez Development Program and the Physical Height Model (see Figure 3-11 in Chapter 3, *Project Description*) are the basis for this analysis. The Physical Height Model assumes development on the parcel containing Biff's II Coffee Shop, a Heritage Property determined eligible for Landmark status (see #15 on Table 4.4-1). It also shows development on the parcel containing the Pacific Kissel Kar salesroom and garage at 2401 Broadway (see #2 on Table 4.4-1). Three additional parcels containing CEQA historic resources are also assumed to have a high potential for development and are therefore analyzed in this section. These include the Connell GMC Pontiac Cadillac/Bay City Chevrolet building at 3903 Broadway (see #10 on Table 4.4-1), the Seventh Church of Christ, Scientist at 2333 Harrison Street (see #12 on Table 4.4-1), and the Newsom Apartments at 2346 Valdez Street (see #13 on Table 4.4-1).⁶

Impacts

Historical Resources

Impact CUL-1: Adoption of and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources (Criterion 1). (Significant and Unavoidable)

⁶ Development on the Connell GMC Pontiac Cadillac/Bay City Chevrolet building, Seventh Church of Christ Scientist, and the Newsom Apartments parcels, was not assumed at the time the Physical Height Model was developed (see Figure 3-11 and subsection 3.5, *Broadway Valdez Development Program*, in Chapter 3, *Project Description*). Although the Specific Plan does not specifically encourage development on these parcels, they are assumed to have a high potential for development, and thus their development is assumed and analyzed here under Cultural Resources. Development on these parcels would not alter the amount or type of *reasonably foreseeable maximum development* represented in the Broadway Valdez Development Program. Further, development on these parcels to the maximum height that would be assumed on adjacent parcels (75 feet for Connell GMC Pontiac Cadillac/Bay City Chevrolet and 65 feet for both the Newsom Apartments and the Seventh Church of Christ, Scientist) would not be visible from significant view corridors represented in Chapter 4.1, *Aesthetics, Shadow, and Wind*, nor would it cast new shadow that would reach solar collectors, passive solar heaters, public open spaces, or other historic resources. As such, development on these parcels, although not included in the Physical Height Model, is fully analyzed in other topic areas within this EIR.

Specific Plan Context

As described above, the Plan Area contains 20 individual properties, including two in an Area of Primary Importance, that are considered historical resources for CEQA purposes. There are also many older buildings which possess architectural merit, located within Areas of Secondary Importance or standing alone, that contribute to the variety and texture of the Plan Area.

The Specific Plan recognizes that the Plan Area contains many historic resources as well as a distinct neighborhood character created by its corridors and unique urban form. The Plan also recognizes that historic preservation contributes to the City's economy, image, and appeal, and represents a long-term enhancement of property values and neighborhood stability. The Specific Plan contains numerous goals, policies, strategies, and design guidelines which recognize the existence and importance of these resources, and encourages preservation and adaptive reuse. The following policy statements are relevant to the protection and enhancement of historical resources.

One of the Plan's key objectives, as established in Specific Plan **Goal LU-11**, is to encourage *Creative reuse of historic buildings that maintains a link to the area's social, cultural and commercial heritage while accommodating contemporary uses that further City objectives to establish a vibrant and visually distinctive retail and mixed use district*. Relevant policies within this Goal LU-11 include the following:

- **Policy LU-11.1:** Encourage landowners and developers of properties within an Adaptive Reuse Priority Area to explore the potential for adaptive reuse of existing older buildings as a means of preserving the area's character and enhancing district identity.
- **Policy LU-11.2:** On Retail Priority Sites, new development that furthers Specific Plan goals to provide destination retail uses will take precedence over adaptive reuse.

Additional Specific Plan policies relevant to the preservation of historic resources include:

- **Policy LU-8.7:** The Triangle will establish an identity as a unique, Oakland shopping district by integrating new high-quality buildings with attractively renovated and re-purposed historic buildings (within Goal LU-8 regarding the Valdez Triangle subarea).
- **Policy LU-9.6:** Emphasis is placed on the renovation and repurposing of historic garage and auto showroom buildings primarily along Broadway to preserve a link to the corridor's past and enrich its character (within Goal LU-9 regarding the North End subarea).
- **Policy LU-10.7:** Establish development regulations that implement recommended height zones while being responsive to surrounding context by providing appropriate transitions between buildings of different scales, maintaining a consistent scale at street frontages, and respecting historic buildings and public open spaces (within Goal LU-10 regarding the regulatory framework).

Chapter 4.4.9 of the Plan, *Historic Resources and Preservation Strategies*, identifies "Adaptive Reuse Priority Areas," which are shown in Figure 4.7 in the Specific Plan and Figure 4.4-2, above. The Adaptive Reuse Priority Areas emphasize renovation and repurposing of historic garage and auto showroom buildings along Broadway (see also Policy LU-9.6). The intention of the Adaptive

Reuse Priority Areas is to include both designated historic resources and other existing buildings possessing architectural merit.

The Plan also notes that the historic buildings located within the Adaptive Reuse Priority Areas, as well as those outside of it, may be eligible for various incentive programs, such as façade improvement grants, façade easements, Transfer of Development Rights (TDR), Mills Act property tax abatements, alternative code requirements, relocation assistance, and other preservation programs.

Finally, a portion of the Specific Plan Appendix C: *Design Guidelines of the Broadway Valdez Specific Plan* is dedicated to realizing the vision for historic resources in the Plan Area. Design Guidelines 119 through 128 encourage new buildings that complement existing building forms, reinforce development patterns, reinforce the streetwall, and incorporate architectural details. Design Guideline 124 states that adaptive reuse of historic buildings should “Follow the Secretary of the Interior’s Standards for Rehabilitation when adapting and altering historic resources.”

Site-Specific Effects

While all of the Plan’s goals, policies, strategies, and design guidelines, including the proposed “Adaptive Reuse Priority Areas,” would help to reduce the level of impacts to historic resources within the Plan Area, and no land use changes are proposed on the parcels where most of the historic resources are located (as shown in Tables 4.4-1, 4.4-2, and 4.4-3 and mapped on Figure 4.4-2), the Broadway Valdez Development Program assumes approximately 3.7 million square feet of new development, including 1,800 residential units over the next 25 years, which could result in the future demolition, destruction, relocation, or alteration of CEQA historical resources (i.e., those which are listed in the federal, state, or local registers of historical resources, or otherwise determined by the City of Oakland to be considered for the purposes of CEQA).

As noted above in *Approach to Analysis*, in addition to the areas with proposed land use changes represented in the Physical Height Model (see Figure 3-11 in Chapter 3, *Project Description*), three additional parcels containing CEQA historic resources are assumed to have a high potential for development and are therefore analyzed in this section. These include the Connell GMC Pontiac Cadillac/Bay City Chevrolet building at 3903 Broadway (see #10 on Table 4.4-1), the Seventh Church of Christ, Scientist at 2333 Harrison Street (see #12 on Table 4.4-1), and the Newsom Apartments at 2346 Valdez Street (see #13 on Table 4.4-1).

The following site-specific significant impacts to historic resources would result from Plan implementation. Detailed information about the affected structures, their history, and their status as historic resources can be found in the 2009 HRI (see Appendix D).

The Specific Plan identifies the block containing Biff’s II Coffee Shop, a Heritage Property, as a Retail Priority Site (see Figure 3-9 in Chapter 3, *Project Description*). Further, the Physical Height Model assumes mixed-use up to 65 feet in height within this block (see Figure 3-11 in Chapter 3, *Project Description*). Demolition or substantial alteration of this property resulting from adoption of and development under the Specific Plan would be considered a significant impact under CEQA.

The Specific Plan identifies the blocks containing the Seventh Church of Christ, Scientist and the Newsom Apartments, OCHS A and B rated Historic Resources, respectively, and Designated Historic Properties on the Preservation Study List, as a Retail Priority Site (see Figure 3-9 in Chapter 3, *Project Description*). Further, the Physical Height Model assumes mixed-use of up to 65 feet in height within the majority these blocks (see Figure 3-11 in Chapter 3, *Project Description*). Demolition or substantial alteration of these properties resulting from adoption of and development under the Specific Plan would be considered a significant impact under CEQA.

The Specific Plan identifies the block containing the Connell GMC Pontiac Cadillac/Bay City Chevrolet building a Historic Resource proposed for B rating, as a Large Opportunity Site (see Figure 3-9 in Chapter 3, *Project Description*). Further, the Physical Height Model assumes mixed-use of up to 75 feet in height within the majority this block (see Figure 3-11 in Chapter 3, *Project Description*). Demolition or substantial alteration of this property resulting from adoption of and development under the Specific Plan would be considered a significant impact under CEQA.

While implementation of proposed Specific Plan policies, Oakland Municipal Code 17.136.075 *Regulations for Demolition or Removal of Designated Historic Properties and Potentially Designated Historic Properties*, as well as the City of Oakland's SCA 56, *Property Relocation Rather than Demolition*, and SCA 57, *Vibrations Adjacent to Historic Structures*, would provide some level of protection for historical properties that may be affected by adoption of and development under the Specific Plan, additional mitigation would be necessary to further reduce potential impacts to the historical resources identified above. Mitigation Measure CUL-1, provided below, is intended to reduce the impacts to historical resources throughout the Plan Area as well as the site-specific impacts associated with the demolition of individual historic resources.

Avoidance and adaptive reuse of historic properties are always the preferred mitigations when feasible. While relocation of an historical property to a location consistent with its historic or architectural character (SCA 56, *Property Relocation Rather than Demolition*) might reduce the impact, relocation is not always effective (e.g. if the property's location is an integral part of its significance) or feasible. For these reasons; although implementation of SCA 56 would be adopted as a condition of approval, incorporated as part of the Specific Plan, and required, as applicable, for development under the Specific Plan; SCA 56 is also listed within Mitigation Measure CUL-1 to be implemented should avoidance and adoption be deemed infeasible.

Impacts from Adjacent Development or Reuse

Incompatible new construction immediately adjacent to identified historic resources, as well as inappropriate reuse of such resources, could occur in the Plan Area. Implementation of Plan Policies such as LU-10.7 which encourages sensitive integration of new development in the immediate vicinity of historic buildings, as well as Specific Plan Design Guideline 124 which states that adaptive reuse of historic buildings shall follow the Secretary of the Interior's Standards for Rehabilitation, would reduce impacts to adjacent historic resources to a less-than-significant level. However, as described in Section 4.1, *Aesthetics, Shadow, and Wind*, shadows from development on parcels across Webster Street to the northeast of the Temple Sinai could extend south enough to shade the temple's stained glass windows during the early morning hours

(prior to 9 a.m.) in the spring, summer and fall, which would materially impair this resource's historic significance by altering those physical characteristics of the resource that convey its historical significance and that justify its inclusion in the California Register of Historic Resources. Implementation of Mitigation Measure AES-4, Shadow Analysis, cannot be guaranteed to reduce the impact to a less-than-significant level and therefore the impact would remain conservatively significant and unavoidable.

Mitigation Measure CUL-1, below, includes multiple mitigation measures and approaches. Some approaches could reduce impacts to historic resources to a less-than-significant level, and others could reduce impacts to historic properties, but not to a less-than-significant level.

Mitigation Measure CUL-1:

a) Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures.

- *Avoidance.* The City shall ensure, where feasible, that all future development activities allowable under the Specific Plan, including demolition, alteration, and new construction, would avoid historical resources (i.e., those listed on federal, state, and local registers).
- *Adaptive Reuse.* If avoidance is not feasible, adaptive reuse and rehabilitation of historical resources shall occur in accordance with the *Secretary of Interior's Standards for the Treatment of Historic Properties*.
- *Appropriate Relocation.* If avoidance or adaptive reuse *in situ* is not feasible, SCA 56, *Compliance with Policy 3.7 of the Historic Preservation Element (Property Relocation Rather than Demolition)*, shall be implemented, as required. Projects that relocate the affected historical property to a location consistent with its historic or architectural character could reduce the impact less than significant (Historic Preservation Element Action 3.8.1), unless the property's location is an integral part of its significance, e.g., a contributor to a historic district.

b) Future Site-specific Surveys and Evaluations.

Although the Plan Area has been surveyed by the City of Oakland's OCHS and as part of the Broadway Valdez Specific Plan effort by ESA in 2009, evaluations and ratings may change with time and other conditions. There may be previously unidentified historical resources which would be affected by future development activities. For any future projects on or immediately adjacent to buildings 50 years old or older between 2013 and 2038, which is the build-out horizon for the Specific Plan (i.e., by the end of the Plan period, buildings constructed prior to 1988), the City shall require specific surveys and evaluations of such properties to determine their potential historical significance at the federal, state, and local levels. Intensive-level surveys and evaluations shall be completed by a qualified architectural historian who meets the *Secretary of the Interior's Standards*. For all historical resources identified as a result of site-specific surveys and evaluations, the City shall ensure that future development activities avoid, adaptively reuse and/or appropriately relocate such historical resources in accordance with measure "a" (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), above. Site-specific

surveys and evaluations that are more than 5 years old shall be updated to account for changes which may have occurred over time.

c) Recordation and Public Interpretation.

If measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures) is determined infeasible as part of a future project, the City shall evaluate the feasibility and appropriateness of recordation and public interpretation of such resources prior to any construction activities which would directly affect them. Should City staff decide recordation and or public interpretation is required, the following activities would be performed:

- *Recordation.* Recordation shall follow the standards provided in the National Park Service’s Historic American Building Survey (HABS) program, which requires photo-documentation of historic structures, a written report, and/or measured drawings (or photo reproduction of original plans if available). The photographs and report would be archived at the Oakland Planning Department and local repositories, such as public libraries, historical societies, and/or the Northwest Information Center at Sonoma State University. The recordation efforts shall occur prior to demolition, alteration, or relocation of any historic resources identified in the Plan Area, including those that are relocated pursuant to measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures). Additional recordation could include (as appropriate) oral history interviews or other documentation (e.g., video) of the resource.
- *Public Interpretation.* A public interpretation or art program would be developed by a qualified historic consultant or local artist in consultation with the Landmarks Preservation Advisory Board and City staff, based on a City-approved scope of work and submitted to the City for review and approval. The program could take the form of plaques, commemorative markers, or artistic or interpretive displays which explain the historical significance of the properties to the general public. Such displays would be incorporated into project plans as they are being developed, and would typically be located in a publicly accessible location on or near the site of the former historical resource(s). Public interpretation displays shall be installed prior to completion of any construction projects in the Plan Area.

Photographic recordation and public interpretation of historically significant properties does not typically mitigate the loss of resources to a less-than-significant level [CEQA Section 15126.4(b)(2)].

d) Financial Contributions.

If measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures) and measure “b” (Future Site-specific Surveys and Evaluations) are not satisfied, the project applicant shall make a financial contribution to the City of Oakland, which can be used to fund other historic preservation projects within the Plan Area or in the immediate vicinity. Such programs include, without limitation, a Façade Improvement Program or a Property Relocation Assistance Program.

This mitigation would conform to Action 3.8.1(9) of the Historic Preservation Element of the City of Oakland General Plan. Contributions to the fund(s) shall be determined by staff at the time of approval of site-specific project plans based on a formula to be determined by the Landmarks Preservation Advisory Board. However, such financial

contribution, even in conjunction with measure “c” (Recordation and Public Interpretation), would not reduce the impacts to less-than-significant levels.

Only avoidance of direct effects to historic resources, as would be achieved through measure “a” (Avoidance, Adaptive Reuse, or Appropriate Relocation of Historically Significant Structures), and measure “b” (Future Site-specific Surveys and Evaluations) would reduce the impacts to historic resources to a less-than-significant level. Therefore, if demolition or substantial alteration of historically significant resources is identified by the City as the only feasible option for development in the Plan Area, even with implementation of measure “c” (Recordation and Public Interpretation) and measure “d” (Financial Contributions), the impact of adoption of and development under the Specific Plan would be considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Archaeological Resources

Impact CUL-2: Adoption of and development under the Specific Plan could result in significant impacts to unknown archaeological resources (Criterion 2). (Less than Significant)

The records search at the NWIC indicated that no archaeological sites have been previously identified in the Plan Area and that the nearest known archaeological sites are approximately 1-½ miles to the south, nearer to the historic shoreline of the Bay tidal marshland. Although no known prehistoric resources have been recorded in the Plan Area, there is a moderate potential that prehistoric archaeological resources are present within the Holocene alluvium, which is generally located in a north-south strip between Broadway and the Glen Echo Creek corridor (i.e., the entire eastern side of Broadway to the easternmost Plan Area boundary) (Witter et al., 2006). The potential for containing previously unidentified prehistoric archaeological resources is based on the following factors: (1) the presence of relatively stable Holocene-age terrestrial landform; (2) proximity to the Glen Echo Creek, the Oakland estuary, and other water sources, and (3) the presence of landforms similar to those at previously recorded prehistoric sites located nearby. Development in the area, including construction-related subsurface disturbance, could inadvertently damage or destroy previously unidentified prehistoric period archaeological resources.

Although no historic-period archaeological resources have been recorded in the Plan Area, there is a moderate potential for historic-period archaeological resources to be present. While the development of the Plan Area that began in the 1910s and 1920s may have destroyed subsurface historic-period archaeological remains, paved surfaces such as parking lots potentially cap and protect archaeological deposits.

Potential impacts to archaeological resources has been addressed in the Oakland General Plan, the Land Use and Transportation Element (LUTE) EIR, as well as the City’s SCA. Compliance with (1) General Plan objectives and policies addressing archaeological resources; (2) the LUTE EIR mitigation measure that specifically direct the City to establish procedures for determining when

discretionary city approval of ground-disturbing activities warrant special conditions to safeguard archaeological resources; which has, in part, been incorporated into (3) the City's SCA's addressing archaeological resources, would reduced impacts on archaeological impacts to less than significant in most cases.

The area is recognized as potentially sensitive for the existence of archaeological and buried sites not visible due to urban development in the Plan Area. However, implementation of the City of Oakland's SCA 52, *Archaeological Resources*, is considered adequate to ensure that subsurface archaeological materials are dealt with according to regulatory guidance and would minimize the potential risk of impact to archaeological resources to a less-than-significant level. Through the City's project-level review of individual development project proposals, and *prior to issuance of a demolition, grading, or building permit*, the project applicant shall implement either Provision A (Intensive Pre-Construction Study) or Provision D (Construction ALERT Sheet) of the City of Oakland's SCA 52. However, if in either case a high potential presence of historic-period archaeological resources on the Plan Area is indicated, or a potential resource is discovered, the project applicant shall also implement all of the following provisions of the City of Oakland's SCA 52:

- Provision B (Construction-Period Monitoring),
- Provision C (Avoidance and/or Find Recovery), and
- Provision D (to establish a Construction ALERT Sheet if the Intensive Pre-Construction Study was originally implemented per Provision A, or to update and provide more specificity to the initial Construction ALERT Sheet if a Construction ALERT Sheet was originally implemented per Provision D).

Implementation of the City's SCA 52 ensures less-than-significant effects to archaeological resources in the Plan Area. The impact of adoption of and development under the Specific Plan to archaeological resources is less than significant.

Mitigation: None Required.

Paleontological Resources

Impact CUL-3: Adoption of and development under the Specific Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Criterion 3). (Less than Significant)

As discussed above in the paleontological Setting, the paleontological sensitivity of the geologic units underlying the Plan Area is low to moderate. Deep excavations for building foundations associated with adoption of and development under the Specific Plan may disturb these geologic units of low to moderate paleontological sensitivity.

It is possible that fossils would be discovered during excavation within the Plan Area. Because the significance of such fossils would be unknown, such an event represents a potentially

significant impact to paleontological resources. However, SCA 54, *Paleontological Resources*, would be incorporated with adoption of and development under the Specific Plan and would ensure that the potential impact to fossils discovered within the rock units would be less than significant. No additional mitigation is required.

Mitigation: None Required.

Human Remains

Impact CUL-4: Adoption of and development under the Specific Plan could disturb human remains, including those interred outside of formal cemeteries (Criterion 4). (Less than Significant)

While there are no known locations of buried human remains in the Plan Area, the inadvertent discovery of human remains during ground disturbing activities cannot be entirely discounted. In the unlikely event that human remains are uncovered, implementation of SCA 53, *Human Remains*, provides adequate measures for prevention of adverse impacts to human remains that may be discovered with developments under the Specific Plan. Combining with SCA 52 would ensure the impact is reduced to less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact CUL-5: Adoption of and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources. (Significant and Unavoidable)

Geographic Context

The geographic context for the assessment of cumulative impacts to cultural resources consists of the Plan Area and surroundings, in addition to all parts of the city.

Impacts

Adoption of and development under the Specific Plan, when combined with the cumulative development citywide, could result in cumulative impacts to cultural resources. Cumulative effects could occur to resources beyond the Plan Area because cultural resources can include a resource type or theme such as libraries, railroad-related resources, and ethnic sites that occur throughout the city. Past projects in this area are included in the existing setting. Present projects would include any projects currently under construction within the geographic context area. Several past, present and reasonably foreseeable future projects are described in the Major Projects List in Appendix B to this Draft EIR.

Adoption of and development under the Specific Plan could result in significant impacts to cultural resources. Such impacts could combine with the significant impacts of the projects referenced above to form a significant cumulative impact to cultural resources. However, given the applicability of SCAs 52, 53, 54, 56, and 57 to all projects, Mitigation Measure CUL-1 identified above to reduce potential impacts, and the mitigation measures identified in the environmental documents for all cumulative projects in the geographic context area in Oakland, potentially significant cumulative impacts to cultural resources would, under most circumstances, be reduced to a less-than-significant level. In addition, past projects have been, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the Historic Preservation Element of the General Plan and other applicable historic preservation zoning controls and landmark ordinances to ensure protection of cultural resources.

There is a possibility that if demolition or major alteration of a historical resource occurs with adoption of and development under the Specific Plan, and avoidance, adaptive reuse, and appropriate relocation as identified in SCA 56 and Mitigation Measure CUL-1 are not feasible, and the same circumstance occurs with other projects in the Plan Area vicinity that may likely affect potential historic resources (such as the Lake Merritt Station Area Plan now under consideration, and the Broadway West Grand Mixed Use Project, now approved, see discussion below), a significant and unavoidable cumulative impact could result, even with the application of recordation, public interpretation, and financial contributions as identified in Mitigation Measure CUL-1 and all SCAs incorporated to all development projects.

Specifically, the Broadway West Grand Mixed Use Project is included in the cumulative analysis because it is an approved and therefore reasonably foreseeable project in the Plan Area that would also affect historic resources. As currently approved, this project would rehabilitate and reuse four historic resources including 2335-37 Broadway, 2343 Broadway, 2345 Broadway, and 2366-2398 Valley Street / 467 24th Street. The project would demolish one historic resource at 440-448 23rd Street. The 2004 EIR and subsequent addenda for the Broadway West Grand Mixed Use Project identified significant and unavoidable impacts to these historic resources, and recommended mitigation measures to reduce such impacts. Adoption of the Specific Plan would not result in any new or additional impacts on this project block not already analyzed in the previous environmental documents. Implementation of mitigation measures identified in the 2004 EIR for the Broadway West Grand Mixed Use Project, well as Mitigation Measure CUL-1 and all applicable SCAs, would reduce the cumulative impact to historic resources in the Plan Area, but not to a less-than-significant level.

Based on the information in this section and for the reasons summarized above, adoption of and development under the Specific Plan could contribute considerably to the cumulative cultural resources impact, which could be considered significant and unavoidable.

Mitigation Measure CUL-5: Implement Mitigation Measure CUL-1.

Significance after Mitigation: Significant and Unavoidable (Historic Resources) for Cumulative Impact.

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4.5 Geology, Soils and Geohazards

This section describes geologic and seismic conditions in the Specific Plan Area to provide relevant background information with respect to potential geologic and seismic hazards. This section describes the environmental and regulatory setting relevant to geology, soils, and geohazards within the Plan Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.5.1 Environmental Setting

The Plan Area is located within the Coast Ranges Geomorphic Province¹ (Coast Ranges), characterized by northwest-southeast-trending mountain ridges and intervening valleys that have formed over millions of years due to movements along major regional faults. The bedrock of the Coast Ranges is primarily composed of ancient seafloor sediments and volcanic rocks. In most areas, these rocks have been significantly hardened, mineralized, folded and fractured by heat and pressure deep within the earth. This bedrock – broadly divided into the Franciscan Complex and Great Valley Sequence – forms most of the hills and mountains of the Bay Area, but may underlie the San Francisco Bay and adjacent plains at depths ranging from 200 to 2,000 feet.

The valleys, plains, estuaries, and bay floors of the region are filled by loose, geologically young deposits of mud, silt, sand and gravel. The character of these deposits varies significantly depending on their origin. For example, the Sacramento and San Joaquin Rivers deliver significant volumes of fine sediments (mud and silt), which slowly accumulate on the margins and floors of the San Pablo and San Francisco Bays where currents are gentle. In contrast, peak winter flows from local creeks and streams often convey pulses of coarse sediment (sand and gravel) to the region's valleys and plains, occasionally reaching estuarine sloughs. Over geologic time scales and with fluctuating sea levels, dominant geologic processes in any one place are always competing, overlapping or changing. Thus, the character of the flatland deposits such as those found beneath the Plan Area is variable over short distances and depths, producing heterogeneous geologic conditions.

Geology, Soils and Geologic Hazards

The following discussion describes the general geology of the Plan Area and identifies potential risks associated with such conditions. The primary sources of information for this section consist of publicly available maps and reports prepared by U.S. Geological Survey (USGS), the California Geological Survey (CGS; formerly the California Division of Mines and Geology), and the Natural Resource Conservation Service (NRCS). Maps of topography, bedrock, soil and mineral resources provide the basic setting of the Plan Area, and this information is used to describe the geologic hazards most likely to affect adoption and development under the Specific Plan.

¹ A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces.

Site Topography

Elevations of the Plan Area range from 12 feet above mean sea level at 23rd and Harrison to 82 feet above mean sea level at 34th and Webster. Generally the Plan Area slopes from northwest to southeast (BKF, 2012). Slope gradients are primarily under five percent. Some bank areas bordering Glen Echo Creek and the northern side of Broadway near Alta Bates Summit Medical Center may have locally higher slopes. The southeastern portion of the Plan Area is just inland from the Oakland Estuary.

Local Geology

Artificial fills placed over Bay Mud is extensive as a result of the practice of infilling of the natural Bay margins west of I-880 near downtown Oakland, as well as the shoreline of both San Francisco Bay and Lake Merritt (CGS, 2003). A geologic map compiled by Witter and others of the USGS (2006) shows that much of the areas bordering Lake Merritt and the Oakland Estuary are comprised of artificial fill material overlying natural deposits of Bay Mud. Beneath surface fills, the northern half of the Plan Area is primarily underlain by stream bed deposits. Fifty meters or more of interlayered beds of gravelly sand generally grade up to silty clays in these deposits of both Holocene² and Pleistocene³ age (Graymer, 2000; Witter et al., 2006). The southern half of the Plan Area is mostly built on a marine terrace of silty mudstone, except for the southeastern-most corner of the Plan Area which is underlain by historic artificial fill over estuarine mud (Graymer 2000; Witter et al., 2006).

Soils

The Plan Area includes largely developed properties, and as a result the ground surface is generally devoid of natural soils. The U.S. Department of Agriculture NRCS has characterized soils beneath the Plan Area as “Urban Land” soils (NRCS, 2012). The NRCS designates soils as urban land when soils have been so altered or obstructed by urbanization—such as buildings, pavement, and cut and fill operations—that identification of the native soils is not feasible. While the soils are urban land, the NRCS indicates that generally these soils have between zero and 32 percent clay content (NRCS, 2012). The physical properties of the site’s underlying geology are important factors in assessing the site’s susceptibility to geologic and seismic hazards, discussed below.

Geologic Hazards

The artificial fills and natural geology underlying the Plan Area present potential hazards related to soil erosion, settlement, and expansive soil materials. These hazards are discussed below and provide the initial context for further evaluation in the impact analysis. Because the Plan Area is relatively gently sloping and is developed, slope-related ground failure (i.e., landslides) is not expected to pose a hazard (WRT, 2009).

² Holocene time is from the present to 11,000 years ago.

³ Pleistocene time was from 11,000 to 1.6 million years ago.

Expansive Soils

Expansive soils possess a “shrink-swell” behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time, usually as a result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. The alluvial fan deposits underlying the portion of the Plan Area northwest of Broadway consists of gravely and clayey sand or clayey gravel and sandy clay, which could exhibit shrink-swell behavior (Graymer, 2000). The actual presence and extent of expansive soils could only be determined as part of site specific geotechnical evaluations for adoption and development under the Specific Plan.

Soil Erosion

Erosion is the wearing away of soil and rock by processes, such as mechanical or chemical weathering, mass wasting, and the action of waves, wind and underground water. Excessive soil erosion can eventually lead to damage of building foundations and roadways. Areas that are susceptible to erosion are those that would be exposed during the construction phase of projects and under the Specific Plan. Typically, the soil erosion potential is reduced once the soil is graded and covered with concrete, structures, asphalt, or slope protection.

Settlement

Settlement can occur from immediate settlement, consolidation, or shrinkage of expansive soil. Immediate settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load. Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load. Rapid settlement can occur if soil is liquefied during an earthquake, an effect which is addressed later in the discussion of Seismic Hazards.

Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in soil properties over an area, which is referred to as differential settlement. The southern and eastern portions of the Plan Area are underlain by “Urban land” soils, which vary in thickness and may experience consolidation settlement and secondary compression. The clay content of the alluvium underlying the northwestern portion of the Plan Area may cause this area to be susceptible to settlement as well (Graymer, 2000; NRCS 2012). In many places, historic bay sloughs, old foundations, and former marsh areas may have been buried by fill material, suggesting some area may be subject to variable conditions and are likely to experience some degree of differential settlement.

Regional Faulting and Seismic Hazards

This section characterizes the region's existing faults, describes historic earthquakes, estimates the likelihood of future earthquakes, and describes probable ground-shaking effects. The primary sources of information for this section are publications prepared by United States Geological Survey (USGS), the California Geological Survey (CGS), and hazard mapping tools provided by the Association of Bay Area Governments (ABAG).

Earthquake Terminology and Concepts

Earthquake Mechanisms and Fault Activity

Faults are planar features within the earth's crust that have formed to release stresses caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these stresses overcome the inherent strength of the earth's crust, and the rock ruptures. The rupture causes seismic waves to propagate through the earth's crust, producing the ground-shaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth's surface.

Geologists commonly use the age of offset rocks as evidence of fault activity—the younger the displaced rocks, the more recently earthquakes have occurred. To evaluate the likelihood that a fault will produce an earthquake, geologists examine the magnitude and frequency of recorded earthquakes and evidence of past displacement along a fault. An *active* fault is defined by the State of California as a fault that has had surface displacement within Holocene time (last 11,000 years). For the purpose of delineating fault rupture zones, the CGS historically sought to zone faults defined as *potentially active*, which are faults that have shown evidence of surface displacement during the Quaternary (last 1.6 million years). However, usage of that term under the Alquist-Priolo Earthquake Fault Zoning Act was discontinued because it became apparent that there are so many Quaternary-age faults in the state that it would be meaningless to zone all of them (Bryant and Hart, 2007). In late 1975, the State Geologist made a policy decision to zone only those faults that have a relatively high potential for ground rupture. It was decided that a fault should only be considered for zoning if it is “sufficiently active”⁴ and “well-defined.”⁵ *Blind* faults do not show surface evidence of past earthquakes, even if they occurred in the recent past; and faults that are confined to pre-Quaternary rocks (more than 1.6 million years old) are considered inactive and incapable of generating an earthquake.

⁴ A fault is deemed sufficiently active if there is evidence of Holocene surface displacement along one or more of its segments or branches. Holocene surface displacement may be directly observable or inferred; it need not be present everywhere along a fault to qualify that fault for zoning.

⁵ A fault is considered well-defined if its trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The fault may be identified by direct observation or by indirect methods (e.g., geomorphic or geophysical evidence). The critical consideration is that the fault, or some part of it, can be located in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

Earthquake Magnitude

When an earthquake occurs along a fault, a characteristic way to measure its size is to measure the energy released during the event. When an earthquake occurs, a network of seismographs records the amplitude and frequency of the seismic waves it generates. The Richter Magnitude (M) for an earthquake represents the highest amplitude measured by the seismograph at a distance of 100 kilometers from the epicenter. Richter magnitudes vary logarithmically with each whole number step representing a ten-fold increase in the amplitude of the recorded seismic waves and 32 times the amount of energy released. While Richter Magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude as the preferred way to measure earthquakes. The Moment Magnitude scale (Mw) is related to the physical characteristics of a fault, including the rigidity of the rock, the size of fault rupture, and the style of movement or displacement across the fault. Although the formulae of the scales are different, they both contain a similar continuum of magnitude values, except that Mw can reliably measure larger earthquakes and can do so from greater distances.

Peak Ground Acceleration

A common measure of ground motion at any particular site during an earthquake is the peak ground acceleration (PGA). The PGA for a given component of motion is the largest value of horizontal acceleration obtained from a seismograph. PGA is expressed as the percentage of the acceleration due to gravity (g), which is approximately 980 centimeters per second squared. In terms of automobile accelerations, one “g” of acceleration is equivalent to the motion of a car traveling 328 feet from rest in 4.5 seconds. For comparison purposes, the maximum PGA value recorded during the Loma Prieta earthquake was in the vicinity of the epicenter, near Santa Cruz, was 0.64g (ABAG, 2003b). Unlike measures of magnitude, which provide a single measure of earthquake energy, PGA varies from place to place, and is dependent on the distance from the epicenter and the character of the underlying geology (e.g., hard bedrock, soft sediments or artificial fills).

The Modified Mercalli Intensity Scale

The Modified Mercalli Intensity Scale (**Table 4.5-1**) assigns an intensity value based on the observed effects of ground-shaking produced by an earthquake. Unlike measures of earthquake magnitude and PGA, the Modified Mercalli (MM) intensity scale is qualitative in nature, which means that it is based on actual observed effects rather than measured values. Similar to PGA, MM intensity values for an earthquake at any one place can vary depending on its magnitude, the distance from its epicenter, the focus its energy, and the type of geologic material. The MM values for intensity range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage. Because the MM is a measure of ground-shaking effects, intensity values can be related to a range of PGA values, also shown in Table 4.5-1.

**TABLE 4.5-1
MODIFIED MERCALLI INTENSITY SCALE**

Intensity Value	Intensity Description	Average Peak Ground Acceleration^a
I	Not felt except by a very few persons under especially favorable circumstances.	< 0.0017 g
II	Felt only by a few persons at rest, especially on upper floors on buildings. Delicately suspended objects may swing.	0.0017-0.014 g
III	Felt noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly, vibration similar to a passing truck. Duration estimated.	0.0017-0.014 g
IV	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.	0.014–0.039g
V	Felt by nearly everyone, many awakened. Some dishes and windows broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles may be noticed. Pendulum clocks may stop.	0.035 – 0.092 g
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; and fallen plaster or damaged chimneys. Damage slight.	0.092 – 0.18 g
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.	0.18 – 0.34 g
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.	0.34 – 0.65 g
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.65 – 1.24 g
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 1.24 g
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 1.24 g
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 1.24 g

^a Value is expressed as a fraction of the acceleration due to gravity (g). Gravity (g) is 9.8 meters per second squared. 1.0 g of acceleration is a rate of increase in speed equivalent to a car traveling 328 feet from rest in 4.5 seconds.

SOURCE: ABAG, 2003a

Seismic Context

The Plan Area lies within the San Francisco Bay Area, a region of California characterized by active (Holocene) and potentially active (Quaternary) faults, and is considered an area of high seismic activity. The USGS along with the CGS and the Southern California Earthquake Center formed the 2007 Working Group on California Earthquake Probabilities to summarize the probability of one or more earthquakes of magnitude 6.7 or higher occurring in the state of California over the next 30 years. Accounting for the wide range of possible earthquake sources, it is estimated that the Bay Area has a 63 percent chance of experiencing such an earthquake (Working Group on California Earthquake Probabilities, 2008). According to the working group, the individual faults posing the greatest threat to the Bay Area are the Hayward, the San Andreas, and the Calaveras faults (USGS, 2012a). Other principal faults capable of producing large earthquakes in the Bay Area include the Concord–Green Valley, Marsh Creek–Greenville, San Gregorio and Rodgers Creek faults. **Table 4.5-2** lists the above mentioned faults, their distance and directions from the Plan Area, and their maximum credible earthquake magnitude. The Hayward, the San Andreas, and the Calaveras faults, which are the closest to the Plan Area, are briefly described below.

**TABLE 4.5-2
ACTIVE FAULTS IN THE REGION**

Fault	Closest Distance and Direction	Recency of Movement^a	Future Earthquake Probability^b	Historical Seismicity	Maximum Moment Magnitude Earthquake (Mw)^c
Hayward (Northern Section)	2.5 miles northeast	Historic	31% (combined with Rodgers Creek Fault)	M 6.8 in 1868 Many <M 4.5	7.1
Calaveras (Northern Section)	14.5 miles east	Historic	7%	M 5.6–M 6.4 in 1861 M 6.2, 1911 in 1984	6.8
San Andreas (Peninsula Section)	14 miles southwest	Historic	21%	M 7.1 in 1989 M 8.25 in 1906 M 7.0 in 1838 Many <M 6	7.9
San Gregorio	21 miles southwest	Holocene	6%	n/a	7.3
Concord–Green Valley (Avon Section)	16 miles northeast	Historic	3%	Historic active creep	6.7
Marsh Creek–Greenville	26 miles East	Historic	3%	M 5.6 in 1980	6.9
Rodgers Creek	26 miles north	Holocene	31% (combined with Hayward Fault)	M 6.7 in 1898 M 5.6 and 5.7 in 1969	7.0

^a Recency of faulting from Jennings and Bryant (2010). Historic: displacement during historic time (within last 200 years), including areas of known fault creep; Holocene: evidence of displacement during the last 11,000 years; Quaternary: evidence of displacement during the last 1.6 million years; Pre-Quaternary: no recognized displacement during the last 1.6 million years (but not necessarily inactive).

^b Probability of one or more earthquakes of magnitude 6.7 or greater in the next 30 years from the Working Group on California Earthquake Probabilities (2008). The Working Group estimates the probability of a “background” earthquake not from one of the seven major faults studied to be 9%.

^c The Maximum Moment Magnitude Earthquake is derived from the joint CDMG/USGS Probabilistic Seismic Hazard Assessment for the State of California (Peterson et al., 1996).

SOURCES: Bryant and Hart, 2007; Jennings and Bryant, 2010; Working Group on California Earthquake Probabilities (2008); Peterson et al., 1996.

Hayward Fault

The Hayward Fault Zone, located as close as 2.5 miles northeast from the Plan Area, extends for 60 miles from San Pablo Bay in Richmond south to the San Jose area. The Hayward fault has historically generated one sizable earthquake, in 1868, when a Richter magnitude 7 earthquake on its southern segment ruptured the ground for a distance of about 20 miles (USGS, 2008). Lateral ground surface displacement during this event was an average of 6 feet (USGS, 2008).

A characteristic feature of the Hayward fault is its well-expressed and relatively consistent fault creep. Although large earthquakes on the Hayward fault have been rare since 1868, slow fault creep has continued to occur and has caused measurable offset. Fault creep on the Southern segment of the Hayward fault is estimated at between 3 and 9 millimeters per year (mm/yr) (Bryant and Cluett, 2000). However, a large earthquake could occur on the Hayward fault with an estimated moment magnitude (Mw) of about Mw 7.1 (Table 4.5-2). The USGS Working Group on California Earthquake Probabilities (2008) identifies the Hayward–Rodgers Creek Fault Systems as having a 31 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

San Andreas Fault

The San Andreas Fault Zone, located as close as 14 miles southwest from the Plan Area, is a major structural feature that forms at the boundary between the North American and Pacific tectonic plates. It is a strike-slip⁶ fault, extending from the Salton Sea in Southern California near the border with Mexico to north of Point Arena, where the fault trace continues out into the Pacific Ocean. The main trace of the San Andreas Fault through the Bay Area trends northwest from the Santa Cruz Mountains to the western side of the San Francisco Peninsula.

In the San Francisco Bay Area, the San Andreas Fault Zone was the source of the two major earthquakes in recent history that affected the San Francisco Bay region. The 1906 San Francisco earthquake was estimated at M 7.9 and resulted in approximately 290 miles of surface fault rupture, the longest of any known continental strike slip fault. Horizontal displacement along the fault averaged 8 to 12 feet along the southern half of the rupture (USGS, 2012b). The 1989 Loma Prieta earthquake, with a magnitude of Mw 6.9, was centered in the Santa Cruz Mountains and resulted in widespread damage throughout the Bay Area. The USGS Working Group on California Earthquake Probabilities (2008) identifies the San Andreas Fault as having a 21 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

Calaveras Fault

The Calaveras fault, located as close as 14.5 miles east from the Plan Area, is a major right-lateral strike-slip fault that has been active during the last 11,000 years. The Calaveras fault is located in the eastern San Francisco Bay region and generally trends from north to south along the eastern side of the Oakland Hills into the western Diablo Range, eventually joining the San Andreas Fault Zone south of Hollister. The northern extent of the fault zone is somewhat speculative and could be linked with the Concord fault.

⁶ Refers to relative motion on either side of a fault which is primarily horizontal (as opposed to vertical).

There is a distinct change in slip rate and fault behavior north and south of the vicinity of Calaveras Reservoir. North of Calaveras Reservoir, the fault is characterized by a relatively low slip rate of 5-6 mm/yr and sparse seismicity (Bryant and Cluett, 1999). South of Calaveras Reservoir, the fault zone is characterized by a higher rate of surface fault creep that has been evidenced in historic times. The Calaveras fault has been the source of several moderate magnitude earthquakes, and the probability of a large earthquake (greater than M 6.7) is much lower than on the San Andreas or Hayward faults. The USGS Working Group on California Earthquake Probabilities (2008) identifies the Calaveras fault as having a 7 percent chance of generating one or more earthquakes of magnitude 6.7 or greater in the next 30 years.

Seismic Hazards

Seismic hazards are generally classified in two categories: primary seismic hazards (surface fault rupture and ground shaking) and secondary seismic hazards (liquefaction and other types of seismically induced ground failure, along with seismically induced landslides). The following discussion identifies the seismic hazards for the Plan Area and provides the initial context for further evaluation in the impact analysis.

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different strands of the same fault. Ground rupture is considered more likely along active faults, which are referenced in Table 4.5-2. Although future earthquakes could occur anywhere along the length of an active fault, only regional strike-slip earthquakes of magnitude 6.0 or greater are likely to be associated with surface fault rupture and offset (CGS, 1996). It is also important to note that earthquake activity and fault rupture due to unmapped subsurface fault traces is a possibility that is not predictable.

Ground rupture is considered more likely along active faults, which are referenced above in Table 4.5-2. The highest potential for surface faulting is along existing fault traces that have had Holocene fault displacement. The closest active fault to the Plan Area is the northern section of the Hayward Fault, approximately 2.5 miles to the northeast. The risk of fault rupture is considered low because the Plan Area is not crossed by an Alquist-Priolo Fault Rupture Hazard Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act, and no active or potentially active faults are known to pass through the Plan Area (CGS, 1982).

Seismic Ground Shaking

As discussed above, a major earthquake is likely to affect the Plan Area within the next 30 years, and would produce strong ground-shaking effects throughout the region. Earthquakes on active or potentially active faults, depending on magnitude and distance from the Plan Area, could produce a range of ground-shaking intensities. Historically, earthquakes have caused strong ground-shaking and damage in the San Francisco Bay Area, the most recent being the M 6.9 Loma Prieta earthquake in October 1989. The epicenter was approximately 46 miles south of the Plan Area, but this earthquake is estimated to have caused moderate (VI) to very strong (VIII) shaking

intensities in the Oakland area (ABAG, 2003b). The largest earthquake in Bay Area history was the San Francisco Earthquake of 1906, with an estimated moment magnitude of 7.9. This produced strong (VII) to violent (IX) shaking intensities in the Plan Area (ABAG, 2003c).

The primary tool that seismologists use to describe ground-shaking hazard is a probabilistic seismic hazard assessment (PSHA). The PSHA for the State of California takes into consideration the range of possible earthquake sources (including such worse-case scenarios as described above) and estimates their characteristic magnitudes to generate a probability map for ground shaking. The PSHA maps depict values of peak ground acceleration (PGA) that have a 10 percent probability of being exceeded in 50 years (1 in 475 chance of occurring each year). Use of this probability level allows engineers to design buildings for ground motions that have a 90 percent chance of *not* occurring in the next 50 years, making buildings safer than if they were simply designed for the most probable events. The PSHA has indicated that PGA values from 0.671 to 0.677 have a 10 percent chance of being exceeded in 50 years in the Plan Area, depending on the type of underlying soil material (USGS and CGS, 2002; see **Table 4.5-3** below). The late Pleistocene to Holocene age alluvial deposits that underlie Glen Creek and the surrounding portions of the Plan Area (Qf) have the highest PGA value for the area. The PGA values for the artificial fill near the northwestern arm of Lake Merritt (afem) and the early to middle Pleistocene deposits northwest of Broadway (Qof) are only slightly lower. The marine terrace deposits that underlie the southwestern portion of the Plan Area south of 27th Street (Qmt) have the lowest PGA value in the Plan Area. As indicated in Table 4.5-1, these PGAs could result in considerable damage even in specially designed structures, causing partial collapse of some buildings and damaging underground utilities. The potential hazards related to ground-shaking are discussed further in the Impacts and Mitigation Measures below.

Liquefaction

Liquefaction is a transformation of soil from a solid to a liquefied state, during which saturated soil temporarily loses strength resulting from the buildup of excess pore water pressure, especially during earthquake-induced cyclic loading. Soil susceptible to liquefaction includes loose- to medium-density sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Four kinds of ground failure commonly result from liquefaction: lateral spread, flow failure, ground oscillation, and loss of bearing strength. *Lateral spreading* is the horizontal displacement of surficial blocks of sediments resulting from liquefaction in a subsurface layer that occurs on slopes ranging between 0.3 and three percent and commonly displaces the surface by several meters to tens of meters. *Flow failures* occur on slopes greater than three degrees and are primarily liquefied soil or blocks of intact material riding on a liquefied subsurface zone. *Ground oscillation* occurs on gentle slopes when liquefaction occurs at depth and no lateral displacement takes place. Soil units that are not liquefied may pull apart from each other and oscillate on the liquefied zone. The *loss of bearing pressure* can occur beneath a structure when the underlying soil loses strength and liquefies. When this occurs, the structure can settle, tip, or even become buoyant and “float” upwards. Liquefaction and associated failures could damage foundations, roads, underground cables and pipelines, and disrupt utility service.

**TABLE 4.5-3
PROBABILISTIC SEISMIC HAZARD ASSESSMENT PEAK GROUND
ACCELERATION VALUES FOR PLAN AREA GEOLOGIC UNITS**

Geologic Unit^a	Approximate Extent of Geologic Unit in Plan Area	PSHA Map PGA Value^b	Liquefaction Susceptibility Rating (at <10 feet to groundwater/ 10-30 feet to groundwater)^{c,d}	Estimated PGA Threshold Required to Trigger Liquefaction^c
afem (Artificial fill over estuarine mud)	South of Bay Street between Valdez Street and the eastern border of the Plan Area	0.676g	Very High/High	0.1g
Qf (Late Pleistocene to Holocene alluvium)	East side of Broadway between 26th and I-580	0.677g	Moderate/Low	> 0.3g
Qmt (Pleistocene marine terrace)	West of Valdez Street between 26th and Grand Avenue	0.671g	Low/Low	uncertain
Qof (Early to Middle Pleistocene alluvium)	West side of Broadway between 26th and I-580	0.675g	Low/Low	> 0.6g

^a After Witter et al., 2006

^b Using central longitude and latitude of each geologic unit in the Plan Area

^c After Witter et al., 2006

^d Depth to groundwater surface from CGS 2003

SOURCES: Witter et al., 2006; USGS and CGS, 2002; CGS 2003

Of particular relevance to the Plan Area is the fact that liquefaction can occur in unconsolidated or artificial fill sediments and other reclaimed areas along the margin of San Francisco Bay. The depth to groundwater influences the potential for liquefaction, in that sediments need to be saturated to have a potential for liquefaction. Groundwater in the Plan Area occurs at relatively shallow depths. At a leaking underground storage tank (LUST) cleanup site at 327 34th Street, at the northern end of the Plan Area, the depths to groundwater ranged from about 12.5 to 23 feet below the ground surface between 1993 and 2012 (LRM, 2012). At the lower elevation southern end of the Plan Area near Lake Merritt, the depth to groundwater is shallower. At a LUST site at 2350 Harrison Street, the depths to groundwater ranged from 3.13 to 10.92 feet below the ground surface between 2008 and 2011 (Conestoga-Rovers, 2012). Witter et al. (2006) and CGS (2003) have classified the geologic units in the Plan Area as ranging from low to very high liquefaction susceptibility given a ten foot depth to the groundwater surface. For three of the four mapped geologic units the PSHA PGA values are larger than the estimated liquefaction PGA thresholds (See Table 4.5-3). The CGS (2003), in accordance with the requirements of the Seismic Hazards Mapping Act, has placed the portions of the Plan Area underlain by artificial fills and Holocene alluvium as being within a liquefaction hazard zone. The implications of this designation are discussed under the regulatory setting and impact analysis below.

Earthquake-Induced Settlement

Settlement of the ground surface can be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur as a result of the relatively rapid compaction and settling of subsurface materials (particularly loose, uncompacted, and variable sandy sediments above the water table) due to the rearrangement of soil particles during prolonged ground-shaking. Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different amounts). Areas underlain by artificial fill would be susceptible to this type of settlement. Given the geologic setting of the Plan Area vicinity, this area could be subjected to earthquake-induced settlement, discussed further in the impact analysis to follow.

4.5.2 Regulatory Framework

State

The statewide minimum public safety standard for mitigation of earthquake hazards (as established through the California Building Code [CBC], Alquist-Priolo Earthquake Fault Zoning Act, and the Seismic Hazards Mapping Act) is that the minimum level of mitigation for a project should reduce the risk of ground failure during an earthquake to a level that does not cause the collapse of buildings for human occupancy, but in most cases, is not required to prevent or avoid the ground failure itself. It is not feasible to design all structures to completely avoid damage in worst-case earthquake scenarios. Accordingly, regulatory agencies have generally defined an “acceptable level” of risk as that which provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of a project [CCR Title 14, Section 3721(a)]. Nothing in these acts, however, precludes lead agencies from enacting more stringent requirements, requiring a higher level of performance, or applying these requirements to developments other than those that meet the acts’ definitions of “project.”

California Building Code

The CBC has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 to be enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2010 edition of the CBC is based on the 2009 International Building Code (IBC) published by the International Code Conference. The 2010 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (such as wind loads) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this Act, the state geologist established regulatory zones, called earthquake fault zones, around the surface traces of active faults and has published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace because many active faults are complex and consist of more than one branch that may experience ground surface rupture. However, this Act does not apply to the adoption and development under the Specific Plan because no active faults cross the Plan Area.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) was developed to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. While this Act pertains to seismic hazards, they are not the same as the fault surface rupture hazard regulated by the Alquist-Priolo Special Studies Zone Act of 1972. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as “zones of required investigation”, where regional (that is, not site-specific) information suggests that the probability of a hazard requiring mitigation is great enough to warrant a site-specific investigation. The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical report, that appropriate mitigation measures have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed mitigation measures. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in California Geological Survey Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board (CGS, 2008).

City of Oakland Regulations

City of Oakland General Plan

The Safety Element of the City of Oakland General Plan enumerates the following policies and actions designed to reduce risks associated with earthquakes that may affect the City of Oakland:

- ***Geologic Hazards, Policy GE-1:*** Develop and continue to enforce and carry out regulations and programs to reduce seismic hazards and hazards from seismically triggered phenomena.

Action GE-1.2: Enact regulations requiring the preparation of site-specific geologic or geotechnical reports for development proposals in areas subject to earthquake-induced liquefaction, settlement or severe ground shaking, and conditioning project approval on the incorporation of necessary mitigation measures.

- ***Geologic Hazards, Policy GE-2:*** Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.

Action GE-2.1: Continue to enforce provisions under the subdivision ordinance requiring that, under certain conditions, geotechnical reports be filed and soil hazards investigations be made to prevent grading from creating unstable slopes, and that any necessary corrective actions be taken.

Action GE-2.2: Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.

Action GE-2.6: Design fire-preventive vegetation-management techniques and practices for creeksides and high-slope areas that do not contribute to the landslide and erosion hazard.

- ***Geologic Hazards, Policy GE-3:*** Continue, enhance or develop regulations and programs designed to minimize seismically related structural hazards from new and existing buildings.

Action GE-3.1: Adopt and amend as needed updated versions of the California building code so that optimal earthquake-protection standards are used in construction and renovation projects.

Action GE-3.2: Continue to enforce the unreinforced masonry ordinance to require that potentially hazardous unreinforced masonry buildings be retrofitted or be otherwise made to reduce the risk of death and injury from their collapse during an earthquake.

Action GE-3.3: Continue to enforce the earthquake-damaged structures ordinance to ensure that buildings damaged by earthquakes are repaired to the extent practicable.

- ***Geologic Hazards, Policy GE-4:*** Work to reduce potential damage from earthquakes to “lifeline” utility and transportation systems.

Action GE-4.2: As knowledge about the mitigation of geologic hazards increases, encourage public and private utility providers to develop additional measures to

further strengthen utility systems against damage from earthquakes, and review and comment on proposed mitigation measures.

City of Oakland Municipal Code

The Safety Element of the City of Oakland's General Plan identifies policies and actions that apply to geologic hazards. The City implements these pertinent sections of the General Plan by enforcing the ordinances described. Among these are ordinances to minimize soil hazards, reduce soil erosion and protect stream quality, prevent grading from creating unstable slopes, abate unreinforced masonry building hazards, and mitigate fault rupture hazards.

Subdivision Ordinance (incorporated in Chapter 16.20.060 of the Oakland Municipal Code): Requires that the subdivider file a preliminary soil report with the City Engineer prior to the submission of a final subdivision map. The preliminary soil report must describe (1) how slopes will be kept stable against sliding and excessive erosion, and (2) if critically expansive soils are present or if other hazardous or problematic soil characteristics are present and what measures can be taken to avoid these hazards or problems. This preliminary soil report may be waived if the Building Inspector and City Engineer both agree that no preliminary analysis is necessary (Ordinance 11924, Section 4).

Subdivision Ordinance (Chapter 16.20.080): If the preliminary report indicates the presence of critically expansive soils, instability of slopes, or other soil problems which would lead to structural damage, a soil investigation of each lot in the subdivision shall be made by a civil engineer who is registered by the state of California. The soil investigation shall be made after grading, and a report shall be submitted recommending corrective action which is likely to prevent structural damage to each structure proposed to be constructed in the subdivision. Copies of the report shall be filed with the Building Inspector and the Street Engineering Department. The information contained in the report of the soils investigation may be included in the certificate respecting the grading work.

Grading Ordinance (Chapter 15.04.660): The Grading Ordinance requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope onsite, or the depth of excavation could exceed five feet at any location. Therefore, the project sponsor would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

Creek Protection, Stormwater Management, and Discharge Control Ordinance (Chapter 13.16): This ordinance prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The ordinance establishes comprehensive guidelines for the regulation of discharges to the city's storm drain system and the protection of surface water quality. The ordinance identifies BMPs and other protective measures for development projects. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing city drainage facilities. In 1997, the ordinance was amended to include the requirement for a creek protection permit for any construction or related activity on creekside property. The ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge

of pollutants to the storm drain system, local creeks, and San Francisco Bay. The provisions also list clear guidelines for creekside residents to protect the creek and habitat.

Unreinforced Masonry Ordinance (Chapter 15.28): Many of the unreinforced masonry buildings surveyed by the Oakland Cultural Heritage Survey in 1994 are located in the Plan Area (ESA, 2009). To abate the hazards posed by unreinforced masonry buildings, a Building Official assigns a priority level to buildings based many factors including the soil type on which the building is located. This priority level determines the amount of time the building owner has to file a building permit application and complete the retrofit work. If a building has been upgraded but no longer meets the structural standards under which it was retrofitted, or if the occupancy classification of the building has or will change, the building may require a new filing of an Engineer's Report and Building Permit Application. Provisions of the California State Historical Building Code (Part 8 of Title 24 in the California Code of Regulations) may apply to any buildings defined as historic by the Oakland cultural heritage survey. ***Geologic reports ordinance (Chapter 15.20):*** The geologic report ordinance in Chapter 15.20 of the Oakland Municipal Code does not apply to the Plan Area because the Plan Area is not within the boundaries of an Alquist-Priolo Fault Rupture Hazard Zone (CGS, 1982).

Building Services Division

In addition to compliance with building standards set forth by the 2009 IBC and 2010 CBC, a project applicant would be required to submit to the Oakland Building Services Division an engineering analysis accompanied by detailed engineering drawings for review and approval prior to excavation, grading, or construction activities on a project site. Specifically, an engineering analysis report and drawings of relevant grading or construction activities on a project site would be required to address constraints and incorporate recommendations identified in geotechnical investigations. These required submittals and City reviews ensure that the buildings are designed and constructed in conformance with the seismic and other requirements of all applicable building code regulations, pursuant to standard City of Oakland procedures.

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

The City of Oakland's Standard Conditions of Approval (SCA) relevant to reducing geologic and seismic impacts due to the adoption and development under the Specific Plan are listed below. If the Specific Plan is approved by the City, all applicable SCA would be adopted as conditions of approval and required of the adoption and development under the Specific Plan, as applicable, to help ensure less-than-significant impacts from geologic and seismic conditions. The SCA are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures.

- **SCA 34: Erosion and Sedimentation Control (when no grading permit is required)**

Ongoing throughout demolition, grading, and/or construction activities. The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating the Best Management Practices shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division. At a minimum, the project applicant shall provide filter materials deemed

acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

- **SCA 55: Erosion and Sedimentation Control Plan**

Prior to any grading activities. The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.660 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities. The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

- **SCA 58: Soils Report**

Required as part of the submittal of a Tentative Tract or Tentative Parcel Map. A preliminary soils report for each construction site within the project area shall be required as part of this project and submitted for review and approval by the Building Services Division. The soils reports shall be based, at least in part, on information obtained from on-site testing. Specifically the minimum contents of the report should include:

- a) Logs of borings and/or profiles of test pits and trenches:
 - 1. The minimum number of borings acceptable, when not used in combination with test pits or trenches, shall be two (2), when in the opinion of the Soils Engineer such borings shall be sufficient to establish a soils profile suitable for the design of all the footings, foundations, and retaining structures.
 - 2. The depth of each boring shall be sufficient to provide adequate design criteria for all proposed structures.
 - 3. All boring logs shall be included in the soils report.
- b) Test pits and trenches
 - 1. Test pits and trenches shall be of sufficient length and depth to establish a suitable soils profile for the design of all proposed structures.
 - 2. Soils profiles of all test pits and trenches shall be included in the soils report.

- c) A plat shall be included which shows the relationship of all the borings, test pits, and trenches to the exterior boundary of the site. The plat shall also show the location of all proposed site improvements. All proposed improvements shall be labeled.
 - d) Copies of all data generated by the field and/or laboratory testing to determine allowable soil bearing pressures, shear strength, active and passive pressures, maximum allowable slopes where applicable and any other information which may be required for the proper design of foundations, retaining walls, and other structures to be erected subsequent to or concurrent with work done under the grading permit.
 - e) A written Soils Report shall be submitted which shall include but is not limited to the following:
 - 1. Site description
 - 2. Local and site geology
 - 3. Review of previous field and laboratory investigations for the site
 - 4. Review of information on or in the vicinity of the site on file at the Information Counter, City of Oakland, Office of Planning and Building.
 - 5. Site stability shall be addressed with particular attention to existing conditions and proposed corrective attention to existing conditions and proposed corrective actions at locations where land stability problems exist.
 - 6. Conclusions and recommendations for foundations and retaining structures, resistance to lateral loading, slopes, and specifications, for fills, and pavement design as required.
 - 7. Conclusions and recommendations for temporary and permanent erosion control and drainage. If not provided in a separate report they shall be appended to the required soils report.
 - 8. All other items which a Soils Engineer deems necessary.
 - 9. The signature and registration number of the Civil Engineer preparing the report.
 - f) The Director of Planning and Building may reject a report that she/he believes is not sufficient. The Director of Planning and Building may refuse to accept a soils report if the certification date of the responsible soils engineer on said document is more than three years old. In this instance, the Director may require that the old soils report be recertified, that an addendum to the soils report be submitted, or that a new soils report be provided.
- **SCA 60: Geotechnical Report**
Required as part of the submittal of a tentative Tract Map or tentative Parcel Map.
 - a) A site-specific, design level, Landslide or Liquefaction geotechnical investigation for each construction site within the project area shall be required as part of this project and submitted for review and approval by the Building Services Division. Specifically:
 - 1. Each investigation shall include an analysis of expected ground motions at the site from identified faults. The analyses shall be accordance with applicable City ordinances and polices, and consistent with the most recent version of the California Building Code, which requires structural design that can accommodate ground accelerations expected from identified faults.

2. The investigations shall determine final design parameters for the walls, foundations, foundation slabs, surrounding related improvements, and infrastructure (utilities, roadways, parking lots, and sidewalks).
 3. The investigations shall be reviewed and approved by a registered geotechnical engineer. All recommendations by the project engineer, geotechnical engineer, shall be included in the final design, as approved by the City of Oakland.
 4. The geotechnical report shall include a map prepared by a land surveyor or civil engineer that shows all field work and location of the “No Build” zone. The map shall include a statement that the locations and limitations of the geologic features are accurate representations of said features as they exist on the ground, were placed on this map by the surveyor, the civil engineer or under their supervision, and are accurate to the best of their knowledge.
 5. Recommendations that are applicable to foundation design, earthwork, and site preparation that were prepared prior to or during the projects design phase, shall be incorporated in the project.
 6. Final seismic considerations for the site shall be submitted to and approved by the City of Oakland Building Services Division prior to commencement of the project.
 7. A peer review is required for the Geotechnical Report. Personnel reviewing the geologic report shall approve the report, reject it, or withhold approval pending the submission by the applicant or subdivider of further geologic and engineering studies to more adequately define active fault traces.
- b) Tentative Tract or Parcel Map approvals shall require, but not be limited to, approval of the Geotechnical Report.

4.5.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Expose people or structures to substantial risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or Seismic Hazards Map issued by the State Geologist for the area or based on other substantial evidence of a known fault [NOTE: Refer to California Geological Survey 42 and 117 and Public Resources Code section 2690 et. seq.];
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction, lateral spreading, subsidence, collapse; or
 - Landslides;

2. Result in substantial soil erosion or loss of topsoil, creating substantial risks to life, property, or creeks/waterways;
3. Be located on expansive soil, as defined in Section 1802.3.2 of the California Building Code (2007, as it may be revised), creating substantial risks to life or property;
4. Be located above a well, pit, swamp, mound, tank vault, or unmarked sewer line, creating substantial risks to life or property;
5. Be located above landfills for which there is no approved closure and post-closure plan, or unknown fill soils, creating substantial risks to life or property ; or
6. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Approach to Analysis

Adoption and development under the Specific Plan would not result in direct physical impacts within the Plan Area. However, adoption and development under the Specific Plan could eventually result in various types of construction activities within the Plan Area that would require ground disturbance and use of hazardous materials. These types of construction activities could result in impacts to or from geology, soils, and geohazards. Potential impacts to geology, soils, and geohazards are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, and the City of Oakland's Standard Conditions of Approval. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less-than-significant. Additional discussion of potential erosion impacts is presented in Section 4.8, *Hydrology and Water Quality* of this EIR. Detailed analysis of potential impacts due to the use of hazardous materials is presented in Section 4.7, *Hazardous Materials*, of this EIR. Potential impacts to stormwater infrastructure are discussed in Section 4.14, *Utilities and Service Systems*, of this EIR.

Based on the Plan Area and its geographical location, adoption and development under the Specific Plan would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

- ***Fault Rupture.*** The faults most susceptible to earthquake rupture are active faults, which are faults that have experienced surface displacement within the last 11,000 years. There are no active faults that cross the Plan Area, and the nearest active fault is more than two miles away. Therefore, the potential for fault rupture to affect the development under the Specific Plan are very low.
- ***Landslides.*** The Plan Area does not contain slopes that are susceptible to landslides or slope failure. The gentle sloping topography of the area puts the potential for landslides or slope failure to affect any of the proposed development or adaptive reuse in the Plan Area as very low and is therefore not discussed further. Discussion on earthquake-induced ground failure is provided in Impact GEO-1.
- ***Substantial soil erosion or loss of topsoil.*** Section 4.7, *Hydrology and Water Quality*, discusses soil erosion and its effect on water quality. This criterion focuses more on the

potential for excessive or accelerated erosion to undermine building foundations. Measures to reduce soil erosion during construction for water quality purposes would effectively prevent excessive rilling or rutting of soil on construction sites (see Section 4.7). The Plan Area is in a developed urban area that is paved or landscaped, and served by a storm drain system. Therefore there would be no impact from excessive erosion on foundations or utilities.

- **Wastewater Disposal.** The Plan Area is located within an urban area where all development would be able to tie into existing wastewater infrastructure. Therefore, none of the development would require the use of septic or other alternative disposal wastewater systems, and therefore no impact is associated with this hazard.

Impacts

Impact GEO-1: Adoption and development under the Specific Plan could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, collapse, or lateral spreading (Criterion 1). (Less than Significant)

As discussed in Chapter 3, *Project Description*, a key purpose of the Specific Plan is to enhance the condition of the Plan Area. The City could accomplish the project objectives through various means including new construction or adaptive reuse of buildings and utilities. If development under the Specific Plan is not properly designed or constructed, it has the potential to increase the exposure of people to injury or harm during a large regional earthquake. As discussed in the Setting, the Plan Area could be subject to very strong ground shaking, capable of causing considerable damage to well-built structures, causing partial collapse of older buildings (e.g., soft-story buildings, and those built of unreinforced masonry) and damaging underground utilities. In addition, portions of the Plan Area near Lake Merritt and Glen Echo Creek are located over soils susceptible to liquefaction, which substantially increases the potential damage incurred by structures and utility lines in the event of an earthquake. These hazards must be properly evaluated and mitigated for as specific projects are implemented within the Plan Area.

As described in the Regulatory Framework, development under the Specific Plan would be required to comply with the Seismic Hazards Mapping Act (in liquefaction hazard zones) and with the California Building Code. These laws require development projects to demonstrate that (1) soil conditions are known and that foundations have been designed according to the proper seismic design category, and (2) that the risk of liquefaction and other ground failures has been evaluated and that appropriate mitigation measures, if necessary, have been incorporated into project design. Development under the Specific Plan located wholly or partly within a Seismic Hazard Zone for liquefaction, such as the Plan Area, would be required to comply with CGS guidelines for evaluating and mitigating seismic hazards (Special Publication 117A) (CGS, 2008).

To ensure compliance with these laws, as well as the seismic requirements of the City of Oakland Building Code, the City requires owners/developers to prepare a soils report and geotechnical report for proposed developments that include generally accepted and appropriate engineering techniques for determining the susceptibility of a project site to various geologic and seismic hazards. These requirements are implemented through uniformly-applied Standard Conditions of

Approval (SCA), consistent with General Plan Policies. The geotechnical report (SCA 60, *Geotechnical Report*) would include an analysis of ground shaking effects, liquefaction potential, and provide recommendations to reduce these hazards. Owners/developers of development under the Specific Plan would be required to submit an engineering analysis accompanied by detailed engineering drawings to the City of Oakland Building Services Division prior to excavation, grading, or construction activities on a project site. Geotechnical and seismic design criteria would conform to engineering recommendations consistent with the seismic requirements set forth in the California Code of Regulations, Title 24, California Building Standards Code in effect at the time of permit application.

Further, development under the Specific Plan would be required to comply with 'the requirements of the CBC, Seismic Hazards Mapping Act, and Oakland's standard conditions of approval would ensure that new developments under the Specific Plan would not expose people or structures to an unacceptable level of risk during a large regional earthquake.⁷

It is important to ensure that development under the Specific Plan involving addition of housing or office spaces to *existing* structures occur in structures that are seismically sound. The Plan Area is an older part of Oakland that contains many areas that were built-up prior to the development of modern building codes. Buildings constructed of unreinforced masonry have been widely recognized for experiencing life safety hazardous damage including partial or total collapse during moderate to strong earthquakes. Further, buildings subject to the Oakland Building Code prior to November 26, 1948 (the effective date of the building code requiring earthquake resistant design of buildings) may present an unacceptable level of risk to the residents during an earthquake. Implementation of SCA 58, *Soils Report*, and SCA 60, *Geotechnical Report*, and application of the city's building and grading codes occur as part of submittal of development plans; or projects involving excavation, grading, or construction. Any modification of a structure would require a building permit, and if the structure is out of seismic code, then it would require upgrades before a permit is issued. Under the Section 3406.1 of the CBC, however, any project that would place a building in a different occupancy category or use-type would be required to comply with the current CBC code applicable to the new use or occupancy category. This ensures that buildings that may be seismically unsound would be required to retrofit prior to approval of use changes or changes in occupancy levels. Earthquakes can and will occur in the region and the Plan Area may be affected. However, the application of current seismic design criteria required under the CBC and the SCAs would reduce the potential impacts associated with ground shaking during a major seismic event to less than significant.

Mitigation: None Required.

⁷ An "acceptable level" of risk means that which provides reasonable protection of the public safety, though it does not necessarily ensure continued structural integrity and functionality of the project [CCR Title 14, Section 3721(a)].

Impact GEO-2: Adoption and development under the Specific Plan could be subjected to geologic hazards, including expansive soils, subsidence, seismically-induced settlement and differential settlement (Criterion 3). (Less than Significant)

As discussed in the setting, soils containing a high percentage of clays are generally most susceptible to expansion. Expansive soils can damage foundations of above-ground structures, paved roads and streets, and concrete slabs. The Bay Mud that presumably underlies much of the Plan Area, as well as areas underlain by artificial fill, could potentially be subject to shrink-swell behavior. Further settlement and differential settlement could affect portions of the Plan Area. Larger buildings may put loads on underlying geologic layers of mud and silt that could compress. Places mapped as artificial fills may be underlain by historic bay sloughs, old foundations, and former marsh areas. These areas may experience some degree of differential settlement, and particular care would be needed to ensure soils and foundations are properly engineered.

As discussed in Impact GEO-1, the City of Oakland imposes SCAs requiring proposed developments to conduct a soil reports (SCA 58) and geotechnical studies (SCA 60). These SCAs would ensure that construction methods and building designs are in place to overcome problematic soils (such methods typically involve soil removal and replacement, or special foundation design). SCAs would ensure that structures are protected from expansive soil and settlement concerns. The application of current geotechnical design criteria required under the CBC and the SCAs would reduce the potential impacts associated with expansive soils, subsidence, seismically-induced settlement and differential settlement to less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact GEO-3: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would not result in significant cumulative impacts with respect to geology, soils or seismicity. (Less than Significant)

Geographic Context

Although the entire Bay Area is situated within a seismically-active region with a wide range of geologic and soil conditions, these conditions can vary widely within a short distance, making the cumulative context for potential impacts resulting from exposing people and structures to related risks one that is more localized or even site-specific. Potential cumulative geology and seismic impacts do not extend far beyond a project's boundaries, since such geological impacts are typically confined to discrete spatial locations and do not combine to create an extensive cumulative impact. The exception to this generalization would occur where a large geologic feature (e.g., fault zone, massive landslide) might affect an extensive area, or where the development effects from the adoption and development under the Specific Plan could affect the geology of an off-site location. These circumstances are not likely to occur in the Plan Area as

there are no large landslide features or fault zones. The development under the Specific Plan could combine with structural damage from other past, present, and reasonably foreseeable future projects. These include but are not limited to projects listed in the Major Projects List in Appendix B to this Draft EIR.

Impacts

The cumulative analysis considers the adoption and development under the Specific Plan combined with other past, present, existing, pending and reasonably foreseeable projects. Many existing buildings (i.e., past projects) in the surrounding area have been built in accordance with building code requirements for geotechnical and seismic safety in effect at the time of building construction. Present, pending and future projects within the Plan Area are subject to these enhanced requirements and result in reduced geologic and seismic hazards. As present and future projects replace aging infrastructure and older structures with new, more rigorously regulated projects, the potential for cumulative seismic risks is incrementally reduced over time.

The SCAs discussed above, including appropriate grading requirements, and compliance with the UBC as locally amended would reduce the potential for cumulative geologic and seismic effects from development within Plan Area and surrounding area. Therefore, adoption and development under the Specific Plan together with the impact of past, present, existing, pending and reasonably foreseeable future development would not result in any significant cumulative geologic and seismic impacts. Moreover, given that the adoption and development under the Specific Plan would likely remove older structures and replace them with new structures, or rehabilitate older structures that must comply with current and future building code requirements for geologic and seismic safety, the development under the Specific Plan would not make any considerable contribution to any potential cumulative impact, because it would improve geologic and seismic safety in the Plan Area. The impact would be less than significant.

Mitigation: None Required.

4.5.4 References

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4.6 Greenhouse Gases and Climate Change

This section presents an overview of region-specific information related to greenhouse gases (GHG), including a description of current emissions generated within the City. The impact analysis discusses the expected emissions associated with adoption and development under the Specific Plan. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary. An analysis of the contribution of the adoption and development under the Specific Plan to global climate change and GHG emissions is also included at the end of this section as is an assessment of consistency with relevant plans to reduce GHG emissions.

4.6.1 Physical Setting for GHG Emissions and Climate Change

There is a general scientific consensus that global climate change is occurring, caused in whole or in part, by increased emissions of GHGs that keep the Earth's surface warm by trapping heat in the Earth's atmosphere (USEPA, 2000), in much the same way as glass in a greenhouse. While many studies show evidence of warming over the last century and predict future global warming, the precise causes of such warming and its potential effects are far less certain.¹ While the greenhouse effect is responsible for maintaining a habitable climate on Earth, human activity has caused increased concentrations of these gases in the atmosphere, contributing to an increase in global temperatures and alterations of climactic conditions.

The USEPA has recently concluded that scientists have a good understanding of the following relationship and data supporting the following:

- “Human activities are changing the composition of Earth's atmosphere. Increasing levels of greenhouse gases like carbon dioxide (CO₂) in the atmosphere since pre-industrial times are well-documented.”
- The atmospheric buildup of CO₂ and other greenhouse gases is largely the result of human activities such as the burning of fossil fuels.
- A warming trend of approximately 0.7 to 1.5°F occurred during the 20th century. Warming occurred in both the northern and southern hemispheres, and over the oceans.
- “The key greenhouse gases emitted by human activities remain in the atmosphere for periods ranging from decades to centuries.” It is therefore virtually certain that atmospheric concentrations of greenhouse gases will continue to rise over the next few decades. Increasing greenhouse gas concentrations tend to warm the planet (USEPA, 2000).

¹ “Global climate change” is a broad term used to describe any worldwide, long-term change in the earth's climate. “Global warming” is more specific and refers to a general increase in temperatures across the earth, although it can cause other climatic changes, such as a shift in the frequency and intensity of weather events and even cooler temperatures in certain areas, even though the world, on average, is warmer.

At the same time, there is much uncertainty concerning the magnitude and rate of the warming. Specifically, the USEPA notes that “important scientific questions remain about how much warming will occur; how fast it will occur; and how the warming will affect the rest of the climate system, including precipitation patterns and storms. Answering these questions will require advances in scientific knowledge in a number of areas:

- Improving understanding of natural climatic variations, changes in the sun’s energy, land-use changes, the warming or cooling effects of pollutant aerosols, and the impacts of changing humidity and cloud cover.
- Determining the relative contribution to climate change of human activities and natural causes.
- Projecting future greenhouse emissions and how the climate system will respond within a narrow range.
- Improving understanding of the potential for rapid or abrupt climate change.” (USEPA, 2000)

Greenhouse Gases (GHGs)

Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the principal GHGs, and when concentrations of these gases exceed natural concentrations in the atmosphere, the greenhouse effect may be enhanced. CO₂, CH₄ and N₂O occur naturally, but are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. Other human generated GHGs, which have much higher heat-absorption potential than CO₂, include fluorinated gases such as hydrofluorocarbons (HFCs), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆) which are byproducts of certain industrial processes.

Potential Effects of Human Activity on GHG Emissions

Fossil fuel combustion, especially for the generation of electricity and powering of motor vehicles, has led to substantial increases in CO₂ emissions (and thus substantial increases in atmospheric concentrations). In 1994, atmospheric CO₂ concentrations were found to have increased by nearly 30 percent above pre-industrial (c.1860) concentrations.

The effect each GHG has on climate change is measured as a combination of the volume of its emissions, and its global warming potential (GWP),² and is expressed as a function of how much warming would be caused by the same mass of CO₂. Thus, GHG emissions are typically measured in terms of pounds or tons of CO₂e.³

² The potential of a gas or aerosol to trap heat in the atmosphere.

³ CO₂ equivalents (“CO₂e”) are calculated as the product of the mass emitted of a given GHG and its specific global warming potential (GWP). While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such vastly higher quantities that it accounts for the majority of GHG emissions in CO₂e, both from residential developments and human activity in general.

Global Emissions

Worldwide emissions of GHGs in 2004 were 30 billion tons of CO₂e per year (UNFCCC, 2007) (including both ongoing emissions from industrial and agricultural sources, but excluding emissions from land-use changes).

U.S. Emissions

In 2004, the United States emitted about 8 billion tons of CO₂e or about 25 tons/year/person. Of the four major sectors nationwide — residential, commercial, industrial and transportation — transportation accounts for the highest fraction of GHG emissions (approximately 35 to 40 percent); these emissions are entirely generated from direct fossil fuel combustion (USEPA, 2000).

State of California Emissions

In 2004, California emitted approximately 550 million tons of CO₂e, or about six percent of the U.S. emissions. This large number is due primarily to the sheer size of California compared to other states. By contrast, California has one of the fourth lowest per capita GHG emission rates in the country, due to the success of its energy-efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise (California Energy Commission [CEC], 2007). Another factor that has reduced California's fuel use and GHG emissions is its mild climate compared to that of many other states.

The California Environmental Protection Agency (EPA) Climate Action Team stated in its March 2006 report that the composition of gross climate change pollutant emissions in California in 2002 (expressed in terms of CO₂ equivalence) were as follows:

- Carbon dioxide (CO₂) accounted for 83.3 percent;
- Methane (CH₄) accounted for 6.4 percent;
- Nitrous oxide (N₂O) accounted for 6.8 percent; and
- Fluorinated gases (HFCs, PFC, and SF₆) accounted for 3.5 percent (CalEPA, 2006).

The CEC found that transportation is the source of approximately 41 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 23 percent, and industrial sources at 20 percent. Agriculture and forestry is the source of approximately 8.3 percent, as is the source categorized as "other," which includes residential and commercial activities (CEC, 2007).

Bay Area Emissions

In the Bay Area, fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of the Bay Area's GHG emissions, accounting for just over half of the Bay Area's 85 million tons of GHG emissions in 2002. Industrial and commercial sources were the second largest contributors of GHG emissions with about 25 percent of total emissions. Domestic sources (e.g., home water heaters, furnaces, etc.) account for about 11 percent of the Bay Area's GHG emissions, followed by power plants at

seven percent. Oil refining currently accounts for approximately six percent of the total Bay Area GHG emissions (BAAQMD, 2008).

Oakland Emissions

The City of Oakland has developed a GHG emissions inventory estimating citywide GHG emissions for the year 2005 (City of Oakland Energy and Climate Action Plan Appendix, 2011). This citywide GHG emissions inventory includes “local government focus area” emissions associated with energy used and waste produced within the Oakland city limits, as well as other emission sources associated with activities occurring in Oakland, such as industrial point sources, energy used to convey water to Oakland, pass-through highway travel, and energy used to manufacture products purchased and used in Oakland. **Table 4.6-1** describes Oakland’s local government focus area emissions.

**TABLE 4.6-1
OAKLAND FOCUS AREA CITYWIDE GHG EMISSIONS SUMMARY – 2005 (tons/year)**

GHG Emissions Source	Metric Tons of Carbon Dioxide Equivalent (CO₂e)
Transportation on Local (Non-Highway) Roads	759,884
Commercial/Industrial Electricity	320,151
Commercial/Industrial Natural Gas	288,514
Residential Electricity	150,077
Residential Natural Gas	350,162
Landfilled Solid Waste	126,361

SOURCE: City of Oakland, 2009.

Construction and New Development Emissions

The construction and operation of developments, such as the development under the Specific Plan, cause GHG emissions. Operational phase GHG emissions result from energy use associated with heating, lighting and powering buildings (typically through natural gas and electricity consumption in Oakland), pumping and processing water, as well as fuel used for transportation and decomposition of waste associated with building occupants.

New development can also create GHG emissions in its construction and demolition phases including the use of fuels in construction equipment, creation and decomposition of building materials, vegetation clearing, natural gas usage, electrical usage (since electricity generation by conventional means is a major contributor of GHG emissions, discussed below), and transportation.

However, it is important to acknowledge that new development does not necessarily create entirely new GHG emissions, since most of the persons who will visit or occupy new development will come from other locations where they were already causing such GHG emissions. Further, as discussed above, it has not been demonstrated that a project’s net increase in GHG emissions, if any, when coupled with other activities in the region, would be cumulatively considerable.

Potential Effects of Human Activity on Global Climate Change

Globally, climate change has the potential to impact numerous environmental resources through anticipated, though uncertain, impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming is taking place, including substantial loss of ice in the Arctic (International Panel on Climate Change [IPCC], 2000).

Acknowledging uncertainties regarding the rate at which anthropogenic GHG emissions would continue to increase (based upon various factors under human control, such as future population growth and the locations of that growth; the amount, type, and locations of economic development; the amount, type, and locations of technological advancement; adoption of alternative energy sources; legislative and public initiatives to curb emissions; and public awareness and acceptance of methods for reducing emissions), and the impact of such emissions on climate change, the IPCC devised a set of six “emission scenarios” which utilize various assumptions about the rates of economic development, population growth, and technological advancement over the course of the next century (IPCC, 2000). These emission scenarios are paired with various climate sensitivity models to attempt to account for the range of uncertainties which affect climate change projections. The wide range of temperature, precipitation, and similar projections yielded by these scenarios and models reveal the magnitude of uncertainty presently limiting climate scientists’ ability to project long-range climate change (as previously discussed).

The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects, according to the IPCC (IPCC, 2000):

- Snow cover is projected to contract, with permafrost areas sustaining thawing;
- Sea ice is projected to shrink in both the Arctic and Antarctic;
- Hot extremes, heat waves, and heavy precipitation events are likely to increase in frequency;
- Future tropical cyclones (typhoons and hurricanes) will likely become more intense;
- Non-tropical storm tracks are projected to move poleward, with consequent changes in wind, precipitation, and temperature patterns. Increases in the amount of precipitation are very likely in high-latitudes, while decreases are likely in most subtropical regions; and
- Warming is expected to be greatest over land and at most high northern latitudes, and least over the Southern Ocean and parts of the North Atlantic Ocean.

Potential secondary effects from global warming include global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity.

Potential Effects of Climate Change on State of California

According to the CARB, some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years (CARB, 2006). Several recent studies have attempted to explore the possible negative consequences that climate change, left unchecked, could have in California. These reports acknowledge that climate scientists' understanding of the complex global climate system, and the interplay of the various internal and external factors that affect climate change, remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national level to evaluate climatic impacts, but far less information is available on regional and local impacts. In addition, projecting regional impacts of climate change and variability relies on large-scale scenarios of changing climate parameters, using information that is typically at too general a scale to make accurate regional assessments (Kiparsky, 2003).

Below is a summary of some of the potential effects reported in an array of studies that could be experienced in California as a result of global warming and climate change:

- **Air Quality.** Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. For other pollutants, the effects of climate change and/or weather are less well studied, and even less well understood (U.S. EPA, 2000). If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State (California Climate Change Center [CCCC], 2006).
- **Water Supply.** Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. For example, models that predict drier conditions (i.e., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke, et al., 2004). A July 2006 technical report prepared by the California Department of Water Resources (DWR) addresses the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta. Although the report projects that “[c]limate change will likely have a significant effect on California’s future water resources . . . [and] future water demand,” it also reports that “much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain. This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood (DWR, 2006).” DWR adds that “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future (DWR, 2006).” Still, changes in water supply are

expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky, 2003; Cayan et al., 2006). Water purveyors, such as the East Bay Municipal Utilities District (EBMUD), are required by state law to prepare Urban Water Management Plans (UWMPs) (discussed below, under Regulatory Context for Greenhouse Gas Emissions and Climate Change) that consider climatic variations and corresponding impacts on long-term water supplies (California Water Code, Section 10631[c]). DWR has published a 2005 SWP Delivery Reliability Report, which presents information from computer simulations of the SWP operations based on historical data over a 73-year period (1922–1994). The DWR notes that the results of those model studies “represent the best available assessment of the delivery capability of the SWP.” In addition, the DWR is continuing to update its studies and analysis of water supplies. EBMUD would incorporate this information from DWR in its update of its current UWMP 2005 (required every five years per the California Water Code), and information from the UWMP can be incorporated into Water Supply Assessments (WSAs) and Water Verifications prepared for certain development projects in accordance with California Water Code Section 10910, et seq. and California Government Code Section 66473.7, et seq. (See Section 4.14, *Utilities and Service Systems*, in this EIR for a discussion of the WSA.)

- **Hydrology.** As discussed above, climate change could potentially affect the following: the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes—expansion of sea water as the oceans warm and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could also jeopardize California’s water supply. In particular, saltwater intrusion would threaten the quality and reliability of the state’s major fresh water supply that is pumped from the southern portion of the Sacramento/San Joaquin River Delta. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.
- **Agriculture.** California has a \$30 billion agricultural industry that produces half the country’s fruits and vegetables. The CCCC notes that higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be threatened by a less reliable water supply, and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year that certain crops, such as wine grapes, bloom or ripen, and thus affect their quality (CCCC, 2006).
- **Ecosystems and Wildlife.** As noted in the City’s adopted Energy and Climate Action Plan, climate change is projected to impose significant ecological, health, economic and quality of life risks on Oakland, many of which are similar to those faced by other communities in the region and throughout the state. Projected local impacts of climate change include rising Bay and Delta waters: increased vulnerability to flood events; increased fire danger; greater frequency and intensity of heat events; added stress on infrastructure; significantly decreased snowpack in the Sierra Mountains (the source of most of Oakland’s potable water supply); higher prices for food and fuels; and other ecological and quality of life impacts. Current dependence on fossil fuels not only creates GHG emissions, but imposes other risks associated with energy security, environmental impacts (e.g., recent Gulf oil spill), and vulnerability to energy price volatility. These risks are magnified for

economically disadvantaged communities. Some impacts, such as minor sea level rise, are already starting to be observed.

The State Climate Action Team has predicted that sea levels may rise between 12 and 36 inches by the end of this century (California Climate Action Team, 2010). A set of climate scenarios prepared for the California Energy Commission project that mean sea level along the California coast could rise by as much as 4.5 feet by 2100 (CEC, 2009). According to maps produced by the Bay Conservation and Development Commission (BCDC) and Oakland-based Pacific Institute, many low-elevation areas of Oakland would be vulnerable to flood events under these scenarios (BCDC, 2011).

4.6.2 Regulatory Context for GHG Emissions and Climate Change

Global climate change is addressed through the efforts of various federal, State, regional, and local government agencies as well as national and international scientific and governmental conventions and programs. These agencies work jointly, as well as individually, to understand and regulate the effects of greenhouse gas emissions and resulting climate change through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies, conventions and programs focused on global climate change are discussed below.

International and Federal

Kyoto Protocol. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated five percent from 1990 levels during the first commitment period of 2008–2012. It should be noted that although the United States is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the United States is not bound by the Protocol’s commitments.

Copenhagen Summit. The 2009 United Nations Climate Change Conference, i.e., Copenhagen Summit, was held in Denmark in December 2009. The conference included the 15th Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change and the 5th Meeting of the Parties (COP/MOP 5) to the Kyoto Protocol. A framework for climate change mitigation beyond 2012 was to be agreed there. The Copenhagen Accord was drafted by the US, China, India, Brazil and South Africa on December 18, and judged a “meaningful agreement” by the United States government. It was “taken note of”, but not “adopted”, in a debate of all the participating countries the next day, and it was not passed unanimously. The document recognized that climate change is one of the greatest challenges of the present day and that actions should be taken to keep any temperature increases to below 2°C. The document is not legally binding and does not contain any legally binding commitments for reducing CO₂ emissions.

Climate Change Technology Program. The United States has opted for a voluntary and incentive-based approach toward emissions reductions in lieu of the Kyoto Protocol’s mandatory

framework. The Climate Change Technology Program (CCTP) is a multi-agency research and development coordination effort (which is led by the Secretaries of Energy and Commerce) that is charged with carrying out the President's National Climate Change Technology Initiative (CCTP, 2006).

U.S. Environmental Protection Agency (US EPA). The U.S. Supreme Court held that the United States Environmental Protection Agency (U.S. EPA) must consider regulation of motor vehicle GHG emissions. In *Massachusetts v. Environmental Protection Agency et al.*, 12 states and cities, including California, together with several environmental organizations, sued to require the U.S. EPA to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 (2007)). The Supreme Court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and the U.S. EPA had the authority to regulate GHGs.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- **Endangerment Finding:** The current and projected concentrations of the six key well-mixed GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

On September 22, 2009, the U.S. EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the U.S. EPA to develop "...mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy...." The Reporting Rule will apply to most entities that emit 25,000 metric tons of CO₂e or more per year. Starting in 2010, facility owners are required to submit an annual GHG emissions report with detailed calculations of facility GHG emissions. The Reporting Rule also mandates recordkeeping and administrative requirements in order for the U.S. EPA to verify annual GHG emissions reports.

State of California

AB 1493 and Amended "Pavley" Regulations. On July 1, 2002, the California Assembly passed Bill 1493 (AB 1493) (signed into law on July 22, 2002), requiring the CARB to "adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." The regulations were to be adopted by January 1, 2005, and apply to 2009 and later model-year vehicles. In September 2004, CARB responded by adopting "CO₂e fleet average emission" standards. The standards will be phased in from 2009 to 2016, reducing emissions by 22 percent in the "near term" (2009–2012) and 30 percent in the "mid term" (2013–2016), as compared to 2002 fleets.

Executive Order (E.O.) S-3-05. On June 1, 2005, Governor Arnold Schwarzenegger signed E.O. S-3-05, establishing statewide GHG emission reduction targets. This E.O. provides that by

2010, emissions shall be reduced to 2000 levels; by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent below 1990 levels. The Secretary of the California EPA is charged with coordinating oversight of efforts to meet these targets and formed the Climate Action Team (CAT) to carry out the E.O. Several of the programs developed by the CAT to meet the emission targets are relevant to residential construction and are outlined in a March 2006 report (California EPA, 2006). These include prohibition of idling of certain classes of construction vehicles, provision of recycling facilities within residential buildings and communities, compliance with the CEC's building and appliance energy efficiency standards, compliance with California's Green Buildings and Solar initiatives, and implementation of water-saving technologies and features.

AB 32. On August 31, 2006, the California Assembly passed Bill 32 (AB 32) (signed into law on September 27, 2006), the California Global Warming Solutions Act of 2006. AB 32 commits California to reduce GHG emissions to 1990 levels by 2020 and establishes a multi-year regulatory process under the jurisdiction of the CARB to establish regulations to achieve these goals. The regulations shall require monitoring and annual reporting of GHG emissions from selected sectors or categories of emitters of GHGs. By January 1, 2008, CARB was required to adopt a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. CARB has adopted numerous rules and regulations including the low carbon fuel standard, the renewable portfolio standard, and renewable electricity standard, among others which became operative prior to January 1, 2012, to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

On April 20, 2007, CARB published *Proposed Early Actions to Mitigate Climate Change in California* (California EPA, 2007a). There are no early action measures specific to residential development included in the list of 36 measures identified for CARB to pursue during calendar years 2007, 2008, and 2009. Also, this publication indicated that the issue of GHG emissions in CEQA and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions. As noted in that report, "AB 32 requires that all GHG reduction measures adopted and implemented by the Air Resources Board be technologically feasible and cost effective (California EPA, 2007a)." The law permits the use of market-based compliance mechanisms to achieve those reductions and also requires that GHG measures have neither negative impacts on conventional pollutant controls nor any disproportionate socioeconomic effects (among other criteria).

On December 11, 2008, CARB adopted its *Climate Change Scoping Plan* (Scoping Plan), which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations (CARB, 2008). The Scoping Plan contains the main strategies California will implement to reduce CO₂e emissions by 174 million metric tons (MMT), or approximately 30 percent, from the state's projected 2020 emissions level of 596 MMT of CO₂e under a business-as-usual scenario. The Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state's GHG inventory. While CARB has identified a GHG reduction target of 15 percent for local governments themselves, it has not yet determined what amount of GHG emissions reductions it recommends from local

government land use decisions. However, the Scoping Plan does state that successful implementation of the plan relies on local governments' land use planning and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The land use measures approved by CARB and required pursuant to Senate Bill 375 have been developed and are in the process of environmental review in 2013. The Scoping Plan also includes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately impact low-income and minority communities. These measures, shown below in **Table 4.6-2** by sector, also put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels.

California Senate Bill 1368 (SB 1368). On August 31, 2006, the California Senate passed SB 1368 (signed into law on September 29, 2006), which required the Public Utilities Commission (PUC) to develop and adopt a "greenhouse gases emission performance standard" by February 1, 2007, for the private electric utilities under its regulation. The PUC adopted an interim standard on January 25, 2007, but formally requested a delay until September 30, 2007, for the local publicly-owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities. The CEC adopted a consistent standard in August, 2007. (Natural Resources Defense Council [NRDC], 2007)

California Senate Bill 97 (SB 97). Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the Natural Resources Agency adopted the state CEQA Guidelines amendments, as required by SB 97. These state CEQA Guidelines amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

California Senate Bill 375 (SB 375). In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375, which provides for regional coordination in land use and transportation planning and funding to help meet the AB 32 GHG reduction goals. SB 375 aligns regional transportation planning efforts, regional GHG emissions reduction targets, and land use and housing allocations. SB 375 requires Regional Transportation Plans (RTPs) developed by the state's 18 metropolitan planning organizations (MPOs) to incorporate a "sustainable communities strategy" (SCS) that will achieve GHG emission reduction targets set by the CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects, such as transit-oriented development. SB 375 would be implemented over the next several years.

TABLE 4.6-2
LIST OF RECOMMENDED ACTIONS BY SECTOR IN THE CARB SCOPING PLAN

Measure No.	Measure Description	GHG Reductions (Annual MMT CO ₂ e)
Transportation		
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3 ^a	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. <ul style="list-style-type: none"> • Ship Electrification at Ports • System-Wide Efficiency Improvements 	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
Electricity and Natural Gas		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) <ul style="list-style-type: none"> • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) <ul style="list-style-type: none"> • Target of 3000 MW Total Installation by 2020 	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) <ul style="list-style-type: none"> • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs 	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
Green Buildings		
GB-1	Green Buildings	26
Water		
W-1	Water Use Efficiency	1.4†
W-2	Water Recycling	0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
Industry		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01

^a This is not the SB 375 regional target. CARB will establish regional targets for each MPO region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375

† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target

The Metropolitan Transportation Commission (MTC) is responsible for developing the SCS and the RTPs for the San Francisco Bay Area. MTC's 2013 RTP will be its first plan subject to SB 375 and is currently undergoing environmental review under CEQA.

California Urban Water Management Act. The California Urban Water Management Planning Act requires various water purveyors throughout the State of California (such as EBMUD) to prepare UWMPs, which assess the purveyor's water supplies and demands over a 20-year horizon (California Water Code, Section 10631 *et seq.*). As required by that statute, UWMPs are updated by the purveyors every five years. As discussed above, this is relevant to global climate change which may affect future water supplies in California, as conditions may become drier or wetter, affecting reservoir inflows and storage and increased river flows (Brekke, 2004).

Bay Area Air Quality Management District (BAAQMD). The BAAQMD is responsible for improving air quality within the San Francisco Bay Area Basin. The BAAQMD's prior CEQA Guidelines, which were last updated in 1999, contained no thresholds of significance for GHG emissions. In May of 2011 the BAAQMD adopted new Thresholds of Significance (2011 Thresholds). Subsequently, the Alameda Superior Court required the BAAQMD to conduct additional environmental review in connection with its adoption of the thresholds. The 2011 Thresholds of Significance of the BAAQMD identified a project-specific threshold of 1,100 metric tons per year, and an efficiency-based threshold of 4.6 metric tons per year per service population (residents and employees) as resulting in a cumulatively considerable contribution of GHG emission and a cumulatively significant impact to global climate change. The BAAQMD CEQA Guidelines also include a plan-level service threshold of 6.6 metric tons of CO₂e per service population annually. However, the plan-level approach described here differs for greenhouse gas (GHG) impact assessments. BAAQMD recommends that when assessing GHG impacts for plans other than regional plans (transportation and air quality plans) and general plans, such as specific plans and area plans, the appropriate thresholds and methodology is the same as project-level GHG impact assessments and should rely on the threshold of 4.6 metric tons per year per service population.

City of Oakland

Oakland Energy and Climate Action Plan

An Oakland Energy and Climate Action Plan (ECAP) has been developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP identifies energy and climate goals, clarifies policy direction, and identifies priority actions for reducing energy use and GHG emissions. On July 7, 2009, the Oakland City Council directed staff to develop the draft Oakland ECAP using a GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020 (City of Oakland, Resolution No. 82129 C.M.S., 2009). The City adopted the ECAP on December 4, 2012.

The ECAP outlines a ten year plan including more than 150 actions that will enable Oakland to achieve a 36% reduction in GHG emissions with respect to each of these GHG sources. Oakland can accomplish this goal by 2020 through:

- 20% reduction in vehicle miles traveled annually as residents, workers and visitors meet daily needs by walking, bicycling, and using transit;
- 24 million gallons of oil saved annually due to less driving and more fuel efficient vehicles on local roads
- 32% decrease in electricity consumption through renewable generation, conservation and energy efficiency
- 14% decrease in natural gas consumption through building retrofits, solar hot water projects and conservation
- 62 million kWh and 2.7 million therms annually of new renewable energy used to meet local needs
- 375,000 tons of waste diverted away from local landfills through waste reduction, reuse, recycling, and composting

The ECAP also recommends a Three Year Priority Implementation Plan; a prioritized subset of actions recommended for implementation in the next three years. These priority actions will capitalize on near term opportunities and lay the groundwork for long term progress. Some of the recommended priority actions can be implemented with existing and anticipated resources. Others will require the identification of new, in some cases significant, resources to move forward.

The following Priority Actions of the ECAP apply to the Plan Area/and or proposed Specific Plan:

- PA1: Identify and Adopt Priority Development Area (PDA). The Plan area is designated by the City and in the Sustainable Communities Strategy pursuant to SB375 as an identified PDA.
- PA7: Adopt a Green Building Ordinance for Private Development. This was adopted in 2011 as discussed later in this section.
- PA31: Improve Transportation and land Use Planning Integration in Every Land Use Effort. The proposed Specific Plan area is located in a transit corridor with both active AC Transit Service and BART service within the Plan area.
- PA37: Plan for Electric Vehicle Infrastructure.
- PA46: Consider Energy Benchmarking for Commercial Buildings.
- PA50: Facilitate Community Solar Programs.

City of Oakland General Plan

Land Use and Transportation Element (LUTE). The LUTE (which includes the Pedestrian Master Plan and Bicycle Master Plan) of the Oakland General Plan contains the following policies that address issues related to GHG emissions and climate change:

- ***Policy T.2.1:*** Transit-oriented development should be encouraged at existing or proposed transit nodes, defined by the convergence of two or more modes of public transit such as BART, bus, shuttle service, light rail or electric trolley, ferry, and inter-city or commuter rail.

- **Policy T.2.2:** Transit-oriented developments should be pedestrian-oriented, encourage night and day time use, provide the neighborhood with needed goods and services, contain a mix of land uses, and be designed to be compatible with the character of surrounding neighborhoods.
- **Policy T3.5:** The City should include bikeways and pedestrian ways in the planning of new, reconstructed, or realigned streets, wherever possible.
- **Policy T3.6:** The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated “transit streets” as shown on the Transportation Plan.
- **Policy T4.2:** Through cooperation with other agencies, the City should create incentives to encourage travelers to use alternative transportation options.
- **Policy N3.2:** In order to facilitate the construction of needed housing units, infill development that is consistent with the General Plan should take place throughout the City of Oakland.
- **Policy T4.5:** The City should prepare, adopt, and implement a Bicycle and Pedestrian Master Plan as a part of the Transportation Element of [the] General Plan.

Open Space, Conservation and Recreation Element (OSCAR). The OSCAR Element includes policies that address GHG reduction and global climate change. Listed below are the following types of OSCAR policies: policies that encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO₂; policies that encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and policies that encourage energy efficiency and use of alternative energy sources, which directly address reducing GHG emissions.

- **Policy OS-1.1:** Conserve existing City and Regional Parks characterized by steep slopes, large groundwater recharge areas, native plant and animal communities, extreme fire hazards, or similar conditions.
- **Policy OS-2.1:** Manage Oakland’s urban parks to protect and enhance their open space character while accommodating a wide range of outdoor recreational activities.
- **Policy CO-5.3:** Employ a broad range of strategies, compatible with the Alameda Countywide Clean Water Program.
- **Policy CO-12.1:** Promote land use patterns and densities which help improve regional air quality conditions by: (a) minimizing dependence on single passenger autos; (b) promoting projects which minimize quick auto starts and stops, such as live-work development, mixed use development, and office development with ground floor retail space; (c) separating land uses which are sensitive to pollution from the sources of air pollution; and (d) supporting telecommuting, flexible work hours, and behavioral changes which reduce the percentage of people in Oakland who must drive to work on a daily basis.
- **Policy CO-12.3:** Expand existing transportation systems management and transportation demand management strategies which reduce congestion, vehicle idling, and travel in single passenger autos.

- **Policy CO-12.4:** Require that development projects be designed in a manner which reduces potential adverse air quality impacts. This may include: (a) the use of vegetation and landscaping to absorb carbon monoxide and to buffer sensitive receptors; (b) the use of low-polluting energy sources and energy conservation measures; and (c) designs which encourage transit use and facilitate bicycle and pedestrian travel.
- **Policy CO-12.5:** Require new industry to use best available control technology to remove pollutants, including filtering, washing, or electrostatic treatment of emissions.
- **Policy CO-13.2:** Support public information campaigns, energy audits, the use of energy-saving appliances and vehicles, and other efforts which help Oakland residents, businesses, and City operations become more energy efficient.
- **Policy CO-13.3:** Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
- **Policy CO-13.4:** Accommodate the development and use of alternative energy resources, including solar energy and technologies which convert waste or industrial byproducts to energy, provided that such activities are compatible with surrounding land uses and regional air and water quality requirements.

Historic Preservation Element (HPE). A key HPE policy relevant to climate change encourages the reuse of existing building (and building materials) resources, which could reduce landfill material (a source of methane, a GHG), avoid the incineration of materials (which produces CO₂ as a by-product), avoid the need to transport materials to disposal sites (which produces GHG emissions), and eliminate the need for materials to be replaced by new product (which often requires the use of fossil fuels to obtain raw and manufacture new material) (USEPA, 2006a).

Safety Element. Safety Element policies that address wildfire hazards related to climate change in that increased temperatures could increase fire risk in areas that become drier due to climate change (USEPA, 2012). Also, wildfire results in the loss of vegetation; carbon is stored in vegetation, and when the vegetation burns, the carbon returns to the atmosphere (NASA, 2004). The occurrence of wildfire also emits particulate matters into the atmosphere. Safety Element policies also address storm-induced flooding hazards related to the potential to accommodate potential increase in storms and flooding as a result of climate change. Pertinent Safety Element policies including the following:

- **Policy FI-3:** Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.
- **Policy FL-1:** Enforce and update local ordinances and comply with regional orders that would reduce the risk of storm-induced flooding.
- **Policy FL-2:** Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

Other City of Oakland Programs and Policies

The City of Oakland has supported and adopted a number of programs and policies designed to reduce GHG emissions and continue Oakland's progress toward becoming a model sustainable

city. Other programs and policies of relevance to the adoption and development under the Specific Plan include:

- ***Sustainable Oakland Program.*** Oakland's sustainability efforts are coordinated through the Sustainable Oakland program, a product of the Oakland Sustainability Community Development Initiative (SDI) created in 1998 (Ordinance 74678 C.M.S.).
- ***Green Building.*** The City of Oakland adopted mandatory green building standards for private development projects on October 19, 2010 (13040 C.M.S.). The following project types are included in the green building ordinance:
 - Residential New Construction
 - Residential Additions and Alterations
 - Non-Residential New Construction
 - Non-Residential Additions and Alterations
 - Removal of a Historic Resource and New Construction
 - Historic Residential Additions and Alterations
 - Historic Non-Residential Additions and Alterations
 - Mixed Use Construction
 - Construction Requiring a Landscape Plan

All buildings or projects must comply with all requirements of the 2008 California Building Energy Efficiency Standards as well as meet a variety of checklist requirements.

- ***Downtown Housing.*** The 10K Downtown Housing Initiative has a goal of attracting 10,000 new residents to downtown Oakland by encouraging the development of 6,000 market-rate housing units. This effort is consistent with Smart Growth principles.
- ***Waste Reduction and Recycling.*** The City of Oakland has implemented a residential recycling program increasing collection of yard trimmings and food waste. This program has increased total yard trimming collections by 46 percent compared to 2004, and recycling tonnage by 37 percent. The City also adopted Construction and Demolition Recycling, for which the City passed a resolution in July 2000 (Ordinance 12253. OMC Chapter 15.34), requiring certain nonresidential or apartment house projects to recycle 100 percent of all Asphalt & Concrete (A/C) materials and 65 percent of all other materials.
- ***Polystyrene Foam Ban Ordinance.*** In June 2006 the Oakland City Council passed the Green Food Service Ware Ordinance (Ordinance 14727, effective as of January 1, 2007), which prohibits the use of polystyrene foam disposable food service ware and requires, when cost neutral, the use of biodegradable or compostable disposable food service ware by food vendors and City facilities.
- ***Zero Waste Resolution.*** In March 2006, the Oakland City Council adopted a Zero Waste Goal by 2020 Resolution (Resolution 79774 C.M.S.), and commissioned the creation of a Zero Waste Strategic Plan to achieve the goal.
- ***Stormwater Management.*** On February 19, 2003, the Regional Water Quality Control Board, San Francisco Bay Region, issued a municipal stormwater permit under the National Pollutant Discharge Elimination System (NPDES) permit program to the Alameda Countywide Clean Water Program (ACCWP). The purpose of the permit is to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to effectively

prohibit non-stormwater discharges into municipal storm drain systems and watercourses. The City of Oakland, as a member of the ACCWP, is a co-permittee under the ACCWP's permit and is, therefore, subject to the permit requirements.

- ***Provision C.3 of the NPDES permit*** is the section of the permit containing stormwater pollution management requirements for new development and redevelopment projects. Among other things, Provision C.3 requires that certain new development and redevelopment projects incorporate post-construction stormwater pollution management measures, including stormwater treatment measures, stormwater site design measures, and source control measures, to reduce stormwater pollution after the construction of the project. These requirements are in addition to standard stormwater-related best management practices (BMPs) required during construction.
- ***Community Gardens and Farmer's Markets.*** Community Garden locations include Arroyo Viejo, Bella Vista, Bushrod, Golden Gate, Lakeside Horticultural Center, Marston Campbell, Temescal, and Verdesa Carter. Weekly Farmer's Markets locations include the Jack London Square, Old Oakland, Grand Lake, Mandela, and Temescal districts. Both efforts promote and facilitate the principal of growing and purchasing locally, which effects reductions in truck and vehicle use and GHG emissions.

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

The City's Standard Conditions of Approval (SCA) that directly pertain to greenhouse gases and that apply to the adoption and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the development under the Specific Plan to help ensure no significant impacts occur regarding construction period dust (or emissions). The SCA are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures.

- **SCA F: Greenhouse Gas (GHG) Reduction Plan**

Prior to issuance of a construction-related permit and ongoing as specified. The project applicant shall retain a qualified air quality consultant to develop a Greenhouse Gas (GHG) Reduction Plan for City review and approval. The applicant shall implement the approved GHG Reduction Plan.

The goal of the GHG Reduction Plan shall be to increase energy efficiency and reduce GHG emissions to below at least one of the City of Oakland's CEQA Thresholds of Significance (1,100 metric tons of CO₂e per year or 4.6 metric tons of CO₂e per year per service population) AND to reduce GHG emissions by 36 percent below the project's "adjusted" baseline GHG emissions (as explained below) to help achieve the City's goal of reducing GHG emissions. The GHG Reduction Plan shall include, at a minimum, (a) a detailed GHG emissions inventory for the project under a "business-as-usual" scenario with no consideration of project design features, or other energy efficiencies, (b) an "adjusted" baseline GHG emissions inventory for the project, taking into consideration energy efficiencies included as part of the project (including the City's Standard Conditions of Approval, proposed mitigation measures, project design features, and other City requirements), (c) a comprehensive set of quantified additional GHG reduction measures available to further reduce GHG emissions beyond the adjusted GHG emissions, and (d) requirements for ongoing monitoring and reporting to demonstrate that the additional

GHG reduction measures are being implemented. If the project is to be constructed in phases, the GHG Reduction Plan shall provide GHG emission scenarios by phase.

Specifically, the applicant/sponsor shall adhere to the following:

- a) *GHG Reduction Measures Program.* Prepare and submit to the City Planning Director or his/her designee for review and approval a GHG Reduction Plan that specifies and quantifies GHG reduction measures that the project will implement by phase.

Potential GHG reduction measures to be considered include, but are not be limited to, measures recommended in BAAQMD's latest CEQA Air Quality Guidelines, the California Air Resources Board Scoping Plan (December 2008, as may be revised), the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures Document (August 2010, as may be revised), the California Attorney General's website, and Reference Guides on Leadership in Energy and Environmental Design (LEED) published by the U.S. Green Building Council.

The proposed GHG reduction measures must be reviewed and approved by the City Planning Director or his/her designee. The types of allowable GHG reduction measures include the following (listed in order of City preference): (1) physical design features; (2) operational features; and (3) the payment of fees to fund GHG-reducing programs (i.e., the purchase of "offset carbon credits," pursuant to item "b" below).

The allowable locations of the GHG reduction measures include the following (listed in order of City preference): (1) the project site; (2) off-site within the City of Oakland; (3) off-site within the San Francisco Bay Area Air Basin; (4) off-site within the State of California; then (5) elsewhere in the United States.

- b) *Offset Carbon Credits Guidelines.* For GHG reduction measures involving the purchase of offset carbon credits, evidence of the payment/purchase shall be submitted to the City Planning Director or his/her designee for review and approval prior to completion of the project (or prior to completion of the project phase, if the project includes more one phase).

As with preferred locations for the implementation of all GHG reductions measures, the preference for offset carbon credit purchases include those that can be achieved as follows (listed in order of City preference): (1) within the City of Oakland; (2) within the San Francisco Bay Area Air Basin; (3) within the State of California; then (4) elsewhere in the United States. The cost of offset carbon credit purchases shall be based on current market value at the time purchased and shall be based on the Project's operational emissions estimated in the GHG Reduction Plan or subsequent approved emissions inventory, which may result in emissions that are higher or lower than those estimated in the GHG Reduction Plan.

- c) *Plan Implementation and Documentation.* For physical GHG reduction measures to be incorporated into the design of the project, the measures shall be included on the drawings submitted for construction-related permits. For operational GHG reduction measures to be incorporated into the project, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of project completion (or at the completion of the project phase for phased projects).

For physical GHG reduction measures to be incorporated into off-site projects, the measures shall be included on drawings and submitted to the City Planning Director or his/her designee for review and approval and then installed prior to completion of the subject project (or prior to completion of the project phase for phased projects). For operational GHG reduction measures to be incorporated into off-site projects, the measures shall be implemented on an indefinite and ongoing basis beginning at the time of completion of the subject project (or at the completion of the project phase for phased projects).

- d) *Compliance, Monitoring and Reporting.* Upon City review and approval of the GHG Reduction Plan program by phase, the applicant/sponsor shall satisfy the following requirements for ongoing monitoring and reporting to demonstrate that the additional GHG reduction measures are being implemented. The GHG Reduction Plan requires regular periodic evaluation over the life of the Project (generally estimated to be at least 40 years) to determine how the Plan is achieving required GHG emissions reductions over time, as well as the efficacy of the specific additional GHG reduction measures identified in the Plan.

Implementation of the GHG reduction measures and related requirements shall be ensured through the project applicant/sponsor's compliance with Conditions of Approval adopted for the project. Generally, starting two years after the City issues the first Certificate of Occupancy for the project, the project applicant/sponsor shall prepare each year of the useful life of the project an Annual GHG Emissions Reduction Report (Annual Report), subject to the City Planning Director or his/her designee for review and approval. The Annual Report shall be submitted to an independent reviewer of the City Planning Director's or his/her designee's choosing, to be paid for by the project applicant/sponsor (see Funding, below), within two months of the anniversary of the Certificate of Occupancy.

The Annual Report shall summarize the project's implementation of GHG reduction measures over the preceding year, intended upcoming changes, compliance with the conditions of the Plan, and include a brief summary of the previous year's Annual Report results (starting the second year). The Annual Report shall include a comparison of annual project emissions to the baseline emissions reported in the GHG Plan.

The GHG Reduction Plan shall be considered fully attained when project emissions are less than either applicable numeric BAAQMD CEQA Thresholds AND GHG emissions are 36 percent below the project's "adjusted" baseline GHG emissions, as confirmed by the City Planning Director or his/her designee through an established monitoring program. Monitoring and reporting activities will continue at the City's discretion, as discussed below.

- e) *Funding.* Within two months after the Certificate of Occupancy, the project applicant/sponsor shall fund an escrow-type account or endowment fund to be used exclusively for preparation of Annual Reports and review and evaluation by the City Planning Director or his/her designee, or its selected peer reviewers. The escrow-type account shall be initially funded by the project applicant/sponsor in an amount determined by the City Planning Director or his/her designee and shall be replenished by the project applicant/sponsor so that the amount does not fall below an amount determined by the City Planning Director or his/her designee. The mechanism of this account shall be mutually agreed upon by the project applicant/sponsor and the City Planning Director or his/her designee, including the ability of the City to access the

funds if the project applicant/sponsor is not complying with the GHG Reduction Plan requirements, and/or to reimburse the City for its monitoring and enforcement costs.

- f) *Corrective Procedure.* If the third Annual Report, or any report thereafter, indicates that, in spite of the implementation of the GHG Reduction Plan, the project is not achieving the GHG reduction goal, the project applicant/sponsor shall prepare a report for City review and approval, which proposes additional or revised GHG measures to better achieve the GHG emissions reduction goals, including without limitation, a discussion on the feasibility and effectiveness of the menu of other additional measures (Corrective GHG Action Plan). The project applicant/sponsor shall then implement the approved Corrective GHG Action Plan.

If, one year after the Corrective GHG Action Plan is implemented, the required GHG emissions reduction target is still not being achieved, or if the project applicant/owner fails to submit a report at the times described above, or if the reports do not meet City requirements outlined above, the City Planning Director or his/her designee may, in addition to its other remedies, (a) assess the project applicant/sponsor a financial penalty based upon actual percentage reduction in GHG emissions as compared to the percent reduction in GHG emissions established in the GHG Reduction Plan; or (b) refer the matter to the City Planning Commission for scheduling of a compliance hearing to determine whether the project's approvals should be revoked, altered or additional conditions of approval imposed.

The penalty as described in (a) above shall be determined by the City Planning Director or his/her designee and be commensurate with the percentage GHG emissions reduction not achieved (compared to the applicable numeric significance thresholds) or required percentage reduction from the "adjusted" baseline.

In determining whether a financial penalty or other remedy is appropriate, the City shall not impose a penalty if the project applicant/sponsor has made a good faith effort to comply with the GHG Reduction Plan.

The City would only have the ability to impose a monetary penalty after a reasonable cure period and in accordance with the enforcement process outlined in Planning Code Chapter 17.152. If a financial penalty is imposed, such penalty sums shall be used by the City solely toward the implementation of the GHG Reduction Plan.

- g) *Timeline Discretion and Summary.* The City Planning Director or his/her designee shall have the discretion to reasonably modify the timing of reporting, with reasonable notice and opportunity to comment by the applicant, to coincide with other related monitoring and reporting required for the project.
- Fund Escrow-type Account for City Review: Certificate of Occupancy plus 2 months
 - Submit Baseline Inventory of "Actual Adjusted Emissions": Certificate of Occupancy plus 1 year
 - Submit Annual Report #1: Certificate of Occupancy plus 2 years
 - Submit Corrective GHG Action Plan (if needed): Certificate of Occupancy plus 4 years (based on findings of Annual Report #3)
 - Post Attainment Annual Reports: Minimum every 3 years and at the City Planning Director's or his/her designee's reasonable discretion

In addition, other SCA that pertain to greenhouse gases and that apply to the adoption and development under the Specific Plan are listed in other sections of this EIR and described below.

4.6.3 Impacts and Mitigation Measures

Significance Thresholds for GHG and Climate Change

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, specifically:

- a) For a project involving a land use development, produce total emissions of more than 1,100 metric tons of CO₂e annually **AND** more than 4.6⁴ metric tons of CO₂e per service population annually. The service population includes both the residents and the employees of the project. The project's impact would be considered significant if the emissions exceed **BOTH** the 1,100 metric tons threshold and the 4.6 metric tons threshold. Accordingly, the impact would be considered less than significant if the project's emissions are below **EITHER** of these thresholds.
- b) Fundamentally conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing greenhouse gas emissions.

Approach to CEQA Analysis of GHG Emissions and Climate Change Impacts in this EIR

The analysis of potential GHG impacts uses the project-level methodology identified by the BAAQMD, the regional agency primarily responsible for developing air quality plans for the Bay Area, including the City of Oakland. This methodology is outlined in the BAAQMD document *California Environmental Quality Act Air Quality Guidelines* (BAAQMD, 2012). This hybrid of a project-level and plan-level analysis considers individual construction and operational emissions from development projects envisioned under the Plan and, consistent with BAAQMD's Air Quality Guidelines, represents adequate environmental analysis under CEQA for individual development projects envisioned under the Specific Plan.

This EIR does discuss, for consideration by decision makers, estimated GHG emissions from adoption and development under the Specific Plan. Because details of subsequent development projects are not known, project design features that would avoid or minimize those emissions are not estimated.

CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under

⁴ The 2011 BAAQMD Guidelines state that the plan-level service threshold of 6.6 metric tons of CO₂e per service population annually should only be applied to general plans. For other types of plans, such as redevelopment plans and specific Plans, the Guidelines state that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used.

CEQA. However, this EIR nevertheless analyzes potential effects of “the environment on the project” in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

Quantitative and Qualitative Approach

This EIR uses both a quantitative and a qualitative approach. The quantitative approach is used to answer the first threshold: would adoption and development under the Specific Plan generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. The quantitative threshold discussed above is used to determine if this threshold is met.

The qualitative approach addresses the second threshold: would adoption and development under the Specific Plan conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Theoretically, if a project implements reduction strategies identified in AB 32, the Governor’s E.O. Section-3-05, or other strategies to help toward reducing GHGs to the level proposed by the Governor and targeted by the City of Oakland, it could reasonably follow that the project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Alternatively, a project could reduce a potential cumulative contribution to GHG emissions through energy efficiency features, density and locale (e.g., compact development near transit and activity nodes of work or shopping) and by contributing to available mitigation programs, such as reforestation, tree planting, or carbon trading.

GHG emissions resulting from the adoption and development under the Specific Plan were estimated using the CalEEMod emissions estimator Model version 2011.1.1, the latest version available at the time of the NOP. Vehicle trips assumed a BAAQMD-specific average vehicle trip distance of 12.7 miles which is embedded in CalEEMod which also makes adjustments for implementation of Pavley vehicle standards and Low Carbon Fuel Standards.

Adoption and development under the Specific Plan would generate GHG emissions from an increase in both stationary sources and mobile sources. Although specific characteristics of future projects under the Specific Plan are not known at this time, area and indirect sources associated with adoption and development under the Specific Plan would primarily result from electrical usage, water and wastewater transport and solid waste generation. GHG emissions from electrical usage are generated when energy consumed on the site is generated by fuel combustion. GHG emissions from water and wastewater transport are also indirect emissions resulting from the energy required to transport water from its source, and the energy required to treat wastewater and transport it to its treated discharge point. Solid waste emissions are generated when the increased waste generated by the project are taken to a landfill to decompose. GHG emissions from electrical usage, water and wastewater conveyance, and solid waste were estimated using CalEEMod.

Net Change in Emissions and Local/Global Context

The methodology applied in this EIR assumes that all emission sources associated with adoption and development under the Specific Plan would be new sources that would combine with existing conditions. For this assessment, it is not possible to predict whether emission sources associated with the adoption and development under the Specific Plan would move from outside the air basin (and thus generate “new” emissions within the air basin), or whether they are sources that already exist and are merely relocated within the air basin. Because the effects of GHGs are global, if the project merely shifts the location of the GHG-emitting activities (locations of residences and businesses and where people drive), there would not be a net new increase of emissions. It also cannot be determined until buildout of the Broadway Valdez Development Program whether occupants of the future projects would have shorter commute distances, require fewer vehicle trips, walk, bike, or use public transit more often, instead of driving, or use overall less energy by virtue of the development’s characteristics or proximity to workers’ housing. If these types of changes occur, overall vehicle miles traveled could be reduced and it could be argued that the adoption and development under the Specific Plan would result in a potential net reduction in GHG emissions, locally and globally.

The GHG analysis presented herein takes into account growth and increased vehicle travel within the regional context, which is the regional air basin and cumulative development, as described in Section 4.07.2, *Cumulative Context*, in the beginning of Chapter 4 in this Draft EIR. Therefore, there is no separate cumulative analysis section with regard to GHG emissions and consistency with related plans.

GHG Effects on Flooding and Sea-level Rise

Since a portion of the Plan Area is located in an area that may be subject to coastal or other flooding resulting from climate change, (the nearest coastal shoreline is along the Oakland Estuary) the potential effects of climate change (e.g., effects of flooding on the Plan Area due to sea level rise) on the Specific Plan are discussed in Section 4.8, *Hydrology and Water Quality*, of this EIR.

Impacts

Impact GHG-1: Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO_{2e} per year, that would exceed 4.6 metric tons of CO_{2e} per service population annually (Criterion 1). (Conservatively Significant and Unavoidable)

Construction and operation of adoption and development under the Specific Plan would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during operation. Typically more than 80 percent of the total energy consumption takes place during the use of buildings and less than 20 percent are consumed during construction (United Nations Environmental Programme [UNEP], 2007). Overall, the following activities associated with adoption and development under the Specific Plan (as well as any similar land use development) could contribute to the generation of GHG emissions:

- **Motor Vehicle Use.** Transportation associated with adoption and development under the Specific Plan would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.
- **Gas, Electric and Water Use.** Natural gas use results in the emissions of two GHGs: methane (the major component of natural gas) and carbon dioxide from the combustion of natural gas. Methane is released prior to initiation of combustion of the natural gas (as before a flame on a stove is sparked), and from the small amount of methane that is uncombusted in a natural gas flame. Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy intensive (CEC, 2005).
- **Removal of Vegetation.** The net removal of vegetation for construction results in a loss of the carbon sequestration in plants. However, planting of additional vegetation would result in additional carbon sequestration and lower the carbon footprint of a project. (See City's Standard Conditions of Approval regarding *Landscape Requirements and Tree Replacement*, below).
- **Construction Activities.** Construction equipment typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as carbon dioxide, methane and nitrous oxide. Furthermore, methane is emitted during the fueling of heavy equipment.

While adoption and development under the Specific Plan would generate GHG emissions from the activities described above, the City of Oakland's ongoing implementation of its Sustainability Community Development Initiative (which includes an array of programs and measures, discussed above, under Section 4.6.2, *Regulatory Context for GHG Emissions and Climate Change*) would collectively reduce the levels of GHG emissions and contributions to global climate change attributable to activities throughout Oakland.

GHG Emission Inventory for Development Under the Specific Plan

Emissions included in the BAAQMD Guidelines, and therefore included in the adjusted GHG emissions inventory for the development under Specific Plan, if applicable, are described below (and quantified in **Table 4.6-3**):

- **Area Source Emissions.** These are direct emissions from sources that include natural gas combustion for heating, cooking, fireplaces, or boilers, as well as emissions from landscape maintenance equipment.
- **Transportation Emissions.** These are direct emissions from mobile sources including automobiles, trucks, motorcycles, and buses.
- **Operational Electricity Consumption.** These are indirect emissions emitted off-site via non-renewable, non-nuclear electricity generators as a result of increased electrical demand.
- **Solid Waste Disposal Emissions.** These are indirect emissions associated with waste generation. A large percentage of project waste would be diverted from landfills by waste reduction, recycling, and composting. Oakland currently diverts a large portion of its waste and has goals to even further reduce the amount of waste sent to a landfill. The remainder of the waste not diverted would be disposed of at a landfill. Landfills emit anthropogenic methane from the anaerobic breakdown of material.

TABLE 4.6-3
GHG EMISSIONS INVENTORY FROM DEVELOPMENT UNDER THE SPECIFIC PLAN –
“BUSINESS AS USUAL” AND ADJUSTED^a

Emission Source	Total “Business as Usual” Annual CO₂e Emissions (metric tons per year)	Total Regulatory Adjusted Annual CO₂e Emissions (metric tons per year)	Total City Program Adjusted Annual CO₂e Emissions (metric tons per year)^e
Motor vehicle trips	39,333	27,146	24,431
Natural gas ^b	2,608	2,608	2,384
Grid Electricity ^b	9,156	4,171	4,039
Wastewater & Treatment & Conveyance	937	576	477
Solid Waste	2,858	2,858	2,858
Area Source (landscape maintenance)	363	363	363
Total Operational Project GHG Emissions without Construction Emissions	55,256	37,722	34,552
Construction Emissions per Year (annualized over 40 years)	394	394	394
Total Operational Project GHG Emissions with Construction Emissions	55,650	38,116	34,946
<i>Project- and Plan-level Threshold of Significance</i>	<i>1,100</i>	<i>1,100</i>	<i>1,100</i>
<i>Exceeds Threshold?</i>	Yes	Yes	Yes
Total Project GHG Emissions by Service Population (3,230 population increase and 4,505 employee increase = 7,735) including Construction Emissions^c	7.2	4.9	4.5
<i>Project-level Threshold of Significance^d</i>	<i>4.6</i>	<i>4.6</i>	<i>4.6</i>
<i>Exceeds Project-level Threshold?</i>	Yes	Yes	No
<i>Plan-level Threshold of Significance^d</i>	<i>6.6</i>	<i>6.6</i>	<i>6.6</i>
<i>Exceeds Plan-level Threshold?</i>	Yes	No	No

^a “Business as Usual” emissions primarily represent emission levels without implementation of post-AB32 regulatory efforts to control GHGs, such as the Pavley fuel efficiency standards and the low carbon fuel standard. These vehicle emissions-related standards are reflected in the adjusted emissions, which also consider energy efficiency measures (affecting natural gas and electricity) from the AB 32 Scoping Plan. This analysis is conservative in that additional potential reductions from implementing applicable City SCAs, policies and local programs that may substantially reduce the adjusted emissions (e.g. GHG Reduction Plan, Transportation Demand Management Plan, Green Building compliance, etc) are not incorporated, as reductions would vary widely depending on the specific characteristics (which can not currently be known) of the development under the Specific Plan.

^b Adjusted emissions reductions reflect AB 32 Scoping Plan Measures for energy efficiency that result in improved PG&E emission factors.

^c Total operational and construction GHG emissions, divided by estimated population of 7,735 (3,230 residents and 4,505 employees) associated with adoption and development under the Specific Plan.

^d The BAAQMD Guidelines state that the plan-level service threshold of 6.6 metric tons of CO₂e per service population annually should only be applied to general plans. For other types of plans, such as redevelopment plans and specific Plans, the Guidelines state that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used.

^e City Program Adjusted Annual Co₂e emissions were estimated by assuming a 10 percent reduction in motor vehicle trips through implementation of SCA 25 and implementation of the City’s Green Building Ordinance. While implementation of SCA 25 and the City’s Green building Ordinance would be required of future development according to the specific applicability criteria, and GHG emissions would be reduced through project-by-project implementation of these measures; and while the reductions reflected in this table represent reasonable estimates, it cannot be guaranteed that the specific reductions can be achieved. For this reason, the “Total City Program Adjusted” scenario is included here for informational purposes alone and the annual GHG emissions estimated under the “Total Regulatory Adjusted” scenario form the basis of this EIR analysis.

- ***Operational Fugitive (Direct) Emissions.*** These direct emissions are most commonly associated with inadvertent emissions into the atmosphere due to leakage or inherent imperfections in a gas transport or collection system. Direct fugitive GHG emissions that may reasonably be expected to be generated by commercial buildings would consist of GHG refrigerants emitted from leaks or other imperfections in refrigeration or air cooling equipment.
- ***Operational Water Emissions (embedded energy).*** These indirect emissions are associated with the electricity used to convey water, due to increased water demand from adoption and development under the Specific Plan.
- ***Operational Wastewater (non-biogenic).*** These are indirect emissions from wastewater treatment associated with the electricity use in wastewater treatment (and not the biogenic CO₂ process emissions).

Emission sources that are not included in the BAAQMD Guidelines or relevant to the adoption and development under the Specific Plan are not included in the adjusted GHG emissions inventory. These sources include emissions generated from permitted stationary source equipment, vegetation sequestration change, fugitive refrigeration emissions, life cycle emissions, agricultural emissions; and off road equipment emissions.

City Standard Conditions of Approval, Regulatory Requirements, General Plan Policies and Local Programs, and Design Features that Reduce GHG Emissions of Adoption and Development under the Specific Plan

There are many ways for adoption and development under the Specific Plan to reduce its GHG emissions through its design, construction and operations. Local conditions of approval, policies, programs and regulatory requirements that apply to a project also combine to reduce project GHG emissions. Each of these components would be considered part of each future project under the Specific Plan, as applicable. Table 4.6-3, above, also present the adjusted emissions estimated for the analysis of the adoption and development under the Specific Plan that incorporates potential reductions that may occur from implementing local conditions of approval, policies, programs and regulatory requirements (e.g., GHG Emissions Reduction Plan, Transportation Demand Management [TDM] Plan, Green Building Compliance, etc.). The adjusted emissions also reflect regulatory efforts to control GHGs, such as the statewide Pavley fuel efficiency standard, the low carbon fuel standard, and energy efficiency measures for electricity and natural gas specified in the AB 32 Scoping Plan. These reductions also support a conservative analysis since the AB 32 reductions are based on a benchmark year of 2020, and the analysis in this EIR has a benchmark year 2035, and further reductions would likely accrue in the additional 15 years beyond 2020. Each of the considerations factored in the adjusted emissions inventory in Table 4.6-3 is discussed below.

The SCA relevant to reducing GHG emissions and climate change impacts due to the adoption and development under the Specific Plan are described below and listed either above or in other sections of this EIR.

- **SCA F: GHG Reduction Plan**

SCA F applies to projects of a certain minimum size that produce total GHG emissions that exceed one both of the BAAQMD CEQA Thresholds (1,100 metric tons of CO₂e annually

or 4.6 metric tons of CO₂e per service population annually), and therefore result in a significant impact requiring mitigation. SCA F requires a project applicant to prepare a GHG Reduction Plan to increase energy efficiency and reduce GHG emissions to the greatest extent feasible below the BAAQMD CEQA Thresholds. The GHG Reduction Plan will include a comprehensive set of quantified GHG emissions reduction measures in addition to energy efficiencies included as part of the project (including the City's SCAs, proposed mitigation measures, project design features, and other City requirements). The complete text of SCA F is presented in the *Regulatory Context*, above.

- **SCA H: Green Building for Residential Structures and Non-residential Structures**

SCA H applies to certain projects that would construct single or multi-family dwellings or modifications of existing uses. SCA H requires that the applicant comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance. SCA H is initially presented in Section 4.14, *Utilities and Service Systems*. The Green Building Ordinance establishes checklist requirements for developers based on LEED or Build it Green. LEED certification requires a 10 percent reduction in the Title 24 energy standards which are reflected in Table 4.6-3.

- **SCA I: Green Building for Building and Landscape Projects**

SCA I applies to certain projects that would construct relatively small non-residential land uses or modification of existing uses. SCA I requires that the applicant comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance. SCA I is initially presented in Section 4.14, *Utilities and Service Systems*. The City Program adjusted emissions in Table 4.6-3 reflect GHG savings from application of CALgreen mandatory measures.

- **SCA 25: Parking and Transportation Demand Management**

SCA 25 requires a project applicant to submit for review and approval by the City of Oakland Planning and Zoning Division a Transportation Demand Management (TDM) Plan containing strategies to reduce on-site parking demand and single occupancy vehicle (SOV) travel. Generally the TDM Plan could reduce SOV trips for projects located near transit by about 10 to 20 percent, depending on the specific land use. Certain future projects under the Specific Plan would be required to prepare a TDM Plan and incorporate the resulting reduced emissions (from reduced vehicle trips) into the project's GHG emissions calculations. SCA 25 is initially presented in Section 4.13, *Transportation and Circulation*. The City Program adjusted emissions in Table 4.6-3 reflect GHG savings from a 10 percent trip reduction in vehicle trips achieved by SCA25 as a conservatively attainable goal.

- **SCA 36: Waste Reduction and Recycling**

SCA 36 requires a project applicant to submit a Construction & Demolition Waste Reduction and Recycling Plan (WRRP) and an Operational Diversion Plan (ODP) for review and approval by the Oakland Public Works Agency. Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include all new construction and all demolition. This SCA essentially addresses reduction in construction-related emissions, which the City combines with a project's operational emissions to assess against the significance thresholds for operational emissions, even though construction emissions are not a component of BAAQMD's Guidelines. Therefore, this SCA would contribute to

reducing total emissions of adoption and development under the Specific Plan. SCA 36 is initially presented in Section 4.14, *Utilities and Service Systems*. No appreciable reductions were considered for this SCA as construction waste is largely inert and not considered as a GHG emission source by CalEEMod.

- **Several SCAs Regarding Landscape Requirements and Tree Replacement**

Several SCAs address landscape requirements for frontages of commercial buildings and replacement of trees removed as part of a project. Projects are required to install one tree for every 25 feet of street frontage in cases where sidewalks have adequate width. Additionally, SCAs generally require the replacement of native trees removed as part of a project. Together, these SCAs maintain and increase landscaping and trees, create a cooler climate, reduce excessive solar gain, and absorb CO₂e emissions for a contribution to emission reductions, but have no impact on the emissions inventory of adoption and development under the Specific Plan. SCA 12, SCA 13, SCA 15, SCA 17, and SCA 18 are initially presented in Section 4.1, *Aesthetics, Shadow and Wind*, of this Draft EIR; and SCA 46 is initially presented in Section 4.3, *Biological Resources*. Insufficient data is available to estimate a potential GHG reduction from implementation of this SCA.

- **Several SCAs Regarding Stormwater Management**

Consistent with regional stormwater management programs and requirements that projects must comply with, the City has several SCAs that aim to reduce post construction stormwater runoff that could affect the ability to accommodate potentially increased storms and flooding within existing floodplains and infrastructure systems. These SCAs are relevant as climate change can result in increased flooding due to warmer climate (e.g., earlier and greater melting of snowpack) and inadequate infrastructure. SCA 55 is initially presented in Section 4.5, *Geology, Soils, and Geohazards*; SCA 75 is initially presented in Section 4.8, *Hydrology and Water Quality*; and SCA 83 is initially presented in Section 4.3, *Biological Resources*.

General Plan Policies and City Programs

Each of the following policies and programs were previously discussed in general in *Regulatory Context for GHG Emissions and Climate Change*, in this Section.

- ***Oakland General Plan LUTE.*** The LUTE is aimed at promoting use of public transit, bicycles and pedestrian travel. Any reduction of transportation-related GHG emissions would be captured in the trip reduction associated with the TDM Plan.
- ***Oakland General Plan Open Space, Conservation and Recreation (OSCAR) Element.*** The OSCAR contains policies that (a) encourage the provision of open space, which increases vegetation area (trees, grass, landscaping, etc.) to effect cooler climate, reduce excessive solar gain, and absorb CO₂; (b) encourage stormwater management, which relates to the maintenance of floodplains and infrastructure to accommodate potential increased storms and flooding; and (c) encourage energy efficiency and use of alternative energy sources. Policies that address vegetation area have no impact on the emissions inventory as vegetative sequestration is not a component of BAAQMD's Guidelines. Other policies regarding energy efficiency encourage and support energy efficiency but are not requirements under any implementation mechanism via the General Plan. They have resulted, however, in the implementation of the City of Oakland sustainability program discussed below.
- ***City of Oakland Sustainability Programs.*** The City has proactively adopted a number of sustainability programs in an effort to reduce the City's impact on climate change.

Oakland's sustainability efforts are managed by the Oakland Sustainability Community Development Initiative and there are two main categories that relate to reducing GHG emissions from a development project: renewable energy and green building.

Renewable Energy. With regard to renewable energy, the City's Sustainability Program has set a priority of promoting renewable energy with a particular emphasis on solar generation. The Program's aggressive renewable energy goals include the following: 50 percent of city facilities entire electricity use from renewable sources by 2017; and 100 percent of the city's entire electricity use from renewable sources by 2030. The City has some control over renewable energy percentages for buildings it operates by contracting its energy needs directly with the local utility. However, private building operators generally receive a standard energy mix from PG&E, and would not be required to contract for a higher percentage of renewables under this program as it only targets city facilities. PG&E has requested a 33 percent renewable energy mix goal for 2020 from the CPUC (compared to a 12 percent mix in 2007).

Green Building. With regard to green building strategies, the City of Oakland has implemented green building principles in City buildings through the following programs: Civic Green Building Ordinance (Ordinance No. 12658 C.M.S., 2005), requiring, for certain large civic projects, techniques that minimize the environmental and health impacts of the built environment through energy, water and material efficiencies and improved indoor air quality, while also reducing the waste associated with construction, maintenance and remodeling over the life of the building; Green Building Guidelines (Resolution No. 79871, 2006) which provides guidelines to Alameda County residents and developers regarding construction and remodeling; and Green Building Education Incentives for private developers. The City of Oakland adopted mandatory green building standards for private development projects on October 19, 2010. The City Program adjusted emissions in Table 4.6-3 reflect GHG savings from implementation of green building requirements.

Other Potential Planning Considerations Relevant to Adoption and Development under the Specific Plan

The following considerations are relevant to SB375 and the Sustainable Communities Strategy for the San Francisco Bay Area and may apply to projects within the Specific Plan Area which is designated as a Priority Development Area.

- ***Walkability of the Specific Plan Area.*** According the Pedestrian Master Plan, the City of Oakland has amongst the highest walking rates for all cities in the nine-county San Francisco Bay Region. It is noted that these high pedestrian trips are likely because the neighborhoods are densely populated and well served by transit, including BART, AC Transit, Amtrak, and the Alameda Ferry. As such, adoption and development under the Specific Plan would reduce transportation-related GHG emissions compared to emissions from the same level of development elsewhere in the outer Bay Area.
- ***Transit-Oriented Development.*** Certain future projects under the Specific Plan could be Transit Oriented Development, developing high-density housing in the central area of Oakland near transit stations, including BART stations, AC Transit centers, and other transportation nodes. development in these areas would reduce transportation-related GHG emissions compared to emissions from the same level of development elsewhere in the outer Bay Area. Because transit service is generally less available in most portions of the outlying areas than in the central area of Oakland, development in outlying areas would

likely result in increased peak-hour vehicle trips of relatively long distances, and often in single-occupant vehicles, compared to development within the Plan Area.

- **Urban Infill near Multiple Transit Modes.** Certain future projects under the Specific Plan could develop high-density housing within four blocks of AC Transit within an area developed with pedestrian facilities. Therefore, these developments, as discussed for Transit Oriented Development, above, would facilitate walking and non-vehicular travel to a greater extent than would be the case for similar development in outlying areas of the region without extensive transit availability. In addition, the high-density development would include a greater number of potential residents that could potentially utilize or engage in alternative modes of travel than in a lower density development on the project site.
- **Building Rehabilitation.** Certain future projects under Specific Plan could incorporate and support sustainable development goals including the renovation and reuse of the existing on-site building. As such, these developments would reduce transportation-related GHG emissions by avoiding the demolition and disposal of existing resources or energy to obtain and prepare raw resources for replacement structure.

Construction-generated GHG Emissions

The construction-generated GHG emissions of adoption and development under the Specific Plan were estimated based on potential land use development within the Plan Area and default construction equipment and area estimates of the CalEEMod model. Because the timing of each project is not known, as a conservative estimate all development was assumed to occur over two phases, consistent with the assumptions of the transportation analysis which envisions a specific portion of net new land use by year 2020 and the remainder by year 2035. An estimated total of approximately **15,779 metric tons (MT) of CO₂e** would be emitted over the assumed construction period of 9 years through 2035.

Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons “per year.” Assuming a 40-year development life of the Specific Plan until development is demolished or remodeled for energy efficiency (which is the common standard currently used in practice), total construction emissions represent approximately **394 MT CO₂e annually, over 40 years**.

As previously discussed, the BAAQMD Guidelines do not include a specific threshold or methodology for assessing construction-related GHG emissions for CEQA analysis. The City’s methodology adds the 40-year annualized construction-related GHG emissions to a project’s total operational-related emissions, to assess construction-related GHG emissions against the City of Oakland’s thresholds and a project’s ability to meet AB 32 GHG reduction goals, as discussed below.

The analysis of construction emissions only considers improvements in construction equipment exhaust emissions through manufacturer requirements and turnover. In addition to considering the CO₂e emission from construction activities, adoption and development under the Specific Plan would incorporate dust control measures recommended by BAAQMD (SCA A, *Construction-Related Air Pollution Controls*), which includes measures related to construction exhaust

emissions. Further, the SCAs that apply to adoption and development under the Specific Plan align with BAAQMD regulations that relate to portable equipment (e.g., concrete batch plants, and gasoline- or diesel-powered engines used for power generation, pumps, compressors, pile drivers, and cranes), architectural coatings, and paving materials. Equipment used during project construction would be subject to the requirements of BAAQMD Regulation 2 (Permits), Rule 1 (General Requirements) with respect to portable equipment unless exempt under Rule 2-1-105 (Exemption, Registered Statewide Portable Equipment); BAAQMD Regulation 8 (Organic Compounds), Rule 3 (Architectural Coatings); and BAAQMD Regulation 8 (Organic Compounds), Rule 15 (Emulsified and Liquid Asphalts).

These measures would be implemented and construction activities of each project would be subject to their implementation. Construction of each future project under the Specific Plan would not disrupt or hinder implementation of these reduction measures. In summary, the annualized GHG emissions from construction for the adoption and development under the Specific Plan would not conflict with the goals of AB 32.

Long-Term Operational GHG Emissions

As introduced above, long-term operational GHG emissions associated with adoption and development under the Specific Plan include indirect emissions from mobile sources (motor vehicle trips), emissions from natural gas combustion used in non-residential buildings, emissions from electricity use in non-residential buildings (grid electricity), emissions from water conveyance and waste water treatment and conveyance, and emissions from area sources. Emissions from each of these sources, in addition to the construction-related emissions discussed above, are reported in Table 4.6-3.

“Business as Usual” emissions shown in Table 4.6-3 do not consider any GHG reduction measures or compliance with local or statewide policies, plans and programs and regulations aimed at reducing GHG emissions. These “business as usual” emissions are provided to demonstrate how emissions from the adoption and development under the Specific Plan could be reduced even with the implementation of the most basic measures and adherence to regulatory requirements.

As previously discussed under *City Standard Conditions of Approval, Regulatory Requirements, General Plan Policies and Local Programs, and Design Features that Reduce GHG Emissions of Adoption and Development under the Specific Plan*, the adjusted operational GHG emissions do not fully factor in project design features or some applicable City SCAs since design detail of future projects under the Specific Plan is not available. The adjusted emissions do include regulatory requirements such as implementation of Pavley GHG standards and the Low Carbon Fuel Standard (LCFS) for motor vehicles and other reduction measures from the AB 32 Scoping Plan.

As noted above, while implementation of SCA 25 and the City’s Green building Ordinance would be required of future development according to the specific applicability criteria, and GHG emissions would be reduced through project-by-project implementation of these measures; and while the reductions reflected in Table 4.6-3 for the “Total City Program Adjusted” scenario represent reasonable estimates; it cannot be guaranteed that the specific reductions can be

achieved. For this reason, the “Total City Program Adjusted” scenario is included for informational purposes alone and the annual GHG emissions estimated under the “Total Regulatory Adjusted” scenario are used to determine significance in this EIR analysis.

As shown in Table 4.6-3, the Total Regulatory Adjusted Annual GHG emissions generated by adoption and development under the Specific Plan, including emissions from construction associated with that development, is approximately **38,116 MT CO₂e per year** (approximately 32 percent less than “business as usual” emissions). Total emissions and service population (residents and employees) generated by adoption and development under the Specific Plan, in the Total Regulatory Adjusted Annual scenario, would result in approximately **4.9 MT CO₂e per service population annually** (approximately 32 percent less than “business as usual” emissions). Based on the project-level significance thresholds, adoption and development under the Specific Plan would have a significant impact because it would produce total emissions that exceed 1,100 MT of CO₂e as well as 4.6 MT of CO₂e per service population annually.

Based on the plan-level significance thresholds, adoption and development under the Specific Plan would produce total emissions that would exceed 1,100 MT of CO₂e, but that would not exceed the 6.6 MT of CO₂e per service population annually. Therefore, the impact under the plan-level significance thresholds would be less than significant since adoption and development under the Specific Plan would not exceed *both* numeric thresholds (total emissions and service population annually). However, as noted above, the plan-level service threshold of 6.6 metric tons of CO₂e per service population annually should only be applied to regional plans and general plans and thus does not apply to the Specific Plan. Adherence to the City’s SCAs and other policies cited above would reduce the GHG emissions of each new development under the Specific Plan. In particular, as previously discussed, SCA F, GHG Reduction Plan, applies to certain projects and has the goal of increasing energy efficiency and reducing GHG emissions to the greatest extent feasible below **both** applicable numeric City of Oakland CEQA Thresholds (i.e., total emissions and per service population) to help achieve the City’s goal of reducing GHG emissions. The GHG Reduction Plan shall be considered fully attained when project emissions are less than the applicable numeric City CEQA Thresholds. To the extent that adoption and development under the Specific Plan would be subject to SCA F, according to the applicability criteria discussed below, the GHG emissions reported in Table 4.6-3 would be reduced through project-by-project implementation of project-specific reduction measures.

Specifically, SCA F would apply to future projects under the Specific Plan under any of three scenarios.

- **Scenario A:** Projects which (a) involve a land use development (i.e., a project that does not require a BAAQMD permit to operate), (b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, AND (c) after a GHG analysis is prepared would exceed **both** applicable numeric City of Oakland CEQA Thresholds.
- **Scenario B:** Projects which (a) involve a land use development, (b) exceed the GHG emissions screening criteria contained in the BAAQMD CEQA Guidelines, (c) after a

GHG analysis is prepared would exceed one of the applicable numeric City of Oakland CEQA Thresholds, AND (d) are considered to be “Very Large Projects.”⁵

- **Scenario C:** Projects which (a) involve a stationary source of GHG (i.e., a project that requires a permit from BAAQMD to operate) AND (b) after a GHG analysis is prepared would produce total GHG emissions of more than 10,000 metric tons of CO₂e annually.

As individual projects tiering off the Specific Plan occur, their specific design features and GHG reduction measures, including TDM programs, as well as specifics about project types, land use specific travel demand and the availability of transit access will be defined and factored into the GHG Reduction Plan prepared pursuant to SCA F. Not until these tiered projects are proposed and evaluated can the efficacy of the project’s design characteristics, applicable SCAs and other City policies, particularly SCA F, in reducing GHG emissions to below relevant thresholds be determined. The SCAs and City policies discussed above represent a comprehensive approach to reducing energy usage, fostering more sustainable land use development patterns, and reducing GHG emissions. No other mitigation, in addition to implementation of the City’s SCAs, policies, and programs mentioned above, is considered feasible that to reduce GHG below the efficiency threshold of 4.6 Metric tons per year per service population. Therefore, the impact at the project level is conservatively considered significant and unavoidable because it cannot be guaranteed that reductions can be achieved.

Mitigation: None Feasible other than those identified in SCA F.

Significance after Mitigation: Conservatively Significant and Unavoidable.

Impact GHG-2: Adoption and development under the Specific Plan would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions (Criterion 2). (Less than Significant)

Adoption and development under the Specific Plan would not conflict with any applicable plan, policy or regulation adopted with the intent to reduce GHG emissions. Adoption and development under the Specific Plan would exceed project-level GHG emissions thresholds for the determining the consistency of land use development projects with the goals and projections of

⁵ A “Very Large Project” is defined as any of the following:

- (A) Residential development of more than 500 dwelling units;
- (B) Shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space;
- (C) Commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space;
- (D) Hotel/motel development of more than 500 rooms;
- (E) Industrial, manufacturing, processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or encompassing more than 650,000 square feet of floor area; or
- (F) Any combination of smaller versions of the above that when combined result in equivalent annual GHG emissions as the above.

AB 32.⁶ However, the Specific Plan would guide specific future projects to align with existing current plans, policies and regulations adopted to reduce GHG emissions. Specifically, adoption and development under the Specific Plan would not conflict with the ECAP, current City Sustainability Programs, or General Plan policies or regulations regarding GHG reductions and other local, regional and statewide plans, policies and regulations (previously discussed in Section 4.6.2, *Regulatory Context for GHG Emissions and Climate Change*) that are related to the reduction of GHG emissions and relevant to the Specific Plan.

Further, adoption and development under the Specific Plan would be subject to all the regulatory requirements including the City's approach to reducing GHG emissions (and significant GHG emissions impacts, if applicable) by requiring the preparation and implementation of project-specific GHG Reduction Plans (SCA F), which would reduce GHG emissions of the adoption and development under the Specific Plan to the greatest extent feasible. SCAs also include conditions to address adherence to best management construction practices and equipment use (SCA A and SCA 41) and minimize post construction stormwater runoff that could affect the ability to accommodate potentially increased storms and flooding within existing floodplains and infrastructure systems (SCA 55, SCA 75, and SCA 83), to reduce demand for single occupancy vehicle travel (SCA 25), to increase landscaping to absorb CO₂e emissions (SCA 12, SCA 13, SCA 15, SCA 17, SCA 18, and SCA 46), and facilitate waste reduction and recycling (SCA 36).

Overall, adoption and development under the Specific Plan would not conflict with any applicable plans, policies or regulations adopted with the intent to reduce GHG emissions. The impact would be less than significant.

Mitigation: None Required.

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⁶ The BAAQMD Guidelines state that the plan-level service threshold of 6.6 metric tons of CO₂e per service population annually should only be applied to general plans. For other types of plans, such as redevelopment plans and specific Plans, the Guidelines state that the project-level service threshold of 4.6 metric tons of CO₂e of service population annually should be used.

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4.7 Hazards and Hazardous Materials

This section discusses the hazards and hazardous materials issues related to the existence of hazardous materials associated with the Plan Area. This section describes the environmental and regulatory setting that is applicable to health and safety regarding hazards and hazardous materials associated with the Plan Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.7.1 Environmental Setting

Definition of Hazardous Materials

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (State of California, Health and Safety Code, Chapter 6.95, Section 25501(o)). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

In some cases, past industrial or commercial activities on a site have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials and wastes can cause public health hazards when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a hazardous material include: inhalation, ingestion, bodily contact, and injection. Exposure can come as a result of an accidental release of hazardous materials during transportation, storage, or handling. Disturbance of contaminated subsurface soil during construction can also cause exposures to workers, the public or the environment through stockpiling, handling, or transportation of soils.

A hazardous waste, for the purpose of this EIR, is any hazardous material that is abandoned, discarded, or recycled, as defined in the State Health and Safety Code (Chapter 6.95, Section 25125). The transportation, use, and disposal of hazardous materials, as well as the potential releases of hazardous materials to the environment, are closely regulated through many state and federal laws.

Soil and Groundwater Contamination

In California, regulatory databases listing hazardous materials sites provided by numerous federal, state, and local agencies are consolidated in the “Cortese List” pursuant to Government Code Section 65962.5. The Cortese List is located on the California Environmental Protection Agency’s (Cal EPA) website and is a compilation of the following lists:

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database;
- List of Leaking Underground Storage Tank Sites by County and Fiscal Year from the State Water Resources Control Board (SWRCB) GeoTracker database;
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit;
- List of “active” Cease and Desist Order (CDO) and Cleanup and Abatement Order (CAO) from the SWRCB; and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC and listed on their EnviroStor database(Cal EPA, 2013).

Pursuant to Section 15300.2 of the CEQA Guidelines, a categorical exemption shall not be used for a project located on a site included on the Cortese List.

The SWRCB GeoTracker database includes leaking underground storage tanks (LUSTs), permitted underground storage tanks (USTs), and Spills, Leaks, Investigations, and Cleanup Database (SLIC) sites. The DTSC EnviroStor database includes federal and state response sites, voluntary, school, and military cleanups and corrective actions, and permitted sites. The five databases cited above identify sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater. The reporting and statuses of these sites change as identification, monitoring and clean-up of hazardous sites progress. Typically, sites are closed once it has been demonstrated that existing site uses combined with the levels of identified contamination present no significant risk to human health or the environment. These databases are updated periodically and would need to be revisited prior to construction for adoption and development under the Specific Plan.

Within the Plan Area, there are seven LUST sites and three listed Cleanup Program sites currently identified within the Plan Area, listed in **Table 4.7-1** below, and depicted in **Figure 4.7-1** (SWRCB, 2012; DTSC, 2012). In addition, there are eleven LUST sites and four listed Cleanup Program sites within the Plan Area vicinity. Although the sites beyond the Plan Area boundary may have the potential to affect the Plan Area if the contaminants associated with those sites migrate to within the Plan Area, these sites are not known to be currently affecting the Plan Area. There is also one known permitted UST site within the Plan Area and four known permitted UST sites located upgradient or adjacent to the Plan Area. However, the permitted UST sites are not known to have contamination issues.

Fuel Contamination from Leaking Underground and Aboveground Storage Tanks

A UST system is a storage tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. Until the mid-1980s, most USTs were made of single-walled bare steel, which were found to corrode over time resulting in leakage. Faulty installation or maintenance procedures also lead to UST leakage, in addition to potential

**TABLE 4.7-1
REGULATORY SITES LISTED IN THE PLAN AREA VICINITY**

Site Name/ Address	Regulatory List	Site Summary
Regulatory Sites Listed within the Plan Area		
Broadway Volkswagon 2740 Broadway	LUST Cleanup Site	Potential for groundwater and soil contamination. Potential contaminants of concern include gasoline and trichloroethylene.
Chevron #9-2506 2630 Broadway	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern include gasoline and lead.
Connell Oldsmobile 3093 Broadway	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Chrysler Dealership 2417 Broadway	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern include waste, motor, hydraulic and lubricating oils.
Glen Echo Creek Culvert 29th Street and Broadway	Cleanup Program Site	Potential for groundwater contamination. Potential contaminants of concern include arsenic, chromium, diesel, gasoline, waste, motor, hydraulic and lubricating oils.
Lake Merritt Towers Valdez and Grand Avenue	Cleanup Program Site	Potential affected media is under investigation. Potential contaminants of concern includes solvents.
Negherbon/Broadway Grand Redevelopment 2301-2345 Broadway	Cleanup Program Site	Potential for groundwater and soil contamination. Potential contaminants of concern include trichloroethane, arsenic, diesel, gasoline, lead, other chlorinated hydrocarbons, other solvent or non-petroleum hydrocarbon, trichloroethane, trichloroethylene, waste oil / motor / hydraulic / lubricating, dichloroethane, dichloroethene.
Robert & Ruth Burrows Trust 260 30th Street	LUST Cleanup Site	Potential media of contamination is unknown. Potential contaminants of concern include waste, motor, hydraulic and lubricating oils.
Roy Anderson Paints 3080 Broadway	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern include waste, motor, hydraulic and lubricating oils.
Val Strough Chevrolet 327 34th Street	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Regulatory Sites Listed within the Plan Vicinity		
Chevron #9-0019 210 Grand Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Chevron #9-1026 3701 Broadway	LUST Cleanup Site	Potential for groundwater and soil contamination. Potential contaminants of concern include benzene, gasoline, waste, motor, hydraulic and lubricating oils.
CHEVRON #9-3600 2200 Telegraph Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Chevron #21-1283 3810 Broadway	LUST Cleanup Site	Potential for groundwater and soil contamination. Potential contaminants of concern includes gasoline and waste oil / motor / hydraulic / lubricating.
CHP – Oakland 3601 Telegraph Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Dave's Station 2250 Telegraph Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.
Dodson LTD 240 MacArthur Blvd.	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminants of concern includes gasoline.

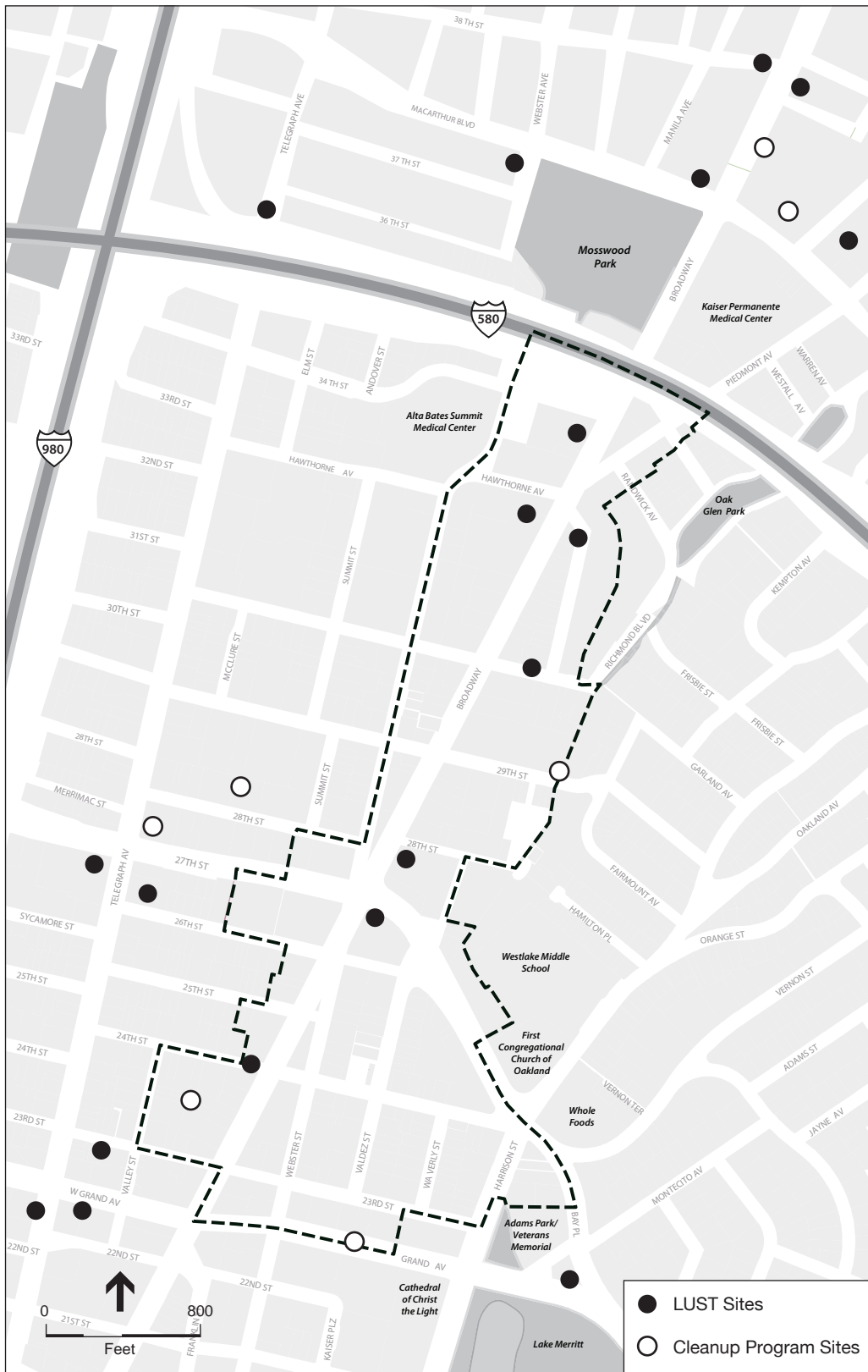
TABLE 4.7-1 (Continued)
REGULATORY SITES LISTED IN THE PLAN AREA VICINITY

Site Name/ Address	Regulatory List	Site Summary
Regulatory Sites Listed within the Plan Vicinity (cont.)		
Exxon #7-0235 2225 Telegraph Ave	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminates of concern include benzene, diesel, and gasoline.
Glovatorium 3820 Manila Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminates of concern includes stoddard solvent / mineral spirits / distillates
Kaiser Hospital 38th Street and Broadway	Cleanup Program Site	Potential affected media and contaminants are under investigation.
Kaiser Medical Center 280 MacArthur Blvd. West	Cleanup Program Site	Potential affected media and contaminants are under investigation.
Private Residence 28th and Summit Streets	Cleanup Program Site	Potential for soil contamination. Contaminant of concern is lead.
Robert Beallo MD INC 2710 Telegraph Avenue	Cleanup Program Site	Potential media of contamination is unknown and needs further evaluation.
Sears Auto Center #1058 2600 Telegraph Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminates of concern include waste, motor, hydraulic and lubricating oils.
Sears Retail Store 2633 Telegraph Avenue	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminates of concern includes gasoline.
UNOCAL #3538 411 MacArthur Blvd.	LUST Cleanup Site	Potential for groundwater contamination. Potential contaminates of concern includes gasoline.

releases associated with spills. Recently revised UST regulations have significantly reduced the incidents of UST leakage from new UST systems and the consequential soil and groundwater contamination. However, there are some older UST systems that remain in service and many sites contaminated by leaking USTs that are still under investigation and clean-up. USTs installed prior to the mid-1980's that have leaked as well as improperly installed USTs have resulted in fuel spills can present contamination issues in the Plan Area. In addition, it is not uncommon for older USTs to have been abandoned in place with no documentation of location or abandonment technique. As shown on Table 4.7-1 above, there are eleven known UST sites located within the Plan Area that have contamination issues (SWRCB, 2012). These sites are in various stages of investigation by the regulatory agencies. In the event that future projects were to occur at these sites, the construction activities could encounter contamination depending on the progress in cleanup activities at the time of construction. The three known UST sites located outside of the Plan Area have the potential to affect the Plan Area but would be increasingly less likely to do so with increasing distance from the Plan Area.

Contamination from Spills and Leaks

Spills and leaks of chemicals can contaminate soil and groundwater when proper precautions are not in place. Various businesses and industries transport, use, and dispose of chemicals and may improperly or accidentally release them into the environment. Chemicals can include but are not limited to heavy metals, solvents, and flammable materials. Non-permitted discharges of these



SOURCE: California Department of Toxic Substances Control, 2013

Broadway Valdez District Specific Plan . 208522
Figure 4.7-1
 Soil and Groundwater Contamination Sites

chemicals are documented by the San Francisco Bay RWQCB in the Spills SLIC list. Within the Plan Area, there is one known SLIC site identified and is undergoing clean up and monitoring with the oversight of the DTSC. In the event that future projects were to occur at this site, the construction activities may encounter contamination depending on the progress of cleanup activities at the time of construction.

Other Classifications for Contaminated Sites

Other sites with contaminated soil and/or groundwater within the Plan Area include those included in the Formerly Used Defense Sites (FUDS) database; Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) database; sites under DTSC oversight; as well as sites listed for voluntary cleanup. The SWRCB GeoTracker database listed four Cleanup Program sites within the Plan Area and three located upgradient of the Plan Area (SWRCB, 2012). These sites are in various stages of investigation by the regulatory agencies. In the event that future projects were to occur at these sites, the construction activities may encounter contamination depending on the progress of cleanup activities at the time of construction.

Hazardous Building Materials Associated with Demolition

Adoption and development under the Specific Plan could include demolition of some portions of the existing structures in the Plan Area. The Plan Area is currently highly developed and includes many older buildings that may have been constructed with hazardous building materials. These materials include lead-based paint, asbestos, and polychlorinated biphenyls (PCBs) and if disturbed could present a potential hazard to workers or the public.

Prior to the U.S. Environmental Protection Agency (USEPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Through such disturbances as sanding and scraping activities, renovation work, or gradual wear and tear, old peeling paint, or paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects especially in children.

Asbestos is a naturally-occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the USEPA in the 1970s. Asbestos was commonly used for insulation of heating ducts as well as ceiling and floor tiles to name a few typical types of materials. Similar to lead-based paint, contained within the building materials asbestos fibers present no significant health risk, but once these tiny fibers are disturbed they become airborne and create potential exposure pathways. The fibers are very small and cannot be seen with the naked eye. Once they are inhaled they can become lodged into the lung potentially causing lung disease or other pulmonary complications.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured

after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit. Additional information about these materials is provided in the Regulatory Framework Section below.

Radon

Radon is a naturally-occurring odorless, tasteless, and invisible gas produced from the decay of uranium in soil and water (USEPA, 2013). Structures placed on native soils with elevated levels of radon can be impacted by the intrusion of radon gas into breathing spaces of the overlying structures, which can cause lung cancer. Alameda County is listed as a Zone 2 county with a predicted average indoor radon screening level between 2 and 4 picocuries per liter. This is considered a moderate level by the USEPA. The USEPA recommends remedial action for areas with levels above 4 picocuries per liter. Based on the USEPA information, the Plan Area is not considered to have radon above the recommended health risk level.

Schools and Daycare Facilities

There are no schools located within the Plan Area. There are three grade schools located outside but within ¼-mile of the Plan Area: Westlake Middle School, St. Paul's Episcopal School, and Oakland Emiliano Zapata Street Academy. Westlake Middle School is located at 2629 Harrison Street, adjacent to, and southeast of, the Plan Area. The St. Paul's Episcopal School is located at 262 Grand Avenue, approximately 0.20 miles southeast of the Plan Area. Oakland Emiliano Zapata Street Academy is located at 417 29th Street, approximately 0.10 miles west of the Plan Area.

There is one registered Pre-School facility and one university located outside but within ¼-mile of the Plan Area. The Snow White Pre-School is located at 241 West MacArthur Boulevard, approximately 0.20 miles northeast of the Plan Area. Samuel Merritt University is located at 3100 Telegraph Avenue, approximately 0.20 miles west of the Plan Area.

Airports

Aviation safety hazards can result if projects are sited in the vicinity of airports. The nearest public airport to the Plan Area is Oakland International Airport, located approximately seven miles south of the Plan Area. There are no private airstrips in the vicinity.

Wildland Fires

The California Department of Forestry and Fire Protection (CAL FIRE) is required by law to map areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors (PRC 4201-4204 and Govt. Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition, and atmospheric conditions. The CAL FIRE Alameda County Fire Hazard Severity Zone Map does not identify any very high or high fire hazard zones in the Plan Area (CAL FIRE, 2007).

4.7.2 Regulatory Framework

Adoption and development under the Specific Plan is subject to government health and safety regulations applicable to the transportation, use, and disposal of hazardous materials. This section provides an overview of the health and safety regulatory framework that is applicable to the Plan Area.

Federal

Hazardous Materials Management

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.7-2** and are discussed in detail in this section.

State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local agency section.

State

In January 1996, the California Environmental Protection Agency (Cal EPA) adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program has six elements: hazardous waste generators and hazardous waste on-site treatment; underground storage tanks; aboveground storage tanks; hazardous materials release response plans and inventories; risk management and prevention programs; and Unified Fire Code hazardous materials management plans and inventories. The plan is implemented at the local level. The Certified Unified Program Agency (CUPA) is the local agency that is responsible for the implementation of the Unified Program. In Oakland, the Alameda County Department of Environmental Health (ACDEH) and the Oakland Fire Department are the designated CUPA for all businesses.

Hazardous Materials Management

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires that any business that handles hazardous materials prepare a business plan, which must include the following:

- Details, including floor plans, of the facility and business conducted at the site;
- An inventory of hazardous materials that are handled or stored on site;
- An emergency response plan; and
- A safety and emergency response training program for new employees with annual refresher courses

**TABLE 4.7-2
FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Incidents	National Priorities List (NPL)	Compilation of over 1,200 sites for priority cleanup under the Federal Superfund Program.
	Proposed National Priorities List (PNPL)	Sites considered for NPL listing.
	Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	Contains data on potentially hazardous waste sites that have been reported to the USEPA by California. CERCLIS contains sites which are either proposed to or on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL.
	CERCLIS No Further Remedial Action Planned (CERC-NFRAP)	CERC-NFRAP are archived sites which indicate an assessment of the site has been completed and that the EPA has determined no further steps will be taken to list the site on NPL.
	California Hazardous Materials Incident Report System (CHMIRS)	Spills and other incidents gathered from the California Office of Emergency Services.
	Formerly Used Defense Sites Properties (FUDS)	Includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.
	Proposition 65 Records (Notify 65)	This database, maintained by the State Water Resources Control Board (SWRCB), contains facility notifications about any release that could impact drinking water and thereby expose the public to a potential health risk.
Hazardous Materials Management	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA))	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	Resource Conservation and Recovery Act of 1976 (RCRA)	Under RCRA, the EPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave."
	Hazardous and Solid Waste Act	Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes.
	Hazardous Wastes & Substances Sites List (Cortese)	Historical compilation of sites listed in the LUST, SWF/LF and Cal SITES databases. No longer maintained as an active database.
Hazardous Materials Transportation	U.S. Department of Transportation (DOT)	Has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).
Structural and Building Components (Lead-based paint, PCBs, and asbestos)	Toxic Substances Control Act (TSCA)	Regulates the use and management of PCBs in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	U.S. EPA	The EPA monitors and regulates hazardous materials used structural and building components and affects on human health.

Hazardous Waste Handling

The Cal EPA DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. State and federal laws require detailed planning to ensure that hazardous materials are properly handled, used, stored, and disposed of, and, in the event that such materials are accidentally released, to prevent or to mitigate injury to health or the environment. Laws and regulations require hazardous materials users to store these materials appropriately and to train employees to manage them safely.

Under the federal Resource Conservation and Recovery Act of 1976 (RCRA) described in Table 4.7-1, above, individual states may implement their own hazardous waste programs in lieu of RCRA, as long as the state program is at least as stringent as federal RCRA requirements. In California, the DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. The hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal, and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

Hazardous Materials Transportation

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the California Code of Regulations (CCR). In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state (26 CCR). Both regulatory programs apply in California. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans).

Occupational Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the CFR. Cal/OSHA standards are generally more stringent than federal regulations.

Cal/OSHA regulations (8 CCR) concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. The hazard communication program also requires that Materials Safety Data Sheets (MSDS) be available to employees, and that employee information and training programs be documented. These regulations also require preparation of emergency action plans (escape and evacuation procedures, rescue and medical duties, alarm systems, and training in emergency evacuation).

State laws, like federal laws, include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. Specific, more detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR. Emergency equipment and supplies, such as fire extinguishers, safety showers, and eye washes, must also be provided and maintained in accessible places.

Cal/OSHA (8 CCR), like Fed/OSHA (29 CFR), includes extensive, detailed requirements for worker protection applicable to any activity that could disturb asbestos-containing materials, including maintenance, renovation, and demolition. These regulations are also designed to ensure that persons working near the maintenance, renovation, or demolition activity are not exposed to asbestos.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private agencies. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies, including Cal EPA, CHP, CDFG, the San Francisco Bay RWQCB, and the Oakland Fire Department (OFD). The OFD provides first response capabilities, if needed, for hazardous materials emergencies within the Plan Area.

Structural and Building Components

Adoption and development under the proposed Specific Plan could include demolition of structures which, due to their age, may contain asbestos, PCBs, or lead and lead-based paint. In addition, removal of existing aboveground tanks or USTs may be required.

Asbestos

State laws and regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local governmental agencies prior to beginning renovation or demolition that could disturb asbestos. Asbestos represents a human health risk when asbestos fibers become airborne (friable) and are inhaled into the lungs.

The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work. Cal/OSHA regulates asbestos removal to ensure the health and safety of workers removing asbestos containing materials and also must be notified of asbestos abatement activities.

Polychlorinated Biphenyls (PCBs)

As previously discussed, PCBs are organic oils that were formerly placed in many types of electrical equipment and in fluorescent lighting ballasts. PCBs are highly persistent in the environment and are toxic. In 1979, the USEPA banned the use of PCBs in most new electrical equipment and began

a program to phase out certain existing PCB-containing equipment. The use and management of PCBs in electrical equipment is regulated pursuant to the Toxic Substances Control Act (40 CFR). Fluorescent lighting ballasts that contain PCBs, regardless of size and quantity, are regulated as hazardous waste and must be transported and disposed of as hazardous waste.

Lead and Lead-Based Paint

The CCR, Title 22, considers waste soil with concentrations of lead to be hazardous if it exceeds a total concentration of 1,000 ppm and a soluble¹ concentration of 5 ppm. Both the federal and California OSHAs regulate all worker exposure during construction activities that involve lead-based paint. The Interim Final Rule found in 29 CFR Part 1926.62 covers construction work where employees may be exposed to lead during such activities as demolition, removal, surface preparation for re-painting, renovation, clean up and routine maintenance. The OSHA-specified method of compliance includes respiratory protection, protective clothing, housekeeping, hygiene facilities, medical surveillance, training, etc.

Local

Soil and Groundwater Contamination

In Alameda County, remediation of contaminated sites is performed under the oversight of the ACDEH and the San Francisco Bay RWQCB. The ACDEH implements a local oversight program under contract with the SWRCB to provide regulatory oversight of the investigation and cleanup of soil and groundwater contamination from leaking petroleum USTs and aboveground storage tanks. At sites where contamination is suspected or known to have occurred, the project sponsor is required to perform a site investigation and prepare a remediation plan, if necessary. For typical development projects, actual site remediation is completed either before or during the construction phase of the project. Site remediation or development may be subject to regulation by other agencies. As noted above, several properties within the Plan Area have contaminated soil and groundwater which is currently subject to oversight by ACDEH. Future investigation and remediation of soil or groundwater contamination that is known, or has not yet been identified, would be subject to oversight by ACDEH.

Alameda County Hazardous Waste Management Program

Assembly Bill (AB) 2948 requires counties and cities either to adopt a county Hazardous Waste Management Plan as part of their general plan, or enact an ordinance requiring that all applicable zoning subdivision, conditional use permit, and variance decisions be consistent with the county hazardous waste management plan. Once each County had its Hazardous Waste Management Program approved by the State, each city had 180 days to either 1) adopt a City Hazardous Waste Management Plan containing specified elements consistent with the approved County Hazardous Waste Management Program, 2) incorporate the applicable portions of the approved Program, by reference, into the City's General Plan, or 3) enact an ordinance which requires that all applicable zoning, subdivision, conditional use permits, and variance decisions be consistent with the specified

¹ Capable of being dissolved, especially in water.

portions of the Program. Alameda County has adopted a Hazardous Waste Management Program that addresses procedures for hazardous materials incidents.

Under the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, the ACDEH is certified by the DTSC to implement the following programs:

- Hazardous Materials Management Plan and Inventory (HMMP) and the Hazardous Materials Business Plan (HMBP);
- Risk Management Program (RMP);
- UST program;
- Spill Prevention, Control and Countermeasure (SPCC) Plan for aboveground storage tanks;
- Hazardous waste generators; and
- On-site hazardous waste treatment (tiered permit).

Local Plans and Policies

Discussion of Specific Plan overall consistency with the Oakland General Plan is provided in Section 4.9, *Land Use, Plans and Policies*, of this EIR. General Plan policies that are also significance criteria or contain a regulatory threshold, which the project must meet, are addressed in this section.

City of Oakland General Plan

The Safety Element of the City of Oakland General Plan contain the following policies pertaining to hazards and hazardous materials with potential relevance to adoption and development under the Specific Plan:

- ***Fire Hazards, Policy FI-3:*** Prioritize the reduction of the wildfire hazard, with an emphasis on prevention.
- ***Hazardous Materials, Policy HM-1:*** Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.

Action HM-1.2: Continue to enforce provisions under the zoning ordinance regulating the location of facilities which use or store hazardous materials.

Action HM-1.4: Continue to participate in the Alameda County Waste Management Authority and, as a participant, continue to implement policies under the county's hazardous-waste management plan to minimize the generation of hazardous wastes.

Action HM-1.6: Through the Urban Land Redevelopment program, and along with other participating agencies, continue to assist developers in the environmental clean-up of contaminated properties.

Action HM-1.7: Create and maintain a database with detailed site information on all brownfields and contaminated sites in the city.

- ***Hazardous Materials, Policy HM-3:*** Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.

Action HM-3.1: Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider establishing timebased restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

Action HM-3.4: Continue to rely on, and update, the city's hazardous materials area plan to respond to emergencies related to hazardous materials.

Oakland Municipal Code

To protect sensitive receptors from public health effects from a release of hazardous substances, the Oakland Municipal Code, Title 8 Section 42.105 allows the City, at its discretion, to require facilities that handle hazardous substances within 1,000 feet of a residence, school, hospital, or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan (HMARRP).

The HMARRP must include public participation in the planning process, along with the following requirements:

- identify hazardous materials used and stored at the property and the suitability of the site;
- analyze off-site consequences that could occur as a result of a release of hazardous substances (including fire);
- include a health risk assessment; and
- identify remedial measures to reduce or eliminate on-site and off-site hazards.

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

The City's SCAs relevant to hazards and hazardous materials are listed below for reference. If the Specific Plan is approved by the City, all applicable SCAs would be incorporated into the Specific Plan, adopted as conditions of approval, and required of the adoption and development under the Specific Plan, as applicable, to help ensure less-than-significant impacts associated with hazards and hazardous materials. The SCAs are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures. Standard Conditions of Approval applicable to potential hazards and hazardous materials impacts due to the adoption and development under the Specific Plan include:

- **SCA 35: Hazards Best Management Practices**

Prior to the commencement of demolition, grading, or construction. The project applicant and construction contractor shall ensure that construction of Best Management Practices (BMPs) is implemented as part of construction to minimize the potential negative effects to groundwater and soils. These shall include the following:

- a) Follow manufacturers' recommendations on use, storage, and disposal of chemical products used in construction;
 - b) Avoid overtopping construction equipment fuel gas tanks;
 - c) During routine maintenance of construction equipment, properly contain and remove grease and oils;
 - d) Properly dispose of discarded containers of fuels and other chemicals.
 - e) Ensure that construction would not have a significant impact on the environment or pose a substantial health risk to construction workers and the occupants of the proposed development. Soil sampling and chemical analyses of samples shall be performed to determine the extent of potential contamination beneath all UST's, elevator shafts, clarifiers, and subsurface hydraulic lifts when on-site demolition, or construction activities would potentially affect a particular development or building.
 - f) If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.
- **SCA 41: Asbestos Removal in Structures**

Prior to issuance of a demolition permit. If asbestos-containing materials (ACM) are found to be present in building materials to be removed, demolition and disposal, the project applicant shall submit specifications signed by a certified asbestos consultant for the removal, encapsulation, or enclosure of the identified ACM in accordance with all applicable laws and regulations, including but not necessarily limited to: California Code of Regulations, Title 8; Business and Professions Code; Division 3; California Health & Safety Code 25915-25919.7; and Bay Area Air Quality Management District, Regulation 11, Rule 2, as may be amended.
 - **SCA 61: Site Review by the Fire Services Division**

Prior to the issuance of demolition, grading or building permit. The project applicant shall submit plans for site review and approval to the Fire Prevention Bureau Hazardous Materials Unit. Property owner may be required to obtain or perform a Phase II hazard assessment.
 - **SCA 62: Phase I and/or Phase II Reports**

Prior to issuance of a demolition, grading, or building permit. Prior to issuance of demolition, grading, or building permits the project applicant shall submit to the Fire Prevention Bureau, Hazardous Materials Unit, a Phase I environmental site assessment report, and a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer.

- **SCA 63: Lead-based Paint/Coatings, Asbestos, or PCB Occurrence Assessment**

Prior to issuance of any demolition, grading or building permit. The project applicant shall submit a comprehensive assessment report to the Fire Prevention Bureau, Hazardous Materials Unit, signed by a qualified environmental professional, documenting the presence or lack thereof of asbestos-containing materials (ACM), lead-based paint, and any other building materials or stored materials classified as hazardous waste by State or federal law.

- **SCA 64: Environmental Site Assessment Reports Remediation**

Prior to issuance of any demolition, grading or building permit. If the environmental site assessment reports recommend remedial action, the project applicant shall:

- a) Consult with the appropriate local, State, and federal environmental regulatory agencies to ensure sufficient minimization of risk to human health and environmental resources, both during and after construction, posed by soil contamination, groundwater contamination, or other surface hazards including, but not limited to, underground storage tanks, fuel distribution lines, waste pits and sumps.
- b) Obtain and submit written evidence of approval for any remedial action if required by a local, State, or federal environmental regulatory agency.
- c) Submit a copy of all applicable documentation required by local, State, and federal environmental regulatory agencies, including but not limited to: permit applications, Phase I and II environmental site assessments, human health and ecological risk assessments, remedial action plans, risk management plans, soil management plans, and groundwater management plans.

- **SCA 65: Lead-based Paint Remediation**

Prior to issuance of any demolition, grading or building permit. If lead-based paint is present, the project applicant shall submit specifications to the Fire Prevention Bureau, Hazardous Materials Unit signed by a certified Lead Supervisor, Project Monitor, or Project Designer for the stabilization and/or removal of the identified lead paint in accordance with all applicable laws and regulations, including but not necessarily limited to: Cal/OSHA's Construction Lead Standard, 8 CCR1532.1 and DHS regulation 17 CCR Sections 35001 through 36100, as may be amended.

- **SCA 66: Other Materials Classified as Hazardous Waste**

Prior to issuance of any demolition, grading or building permit. If other materials classified as hazardous waste by State or federal law are present, the project applicant shall submit written confirmation to Fire Prevention Bureau, Hazardous Materials Unit that all State and federal laws and regulations shall be followed when profiling, handling, treating, transporting and/or disposing of such materials.

- **SCA 67: Health and Safety Plan per Assessment**

Prior to issuance of any demolition, grading or building permit. If the required lead-based paint/coatings, asbestos, or PCB assessment finds presence of such materials, the project applicant shall create and implement a health and safety plan to protect workers from risks associated with hazardous materials during demolition, renovation of affected structures, and transport and disposal.

- **SCA 68: Best Management Practices for Soil and Groundwater Hazards**

The project applicant shall implement all of the following Best Management Practices (BMPs) regarding potential soil and groundwater hazards:

- a) Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste must be adequately profiled (sampled) prior to acceptable reuse or disposal at an appropriate off-site facility. Specific sampling and handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agencies laws, in particular, the Regional Water Quality Control Board (RWQCB) and/or the Alameda County Department of Environmental Health (ACDEH) and policies of the City of Oakland.
- b) Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner, prior to treatment and disposal, to ensure environmental and health issues are resolved pursuant to applicable laws and policies of the City of Oakland, the RWQCB and/or the ACDEH. Engineering controls shall be utilized, which include impermeable barriers to prohibit groundwater and vapor intrusion into the building (pursuant to the Standard Condition of Approval regarding Radon or Vapor Intrusion from Soil and Groundwater Sources);
- c) Prior to issuance of any demolition, grading, or building permit, the applicant shall submit for review and approval by the City of Oakland, written verification that the appropriate federal, state or county oversight authorities, including but not limited to the RWQCB and/or the ACDEH, have granted all required clearances and confirmed that the all applicable standards, regulations and conditions for all previous contamination at the site. The applicant also shall provide evidence from the City's Fire Department, Office of Emergency Services, indicating compliance with the Standard Condition of Approval requiring a Site Review by the Fire Services Division pursuant to City Ordinance No. 12323, and compliance with the Standard Condition of Approval requiring a Phase I and/or Phase II Reports.

- **SCA 69: Radon or Vapor Intrusion from Soil or Groundwater Sources**

Ongoing. The project applicant shall submit documentation to determine whether radon or vapor intrusion from the groundwater and soil is located on-site as part of the Phase I documents. The Phase I analysis shall be submitted to the Fire Prevention Bureau, Hazardous Materials Unit, for review and approval, along with a Phase II report if warranted by the Phase I report for the project site. The reports shall make recommendations for remedial action, if appropriate, and should be signed by a Registered Environmental Assessor, Professional Geologist, or Professional Engineer. Applicant shall implement the approved recommendations.

- **SCA 74: Hazardous Materials Business Plan**

Prior to issuance of a business license. The project applicant shall submit a Hazardous Materials Business Plan for review and approval by Fire Prevention Bureau, Hazardous Materials Unit. Once approved this plan shall be kept on file with the City and will be updated as applicable. The purpose of the Hazardous Business Plan is to ensure that employees are adequately trained to handle the materials and provides information to the Fire Services Division should emergency response be required. The Hazardous Materials Business Plan shall include the following:

- a) The types of hazardous materials or chemicals stored and/or used on site, such as petroleum fuel products, lubricants, solvents, and cleaning fluids.
- b) The location of such hazardous materials.
- c) An emergency response plan including employee training information.
- d) A plan that describes the manner in which these materials are handled, transported and disposed.

4.7.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

- 1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- 3. Create a significant hazard to the public through the storage or use of acutely hazardous materials near sensitive receptors;
- 4. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 5. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;
- 6. Result in less than two emergency access routes for streets exceeding 600 feet in length unless otherwise determined to be acceptable by the Fire Chief, or his/her designee, in specific instances due to climatic, geographic, topographic, or other conditions;
- 7. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
- 8. Be located within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area;
- 9. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 10. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Approach to Analysis

Adoption and development under the Specific Plan would not result in direct physical impacts within the Plan Area. However, adoption and development under the Specific Plan could eventually result in various types of construction activities within the Plan Area that would require ground disturbance and use of hazardous materials. These types of construction activities could result in impacts from hazards or the use of hazardous materials. Potential impacts relative to hazards and hazardous materials are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, and the City of Oakland's Standard Conditions of Approval. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less-than-significant.

Retail, residential, office and commercial activities within the Plan Area typically use hazardous chemicals common in these types of settings. These chemicals would include familiar materials, such as toners, paints, lubricants, kitchen and restroom cleaners, and other maintenance materials as well as chemicals used during operations. These common consumer products would be used for the same purposes as in any office or support setting, including residences. Retail uses can also handle hazardous materials that are stored in containers provided by manufacturer. The amounts of hazardous materials that would be stored or handled cannot be determined at this time, however assumptions can be made that the amounts of hazardous materials and waste would not significantly change from existing conditions.

Based on the characteristics of adoption and development under the Specific Plan and the existing conditions, adoption and development under the Specific Plan would not result in impacts related to safety hazards associated with an airstrip or airport, interfere with an adopted emergency response or evacuation plan, or expose people and structures to wildland fires. No impact discussion is provided for these topics for the following reasons:

1. ***Interfere with Airstrip/Airport.*** The Plan Area is located more than two miles from the nearest airstrip or airport and therefore, would not interfere with any airport use plan or otherwise create a safety hazard related to any such facility.
2. ***Wildland Fires.*** The Plan Area is located in an urbanized area that is not adjacent to any wildland areas. Fire protection services are provided by the City of Oakland Fire Department and all proposed new construction would be constructed according to the most current fire safety code requirements. Therefore, adoption and development under the Specific Plan would not be susceptible to wildland fires and there is no impact.

Impacts

Hazardous Materials Use, Storage and Disposal

Impact HAZ-1: Adoption and development under the Specific Plan would result in an increase in the routine transportation, use, and storage of hazardous chemicals (Criteria 1 and 3). (Less than Significant)

As discussed in Chapter 3, *Project Description*, a key purpose of the Specific Plan is to enhance the condition of the Plan Area. The City could accomplish the plan objectives through various means

including those that require new construction or adaptive reuse of buildings and utilities. The adoption and development under the Specific Plan could include construction activities that employ hazards or the use of hazardous chemicals, such as fuels, oils and lubricants, paints and thinners, solvents, and other chemicals. Construction could also occur along the day-lighted portion of Glenn Echo Creek north of Grand Avenue along Harrison Street. Construction activities could generate chemical wastes that, if not properly managed, could flow into the storm drainage system or nearby surface water bodies such as Lake Merritt and ultimately San Francisco Bay, which are listed as impaired water bodies by the SWRCB. As such, adoption and development under the Specific Plan could potentially result in impacts from hazards or hazardous materials. Impacts would occur if construction-related activities were to result in hazards or the release of hazardous materials and could be considered potentially significant.

Ongoing commercial, retail and residential activities in the Plan Area also involve the use of chemical compounds and products that are considered hazardous materials. Adoption and development under the Specific Plan could require the transportation, use and storage of additional quantities of hazardous materials to new businesses and entities. If not handled, stored, or transported appropriately, these impacts could be potentially significant.

Adoption and development under the Specific Plan would involve handling and use of these hazardous materials and the disposal of the resulting hazardous wastes would be required to follow the applicable laws and regulations, as described in *Regulatory Framework* above. Additionally, projects requiring the use and disposal of hazardous materials would be required to comply with project-specific hazards best management practices as required by SCA 35: *Hazards Best Management Practices*.

Hazardous materials would be stored according to manufacturer's recommendations and according to the specifications within the project-specific HMMP and HMBP. As required, the hazardous materials would be stored in locations according to compatibility and in storage enclosures (i.e., flammable material storage cabinets) or in areas or rooms specially designed, protected, and contained for such storage, in accordance with applicable regulations. Hazardous materials would be handled and used in accordance with applicable regulations by personnel that have been trained in the handling and use of the material and that have received proper hazard-communication training. Hazardous materials reporting (i.e., California Hazardous Materials Business Planning, California Proposition 65 notification, and Emergency Planning and Community-Right-to-Know Act reporting) would be completed as required.

All hazardous materials would be transported to the Plan Area in accordance with applicable hazardous materials shipping regulations. Hazardous materials and waste would be delivered, stored, and handled in accordance with the HMMP. The HMMP would also provide details on appropriate personal protective equipment, disposal procedures, and spill response measures in the case of accidental upset conditions. Required compliance with applicable regulatory requirements would minimize hazards to workers, visitors, the public, and the environment from waste products. Additionally, implementation of SCA 35, *Hazards Best Management Practices*, would further

reduce potential impacts. As a result of these requirements, impacts resulting from hazardous materials and hazardous waste transport, use and disposal would be less than significant.

Mitigation: None Required.

Impact HAZ-2: Adoption and development under the Specific Plan would result in the accidental release of hazardous materials used during construction through improper handling or storage (Criterion 2). (Less than Significant)

Adoption and development under the Specific Plan could require construction activities which would use certain hazardous materials such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of large quantities of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. These impacts would be potentially significant.

However, the hazardous materials used on a construction site would be used in accordance with manufacturer recommendations. Spills of hazardous materials on construction sites are typically localized and are cleaned up in a timely manner. In most cases, the individual construction contractors are responsible for their hazardous materials and are required under their contract to properly store and dispose of these materials in compliance with state and federal laws. Additionally, the use of construction best management practices which would be required to be implemented as part of construction and required by SCA 35, *Hazards Best Management Practices*, along with SCA 63, *Lead-Based Paint/Coatings, Asbestos, or PCB Occurrence Assessment*; SCA 64, *Environmental Site Assessment Reports Remediation*; and SCA 67, *Health and Safety Plan per Assessment* would minimize the potential adverse effects to groundwater and soils.

Given the use of best management practices as required by the individual construction contractors, the threat of exposure to the public or contamination to soil and groundwater from construction-related hazardous materials is considered less than significant.

Mitigation: None Required.

Exposure to Hazardous Materials

Impact HAZ-3: Adoption and development under the Specific Plan would result in the exposure of hazardous materials in soil and ground water (Criteria 2 and 5). (Less than Significant)

Adoption and development under the Specific Plan could require excavation for installation of building foundations and underground utilities. Some of the excavation could be substantial. The development sites could have had a documented past release that has contaminated subsurface

soils and groundwater or a previously unknown release that would be exposed during excavation activities. Known sites currently listed in the Plan Area are discussed above in the Environmental Setting section and listed in Table 4.7-1. Consequently, construction in the Plan Area could potentially intercept and disturb impacted soil and/or groundwater. Disturbed contaminated soils could expose construction workers and the public to contaminants causing various short-term health effects such as nausea, vomiting, headache, dizziness, or burns. These impacts would be considered potentially significant.

If a specific development site is the location of a documented release of hazardous materials and is listed on a regulatory database it would be subject to site cleanup regulations as required by a designated regulatory agency, such as the SWRCB or DTSC. If the proposed land use were more sensitive than the existing land use, such as changing a commercial building to a residential unit, more stringent clean up regulations would apply even if the site has been considered remediated or closed based on complying with standards for its current land use. However, compliance with standards set forth in the Oakland Urban Land Redevelopment Program would ensure any developed site undergoes risk-based corrective action.

Per standard policy and practice, future projects under the Specific Plan would require a review of environmental databases for a given project site. If database review indicates there is contamination at the site, construction and operation of the project would be subject to the stringent state and local policies regarding the handling of contaminated soils and groundwater. Compliance with the Oakland Urban Land Redevelopment Program, SCA 68, *Best Management Practices for Soil and Groundwater Hazards*, and SCA 69, *Radon or Vapor Intrusion from Soil or Groundwater Sources*, would be required, ensuring that any potential impacts are less than significant.

Mitigation: None Required.

Impact HAZ-4: Adoption and development under the Specific Plan would result in the exposure of hazardous building materials during building demolition (Criterion 2). (Less than Significant)

Demolition of existing structures or portions thereof within the Plan Area may expose construction workers, the public, or the environment to hazardous materials such as lead-based paint, asbestos, and PCBs. The level of potential impact is dependent upon the age, construction, and building materials in each area of the building. As discussed above, asbestos containing materials may be present at the site which, if disturbed, could expose workers and the public during demolition. Any remaining asbestos containing materials would need appropriate abatement of identified asbestos prior to demolition. These impacts would be potentially significant.

Potential exposure to these hazardous building materials would be reduced through appropriate identification, removal and disposal according to applicable regulations to less-than-significant levels. Asbestos containing materials are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal-OSHA.

Cal-OSHA also regulates worker exposure to lead-based paint. In structures slated for demolition for adoption and development under the Specific Plan, any asbestos-containing materials would be abated in accordance with state and federal regulations prior to the start of demolition or renovation activities. Section 19827.5 of the California Health and Safety Code requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified 10 days in advance of any proposed demolition or abatement work.

Notification includes the names and addresses of operations and persons responsible; description and location of the structure to be demolished/altered including size, age, and prior use, and the approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The BAAQMD randomly inspects asbestos removal operations and would inspect any removal operation about which a complaint has been received.

Asbestos abatement contractors must follow state regulations contained in 8 CCR 1529 and 8 CCR 341.6 through 341.14 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a hazardous waste generator number assigned by and registered with the DTSC in Sacramento. The site owner or responsible party and the transporter of the waste are required to file a hazardous waste manifest that details the transportation of the material from the site and its disposal.

Both the federal OSHA and Cal-OSHA regulate worker exposure during construction activities that disturb lead-based paint. The Interim Final Rule found in 29 CFR 1926.62 covers construction work in which employees may be exposed to lead during such activities as demolition, removal, surface preparation for repainting, renovation, cleanup, and routine maintenance. The OSHA-specified compliance includes respiratory protection, protective clothing, housekeeping, special high-efficiency filtered vacuums, hygiene facilities, medical surveillance, and training. No minimum level of lead is specified to activate the provisions of this regulation.

Compliance with these regulations and procedures, as well as SCA 65, *Lead-base Paint Remediation*, and SCA 41, *Asbestos Removal in Structures*, would ensure that any potential impacts due to lead-base paint or asbestos are less than significant.

Fluorescent lighting ballasts manufactured prior to 1978, and electrical transformers, capacitors, and generators manufactured prior to 1977, may contain PCBs. In accordance with the Toxic Substances Control Act and other federal and state regulations, adoption and development under the Specific Plan would be required to properly handle and dispose of electrical equipment and lighting ballasts that contain PCBs, reducing potential impacts to a less-than-significant level.

Mitigation: None Required.

Hazardous Materials within a Quarter Mile of a School

Impact HAZ-5: Adoption and development under the Specific Plan would require use of hazardous materials within 0.25 mile of a school (Criterion 4). (Less than Significant)

There are no schools located within the Plan Area; however, as discussed in the Environmental Setting, there are five schools or daycare facilities located within 0.25 miles of the Plan Area. These schools or daycare facilities include: Westlake Middle School, 2629 Harrison Street; St. Paul's Episcopal School, 262 Grand Avenue; Oakland Emiliano Zapata Street Academy, 417 29th Street; Snow White Pre-School, 241 West MacArthur Boulevard; and Samuel Merritt University, 3100 Telegraph Avenue. As discussed in the Environmental Setting section and *Impact HAZ-1* above, adoption and development under the Specific Plan as well as existing, zoned land uses in the Plan Area could require the use, transport and storage of hazardous materials. In the event of an accidental release of hazardous materials in the vicinity of a school, as outlined below, these potential risks would be less than significant given incorporation of SCAs and other existing regulatory requirements.

Adoption and development under the Specific Plan would be required to comply with the City of Oakland's Ordinances and General Plan Policies that require hazardous material handlers within 1,000 feet of a school or other sensitive receptor to prepare a Hazardous Materials Assessment Report and Remediation Plan (HMARRP). The HMARRP would disclose the use of hazardous materials at the site, conduct assessments of potential off-site risks (such as a Health Risk Assessment), and implement precautions to reduce identified risks. The HMARRP must identify hazardous materials used at a project site, the potential on-site and off-site risks, and measures to be implemented to reduce or eliminate these risks. The HMARRP is subject to review and approval by the City of Oakland. Additionally, those handling or storing hazardous materials would be required to prepare a Hazardous Materials Management Plan (HMMP) and Hazardous Materials Business Plan (HMBP) as required by Alameda County and the City's SCA 74, *Hazardous Materials Business Plan*. Completing these requirements would reduce to a less-than-significant level the potential for an unacceptable release of hazardous materials within 0.25 mile of a school.

Mitigation: None Required.

Emergency Access Routes

Impact HAZ-6: Development under Specific Plan could result in fewer than two emergency access routes for streets exceeding 600 feet in length but would not physically interfere with an adopted emergency response plan or emergency evacuation plan (Criteria 6 and 9). (Less than Significant)

Adoption and development under the Specific Plan could require temporary construction activities which could result in fewer than two emergency access routes for streets exceeding 600 feet in length. Temporary construction closures or limited emergency access could impede emergency response and create hazardous conditions for the public. As outlined below, these potential risks would be less than significant given incorporation of SCAs and other existing regulatory requirements.

Overall, the adoption and development under the Specific Plan would not impede an emergency access route and would continue to maintain the existing city grid system. Additionally, the adoption and development under the Specific Plan would not result in permanent road closures, and therefore, would not physically interfere with emergency response or evacuation plans. In addition, construction activities that would result in temporary road closures, would include traffic control plans to ensure emergency vehicle access and therefore would not cause an impact.

Adoption and development under the Specific Plan would be required to comply with City of Oakland's Ordinances and General Plan Policies. Overall, the construction of the adoption and development under the Specific Plan that would result in temporary road closures, would include traffic control plans to ensure at least two emergency access routes are available for streets exceeding 600 feet in length. Compliance with all applicable requirements would reduce potential impacts to a less-than-significant level.

Mitigation: None Required.

Cumulative Impacts

Impact HAZ-7: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would result in cumulative hazards. (Less than Significant)

Geographic Context

The cumulative geographic context for hazardous materials for the adoption and development under the Specific Plan consists of the Plan Area in addition to all areas of the City and area roadways used to transport hazardous materials.

Impacts

Cumulative health and safety effects could occur if activities in the Plan Area and other existing and proposed development, together, could increase risks in the Plan Area. Cumulative health and safety impacts could occur if outdoor or off-site hazards related to adoption and development under the Specific Plan were to interact or combine with those of other cumulative development within and around the Plan Area (as described in Major Projects List in Appendix B to this Draft EIR). These impacts could occur through limited mechanisms: air emissions, transport of hazardous materials and waste to or from a project site, inadvertent release of hazardous materials to the sewer or non-hazardous waste landfill, and potential accidents that require hazardous materials emergency response capabilities. Air emissions are addressed in Section 4.2, *Air Quality*. The other mechanisms for cumulative off-site effects are discussed below.

Because several development projects in the vicinity of the Plan Area could involve the same roads used by developments within the Plan Area, the adoption and development under the Specific Plan could contribute to cumulative increases in the amount of hazardous material transported to and from the Plan Area. Cumulative increases in the transportation of hazardous materials and wastes would cause a less-than-significant impact because the probability of such accidents is relatively low due to the stringent policies regulating the transport, use and storage of hazardous materials. Adoption and development under the Specific Plan would be required to comply with the City's SCA 66, *Other Materials Classified as Hazardous Waste*, and SCA 74, *Hazardous Materials Business Plan*, which outlines the guidance for transporting hazardous materials safely to and from the project sites, in addition to SCA 61, *Site Review by Fire Services Division*, to ensure overall compliance of projects for hazardous materials.

Adoption and development under the Specific Plan would contribute to cumulative increases in the demand for hazardous materials emergency response capabilities in Oakland. Any growth involving increased hazardous materials use has the potential to increase the demand for emergency response capabilities in the area. However, first response capabilities and hazardous materials emergency response capabilities are currently available and sufficient for all cumulative projects. Furthermore, substantive hazardous materials accidents within the Plan Area or vicinity are expected to be rare, and when such incidents would occur, only one such incident would be expected at any one time (except during major catastrophes, such as major earthquakes). Furthermore, additional hazardous materials response services could be available through other jurisdictions, and private hazardous materials emergency response agencies could be used. Therefore, this cumulative impact would be less than significant.

Mitigation: None Required.

4.7.4 References

California Department of Forestry and Fire Protection (CAL FIRE), Fire and Resource Assessment Program, Fire Hazard Severity Zones in Local Responsibility Areas, Alameda County, California. November 7, 2007. Available online at http://frap.cdf.ca.gov/webdata/maps/alameda/fhszs_map.1.pdf. Accessed December 29, 2012.

California Environmental Protection Agency's (Cal EPA), Cortese List, Government Code Section 65962.5, accessed at: <http://www.calepa.ca.gov/SiteCleanup/CorteseList/default.htm> on January 13, 2013.

California State Regional Water Quality Control Board (SWRCB), available online at <http://www.geotracker.swrcb.gov>, accessed December 27, 2012.

City of Oakland, City of Oakland General Plan Safety Element, adopted November 2004.

City of Oakland Public Works, Oakland Urban Land Redevelopment Program Guidance Document, January 2000.

Department of Toxic Substances Control, Envirostor Database, available online at <http://www.envirostor.dtsc.ca.gov/public/>, accessed December 27, 2012.

US Environmental Protection Agency (USEPA), radon website accessed at www.epa.gov/radon/healthrisks.html on January 13, 2013.

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4.8 Hydrology and Water Quality

This section discusses the hydrology and water quality associated with Plan Area and analyzes how adoption and development under the Specific Plan may affect those resources. This section describes the environmental and regulatory setting relevant to hydrology and water quality in the Plan Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.8.1 Environmental Setting

Regional Drainage Patterns

The Plan Area is located within the San Francisco Bay Hydrologic Region (DWR, 2003). San Francisco Bay provides a topographic separation between the northern and southern coastal mountain ranges. The San Francisco Bay estuarine system receives fresh water from numerous drainages, including the waters of the Sacramento and San Joaquin Rivers, which then drain into the Pacific Ocean at the Golden Gate. Flow in the East Bay area generally flows from east to west, originating in the undeveloped foothills as natural streams, passing through developed urban areas via improved channels, and discharging into sloughs that eventually flow into San Francisco Bay.

Local Drainage Patterns

The Plan Area is within the Glen Echo Creek Watershed of the east bay region (Oakland Museum, 2012). All portions of the Plan Area drain toward the creek or to Lake Merritt. The area is relatively flat and drainage patterns vary with local topography. The Plan Area is largely developed and surface runoff is generally captured by City of Oakland drainage systems. Glen Echo Creek has alternating daylighted and culverted sections along its 1.25-mile length from its origin above the Mountain View Cemetery at the northern terminus of Piedmont Avenue, southwest to its outlet in Lake Merritt. Within the Plan Area, the surface topography generally slopes from northwest to southeast. The daylighted sections of Glen Echo Creek in the Plan Area vicinity begin north of I-580 and extend south parallel to Richmond Boulevard to 30th Street where it follows the eastern boundary of the Plan Area to 29th Street. Between 29th Street and Adams Park the creek is carried in a below grade culvert that runs along the base of the hill and then under the 27th and Harrison Street rights-of-way. The creek daylights again with a short section in Adams Park before flowing under Grand Avenue and into Lake Merritt and eventually into the Bay (BKF, 2012; WRT, 2009).

Surface Water

The major surface water body in the Plan Area is Glen Echo Creek. Additionally, Lake Merritt, San Antonio Creek, the Oakland Estuary, and San Francisco Bay are in the project vicinity. A number of other creeks flow into Lake Merritt, which subsequently drains into the Lake Merritt Channel (San Antonio Slough), Oakland Estuary, and San Francisco Bay. Lake Merritt is a

140-acre tidal estuary that was formed thousands of years ago and has been extensively modified in the past 150 years (Lake Merritt Institute, 2013). The depth of Lake Merritt ranges from approximately eight to 10 feet. The lake is flushed twice daily by tides and receives freshwater from 60 storm drains. Therefore, the lake has a mixture of freshwater and saltwater.

Water Quality

The Plan Area lies in a predominantly urbanized area adjacent to San Francisco Bay. The Glen Echo Creek watershed is an urbanized area containing both residential and commercial development (WRT, 2009). Surface water within the watershed reaches Glen Echo Creek and its tributaries and then flows through a combination of open creek (daylighted) and culverted underground sections described above. Available data regarding the water quality of the Glen Echo watershed system was contained within a sediment study of Glen Echo Creek conducted by the Alameda County Clean Water Program (ACCWP) in 2002. The water quality report prepared for this study presented results of water quality sampling conducted in 2000 and 2001 in Glen Echo Creek to generate baseline information on particulate-associated contaminants (ACCWP, 2002). The 2002 ACCWP water quality study identified concentrations of polychlorinated biphenyls (PCBs) and mercury from two sampling sites within a daylighted section of the mainstem Glen Echo Creek (north and east of Piedmont Avenue). The detected PCB and mercury levels are relatively low but are above the background levels typically expected for such an urban stream system. The study concluded that the PCB and mercury concentrations are attributable to a source within the sampled daylighted section of Glen Echo Creek more than 2,000 feet north and east of the Plan Area.

Lake Merritt is classified as a 303(d)-listed impaired water body and Wildlife Refuge due to organic enrichment/low dissolved oxygen (listed in 2002) and high levels of trash (listed in 1998) (RWQCB, 2010). The trash primarily enters the lake through urban runoff and storm sewers. In 2006, the Coastal Commission identified bacteria as another pollutant of concern (Coastal Commission, 2006). More details about the 303(d) classification are in the *Regulatory Framework* section below.

Stormwater Runoff and Drainage Facilities

Stormwater runoff in Oakland is generally collected from the Oakland-Berkeley Hills to the northeast through the developed flatlands where it then flows primarily through underground storm drains and culverts to the San Francisco Bay via the Oakland Estuary (directly or by way of Lake Merritt) or through the City of Emeryville. The Alameda County Flood Control and Water Conservation District (ACFCWCD) constructs, operates, and maintains major trunk lines and flood-control facilities in Oakland, and the Oakland Public Works Agency (PWA) is responsible for construction and maintenance of the local storm drainage system within Oakland's public areas and roads. Stormwater runoff is conveyed in the Plan Area through onsite pavement gutters, surface drains, parking lots, and roof drains that discharge to local surface waters, as discussed above.

Flooding

Flooding is inundation of normally dry land as a result of rapid accumulation of stormwater runoff or rise in the level of surface waters. Flooding becomes a hazard when the flow of water exposes people or structures to a significant risk of loss, injury, or death. Flooding generally occurs due to excess runoff due to heavy snowmelt or rainfall, but it can also result from the interaction with natural hazards, such as tsunamis, seiches, or failure of dams.

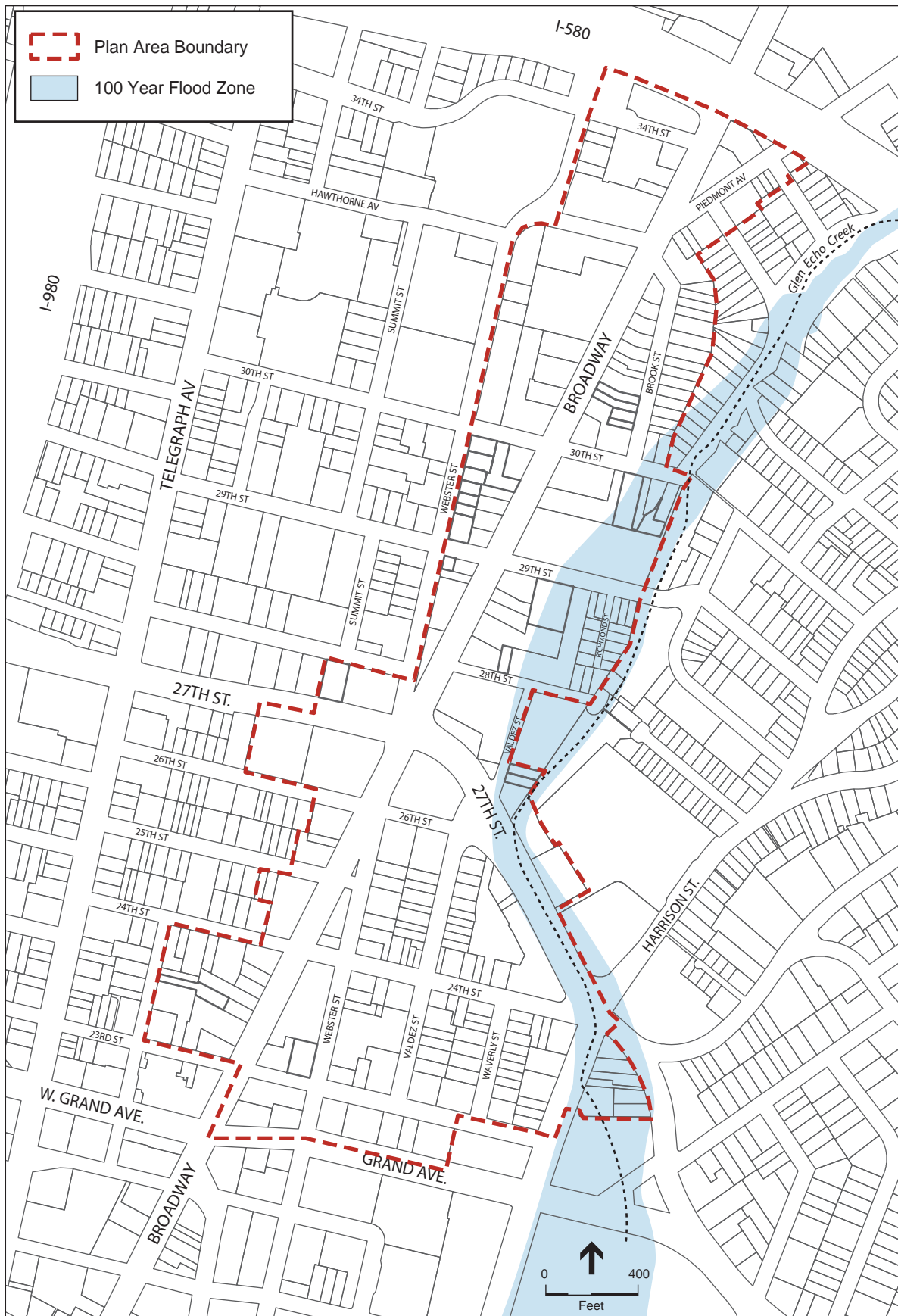
The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Map (FIRM) program, designates areas where flooding could occur during a one percent annual chance (100-year) or a 0.2 percent annual chance (500-year) flood events. As shown in **Figure 4.8-1**, the Plan Area is largely located in an area designated with minimal flooding potential. However, there is a 100-year flood zone associated with Glen Echo Creek that does overlap the boundary on the eastern side from 30th Street southward to 23rd Street (FEMA, 2009).

Tsunamis are waves caused by an underwater earthquake, landslide, or volcanic eruption. Seiches are waves in a semi-enclosed or enclosed body of water such as a lake, reservoir, or harbor. The Plan Area is outside of the Tsunami Inundation Area identified by the Association of Bay Area Governments website (ABAG, 2012a). The occurrence of devastating seiches in Oakland is unlikely because Lake Merritt is too shallow to generate a seiche of sufficient size to cause significant damage (City of Oakland, 2004).

Flooding could also occur due to dam failure. The California Department of Water Resources, Division of Safety of Dams (DSOD) oversees the construction of dams that are over 25 feet high and impound over 15 acre-feet of water, or those that are over six feet high and impound over 50 acre-feet of water. Due to DSOD regulatory oversight, monitoring, and design review, the potential for the catastrophic failure of a properly designed and constructed dam is minimal, whether caused by a seismic event, flood event, unstable slope conditions, or damage from corrosive or expansive soils. The DSOD requires dam owners to develop maps designating potential dam failure. ABAG compiled these maps into a central database for many bay area cities, including Oakland. Based on these maps, the eastern portion of the Plan Area that generally abuts Glen Echo Creek lies in the Piedmont and Estates Dam inundation areas (ABAG, 2012a). These dams are located further east of the Plan Area but a catastrophic failure could potentially cause a release that would inundate a large area including portions of the Plan Area. **Figure 4.8-2** identifies the dam inundation zone in the Plan Area.

Sea Level Rise

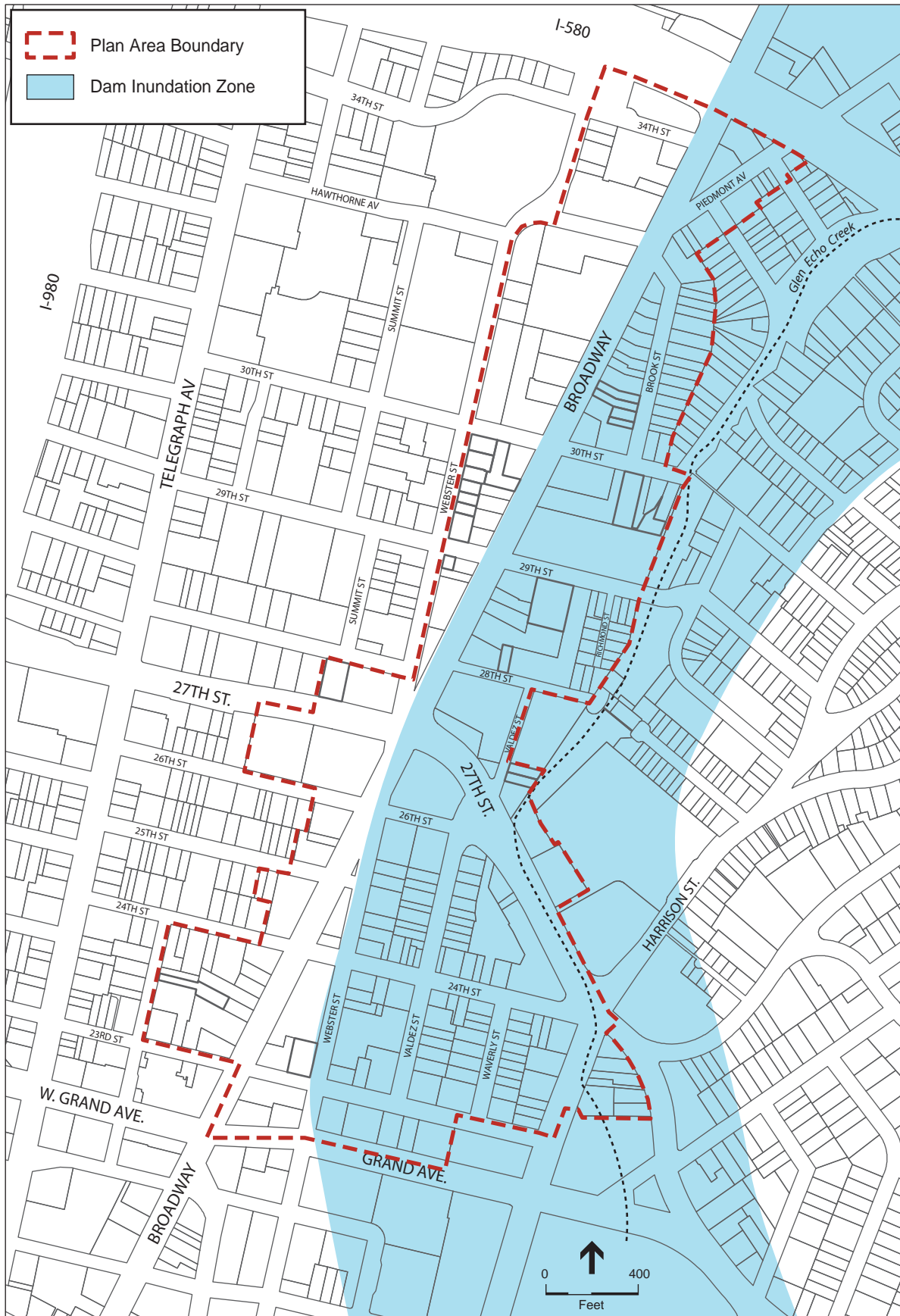
Global climate change refers to changes in the Earth's weather including temperature, precipitation, and wind patterns. The world's leading climate scientists have reached consensus that global climate change is underway and hotter temperatures and rises in sea level would continue for centuries, no matter how much humans control future emissions. Based upon a review of various climate models, the Intergovernmental Panel on Climate Change (IPCC)



SOURCE: FEMA

Broadway Valdez District Specific Plan . 208522

Figure 4.8-1
100 Year Flood Zone



SOURCE: ABAG

Broadway Valdez District Specific Plan . 208522

Figure 4.8-2
Dam Inundation Zone

reports that temperature increases by the year 2099 are likely to range from one to seven (1-7) degrees Fahrenheit, although other regional models for northern California estimate global temperature increases of up to nine (9) degrees Fahrenheit. Increases in global temperatures in these ranges may have multiple effects on the water resources in Oakland, including sea level rise and increased flooding risk. Periodic flooding could occur as a result of climate-induced increases in the level of San Francisco Bay waters, combined with other factors such as tidal cycles, storm surge, wind waves and swell, or seismic waves. Future potential sea level rise associated with climate change may pose risks of inundation to existing and proposed development located in low-lying areas close to San Francisco Bay, including the Oakland Shoreline.

The rate of potential future sea level rise is difficult to project, and estimates vary substantially among the thousands of scientific research documents available on climate change and sea level rise. There have been a number of recent projections on the future magnitude of sea level rise in the San Francisco Bay Area (Bay Area). Each of the projections make different assumptions in relation to the rapid economic growth and large expansions of greenhouse gas (GHG) emissions, as well as several other global components that affect sea level rise (i.e., thermal expansion, melting of global ice, oceanic circulation, and vertical land movement). Based on the most widely accepted literature, the following examples provide a reasonable range of low, medium, and high estimates of future potential sea level rise that could likely occur.

1. **Low Rate of Increase:** The rate of future potential sea level rise could occur according to the low end of the range of sea level rise projections for the emissions scenarios presented in the Fourth Assessment Report by the Intergovernmental Panel on Climate Change. Relative to sea levels in the year 2000, sea level is projected to rise 3 inches by 2050, and 12 inches by 2100 (IPCC, 2007).
2. **Medium Rate of Increase:** The rate of future potential sea level rise could occur according to estimates by the California Climate Change Center, which indicate that sea level is projected to rise by up to 35 inches by 2100 (CEC, 2009).
3. **High Rate of Increase:** Future potential sea level rise could occur at a higher rate, possibly resulting in an increase of 16 inches by 2050, and 55 inches (or higher) by 2100 (San Francisco Bay Conservation and Development Commission [BCDC], 2011).

These values have been cited by both BCDC in its *Living with Rising Seas* report and the State of California in its *2009 Draft Climate Adaptation Strategy*. Both reports recommend using this upper end of the range as guidance to local and State agencies planning for sea level rise, and are consistent with recent predictions made by the Pacific Institute. Further, the State of California Sea Level Rise Interim Guidance Document developed by the Sea-Level Rise Task Force of the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), recommends the consideration of the following sea level rise scenarios for planning purposes in the San Francisco Bay Area region and California as a whole:

- Year 2050 scenario – 16-inch rise (equivalent to 1.3 feet or 0.4 meters)
- Year 2100 scenario – 55-inch rise (equivalent to 4.6 feet or 1.4 meters)

These scenarios are consistent with the upper end of the range, have been adopted as policy by the California State Coastal Conservancy, and are used by the BCDC and other regional and state agencies for planning purposes.

Other factors, including nonlinear effects associated with potential instability of the Greenland and Antarctic ice sheets, have also been discussed in the literature. However, the potential contributions to future sea level rise from ice melt have not been definitively established and such factors in general are not considered when analyzing potential sea level rise impacts. In addition to sea level rise, global warming may affect other flood related factors such as storm surge, wave height and run-up, and rainfall intensity. Generally more intense but less frequent precipitation is predicted, with storm patterns shifting to earlier in the fall and winter months. More intense storms may cause increased storm surge and wave heights in the Bay.

The ABAG website shows the maximum potential sea level rise of 55 inches would be projected to affect Lake Merritt and adjacent to, but not within, the Plan Area (ABAG, 2012b).

Groundwater

A groundwater basin is a hydrogeologic unit containing several connected and interrelated aquifers or one large aquifer (RWQCB, 2011). The Plan Area lies in the East Bay Plain groundwater basin (Basin No. 2-9.01) that extends from Richmond to Hayward (DWR, 2003). The basin is a northwest-trending alluvial plain bounded on the west by San Francisco Bay, on the north by San Pablo Bay, on the east by Franciscan basement rock, and on the south by the Niles Cone Groundwater Basin. The alluvial materials that extend westward from the East Bay hills to San Francisco Bay constitute the deep water-bearing strata for the groundwater basin. The basin is identified as a potential water source for agricultural, industrial, and municipal use (RWQCB, 2011). Groundwater in the Plan Area occurs at relatively shallow depths but there are no water supply wells in the Plan Area. At a leaking underground storage tank (LUST) cleanup site at 327 34th Street, at the northern end of the Plan Area, the depths to groundwater ranged from about 12.5 to 23 feet below the ground surface between 1993 and 2012 (LRM, 2012). At the lower elevation southern end of the Plan Area near Lake Merritt, the depth to groundwater is shallower. At a LUST site at 2350 Harrison Street, the depths to groundwater ranged from 3.13 to 10.92 feet below the ground surface between 2008 and 2011 (Conestoga-Rovers, 2012).

4.8.2 Regulatory Framework

Federal, state, and local agencies regulate activities that could affect hydrological and water quality features in the Plan Area. This section describes the regulatory framework that would apply to development in the Plan Area.

Federal

Clean Water Act (CWA)

The CWA established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the USEPA the authority to implement pollution control programs such as

setting wastewater standards for industry. The CWA sets water quality standards for all contaminants in surface waters. The statute employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The U.S. Army Corps of Engineers (USACE) has jurisdiction over all waters of the U.S. including, but not limited to, perennial and intermittent streams, lakes, and ponds, as well as wetlands in marshes, wet meadows, and side hill seeps. Under Section 401 of the CWA, every applicant for a federal permit or license for any activity that may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with state water quality standards.

The National Pollutant Discharge Elimination System (NPDES) permit program under the CWA controls water pollution by regulating point and nonpoint sources that discharge pollutants into “waters of the U.S.” California has an approved state NPDES program. The USEPA has delegated authority for NPDES permitting to the California State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay RWQCB regulates water quality in the Plan Area.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are “impaired” (i.e., not meeting one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Generally, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The intent of the Section 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality.

In accordance with Section 303(d), the San Francisco Bay RWQCB has identified impaired water bodies within its jurisdiction, along with the pollutant or stressor responsible for impairing the water quality (RWQCB, 2010). In the San Francisco Bay region, the RWQCB has listed Lake Merritt as an impaired water body for organic enrichment/low dissolved oxygen and trash. The RWQCB has not yet developed TMDLs for Lake Merritt.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act, Division 7 of the California Water Code, requires the SWRCB to adopt water quality control plans. The purpose of the plans is to establish water quality objectives for specific water bodies. The act also authorizes the NPDES program under the CWA, which establishes water quality requirements for discharges to waters of the state. Most of the implementation of SWRCB’s responsibilities is delegated to nine regional boards. The San Francisco Bay RWQCB has established the regional basin plan and the permit requirements for stormwater runoff for the Plan Area (see *Regional Water Quality Control Board* section below).

California Toxics Rule

Under the California Toxics Rule, the USEPA has proposed water quality criteria for priority toxic pollutants for inland surface waters, enclosed bays, and estuaries. These federally promulgated criteria create water quality standards for California waters. The California Toxic Rule satisfies CWA requirements and protects public health and the environment. The USEPA and the SWRCB have the authority to enforce these standards. However, construction activities from adoption and development under the Specific Plan could require discharge toxic pollutants directly into the inland surface waters, such as Lake Merritt, or San Francisco Bay, therefore the California Toxic Rule would apply.

Sea Level Rise

California Climate Adaption Strategy

In November 2008, Governor Arnold Schwarzenegger issued Executive Order S-13-08. The Order indicated that future potential sea level rise associated with climate change may have a substantial effect on coastal development, and initiated the assessment of relative sea level rise projections specific to California. The assessment takes into account issues such as (1) erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; (2) the range of uncertainty in selected sea level rise projections, (3) a synthesis of existing information on projected sea level rise impacts to State infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and (4) a discussion of future research needs regarding sea level rise for California.

Per Executive Order S-13-08, the Governor, with input from multiple state agencies, developed the 2009 California Climate Adaptation Strategy (Strategy)—a multi-sector strategy designed to help guide California's efforts in adapting to climate change impacts (California Natural Resources Agency, 2009). The purpose of the 2009 Strategy is to identify the best known science on climate change impacts in seven specific sectors and make recommendations on how to manage those effects. The seven sectors in the report include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The contents of the strategy were developed to address how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. A key recommendation in the Strategy is that State agencies should generally not plan, develop, or build any new significant structure in a place where that structure will require significant protection from sea level rise, storm surges, or coastal erosion during the expected life of the structure. However, the Strategy recognizes that vulnerable shoreline areas containing existing development that have regionally significant economic, cultural, or social value may have to be protected, and infill development in these areas may be accommodated. The Strategy stated that State agencies should incorporate this policy into their decisions and other levels of government are also encouraged to do so.

Draft California Climate Adaption Policy Guide

The Draft California Climate Adaptation Policy Guide (APG) was published in April of 2012 by the California Emergency Management Agency and the California Natural Resources Agency to

provide a method for local and regional entities to evaluate vulnerability and devise adaption strategies to address the impacts of climate change including sea level rise and flooding (California Emergency Management Agency and the California Natural Resources Agency, 2012). The APG seeks to provide a comprehensive approach to climate adaptation. However, because the most effective adaptation policy is based on local conditions, needs, and resources, the APG is not prescriptive in its approach. Instead, it is a decision-making framework that provides guidance for communities to begin taking direct actions in response to climate impacts. The APG is divided into three parts: 1) Introduction and Framework, 2) Regional Adaption Considerations, and 3) Adaption Strategies.

The APG analyzed specific regions including the Bay Area and the following climate impact sectors: Equity, Health and Socio-Economic Impacts; Ocean and Coastal Resources; Water Management; Biodiversity and Habitat; Forest and Rangeland and Agriculture, as well as Transportation and Energy Infrastructure. The APG identified sea level rise, flooding, equity, health and socio-economic impacts, fire, and ecosystem and agriculture as areas to consider in developing for adaption strategies. The selected adaption strategies included:

Strategy 3.1: Develop an adaptive management plan to address the long term impacts of sea level rise.

Strategy 3.3: Require accounting of sea level rise in all applications for new development in shoreline areas.

Regional

Regional Water Quality Control Board

The San Francisco Bay RWQCB is responsible for the protection of beneficial uses and the water quality of water resources within the San Francisco Bay region. The San Francisco Bay RWQCB administers the NPDES stormwater permitting program and regulates stormwater in the San Francisco Bay region. The City of Oakland is a permittee under the NPDES Municipal Stormwater Permit for the Alameda Countywide Clean Water Program (see below for detailed discussion). Project applicants are required to apply for a NPDES General Permit for discharges associated with project construction activities of greater than one acre.

Construction General Permit

Stormwater discharges from construction activities on one acre or more are regulated by the RWQCB and are subject to the permitting requirements of the NPDES General Permit for Discharges of Stormwater Runoff Associated with Construction Activity (General Construction Permit, 99-08-DWQ). All dischargers are required to obtain coverage under the Construction General Permit Order 2009-0009-DWQ adopted on September 2, 2009. The RWQCB established the General Construction Permit program to reduce surface water impacts from construction activities. Construction associated with adoption and development under the Specific Plan would be required to comply with the current NPDES permit requirements to control stormwater discharges from the construction site. The General Construction Permit requires the preparation and

implementation of a Stormwater Pollution Prevention Plan (SWPPP) for construction activities. The SWPPP must be prepared before the construction begins, and in certain cases, before demolition begins. The SWPPP must include specifications for BMPs that would need to be implemented during project construction. BMPs are measures that are undertaken to control degradation of surface water by preventing soil erosion or the discharge of pollutants from the construction area. The SWPPP must describe measures to prevent or control runoff after construction is complete and identify procedures for inspecting and maintaining facilities or other project elements. Required elements of a SWPPP include:

1. Site description addressing the elements and characteristics specific to the site
2. Descriptions of BMPs for erosion and sediment controls;
3. BMPs for construction waste handling and disposal;
4. Implementation of approved local plans;
5. Proposed post-construction controls; and
6. Non-stormwater management.

Examples of typical construction BMPs include scheduling or limiting activities to certain times of year, installing sediment barriers such as silt fence and fiber rolls, maintaining equipment and vehicles used for construction, tracking controls such as stabilizing entrances to the construction site, and developing and implementing a spill prevention and cleanup plan. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The California Stormwater Quality Association (CASQA) established BMPs for the State of California in the *California Storm Water Best Management Practice Handbook* in 2003. The CASQA BMPs are now only available through a paid subscription website.

Regional Water Quality Control Plan

The San Francisco Bay RWQCB prepared the *San Francisco Bay Basin Water Quality Control Plan* (Basin Plan) for San Francisco Bay (RWQCB, 2011). The Basin Plan contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the region and describes beneficial uses of major surface waters and their tributaries. The Basin Plan lists the following beneficial uses for the South Basin of San Francisco Bay:

- Ocean, Commercial, and Sport Fishing
- Estuarine Habitat
- Industrial Service Supply
- Fish Migration
- Navigation
- Preservation of Rare and Endangered Species
- Water Contact Recreation
- Noncontact Recreation
- Shellfish Harvesting
- Wildlife Habitat

The Basin Plan identifies the following beneficial uses for Lake Merritt:

- Water Contact Recreation
- Noncontact Recreation
- Fish Spawning
- Wildlife Habitat

For adoption and development under the Specific Plan, the RWQCB is responsible for regulating construction activities to ensure the protection of the above beneficial uses.

San Francisco Bay Conservation and Development Commission Permit Program

The San Francisco Bay Conservation and Development District (BCDC) is a state agency created in 1965 to regulate development in the Bay and along its shoreline for the purpose of limiting and controlling the amount of fill placed in the Bay. It is necessary to obtain a BCDC permit prior to undertaking most work in the Bay or within 100 feet of the shoreline, including filling, dredging, shoreline development and other work. There are several different types of permit applications, depending on the size, location, and impacts of a project.

BCDC's review of proposed projects and policies within its jurisdiction that may be impacted by sea level rise are guided by the climate policies in the San Francisco Bay Plan (Bay Plan), which were adopted in an amendment on October 6, 2011 (BCDC, 2011b). The Bay Plan was amended to address sea level rise impacts and includes revisions to the findings and policies in the Tidal Marshes and Tidal Flats, Safety of Fills, Protection of the Shoreline, and Public Access sections. More specifically, the Bay Plan requires that when planning shoreline areas or designing larger shoreline projects, a risk assessment should be prepared to determine all types of potential flooding, degrees of uncertainty, consequences of defense failure and risks to existing habitat from proposed flood protection devices. The Bay Plan climate policies also state that most projects should be designed to be resilient to a midcentury sea level rise projection and an adaptive management plan be developed to address the long-term impacts based on the risk assessment conducted for the project. In recognition of the need for a regional perspective on the issue, the Bay Plan recommends the development of a regional sea-level rise strategy adaptation strategy.

As noted above, the BCDC issued in its *Living with Rising Seas* report guidance for addressing future sea level rise scenarios associated with planning and permitting development in potentially susceptible areas (BCDC, 2011a). These are:

- 16 inches by 2050; and
- 55 inches by 2100.

These values represent the upper end of a reasonably conservative range of sea level rise estimates. These values are meant to ensure that projects take these estimates into account when planning infrastructure and development projects. These upper end estimates are not meant to serve as design criteria for initial improvements; rather, they are provided to ensure that projects

take into account future potential sea level rise in their design and planning, and include adaptive management strategies and measures to accommodate such levels when and if they are reached.

The BCDC has recently completed an analysis of potential sea level rise in the San Francisco Bay based on projections of a 16 inch sea level rise by mid-century (2050) and approximately 55 inch sea level rise by the end of the century (2100) (BCDC, 2011a). The BCDC, along with other local, regional, state and federal agencies, organizations, and associations, are currently engaged in a collaborative planning process called the Adapting to Rising Tides (ART Project) with the purpose of providing a potential methodology on how to assess impacts as well as guidance on developing adaption strategies associated with sea level rise for future planning. The ART project involves a subregion of the San Francisco Bay shoreline encompassing a portion of the Alameda County shoreline, from Emeryville to Union City. The Plan Area is not located within the ART Project subregion.

Alameda County Regulations

The ACFCWCD and the City of Oakland PWA share responsibility for maintaining drainage facilities in Oakland. The Plan Area lies within the jurisdiction of Zone 12 of the ACFCWCD (ACFCWCD, 2010). Adoption and development under the Specific Plan would be required to comply with the requirements of these agencies.

Alameda Countywide Clean Water Program (ACCWP)

The ACCWP includes 17 member agencies that work together to protect creeks, wetlands, and San Francisco Bay. The City of Oakland and ACFCWCD are two of the agencies that participate in the ACCWP. The member agencies have developed performance standards to clarify the requirements of the stormwater pollution prevention program, adopted stormwater management ordinances, conducted extensive education and training programs, and reduced stormwater pollutants from industrial areas and construction sites. In the Plan Area, the ACCWP administers the stormwater program to meet CWA requirements by controlling pollution in the local storm drain sewer systems.

The ACCWP is part of the Municipal Regional Stormwater NPDES Permit (MRP) that was adopted by the RWQCB on October 14, 2009. The new NPDES permit (Order R2-2009-0074 Permit No. CAS612008) issued by the RWQCB is designed to enable the ACCWP agencies to meet CWA requirements. The permit addresses the following major program areas: regulatory compliance, focused watershed management, public information/participation, municipal maintenance activities, new development and construction controls, illicit discharge controls, industrial and commercial discharge controls, monitoring and special studies, control of specific pollutants of concern, and performance standards. The permit also includes performance standards for new development and construction activities also referred to as Provision C.3 requirements. The C.3 requirements include measures for Permittees to use in planning appropriate source controls in site designs to include stormwater treatment measures in development projects to address both soluble and insoluble stormwater runoff pollutant discharges. An additional goal is to prevent increases in runoff flows primarily accomplished through implementation of low impact development (LID) techniques.

“Redevelopment” is defined as a project on a previously developed site that results in the addition or replacement of impervious surface. According to the C.3 provision in the ACCWP NPDES permit, the potential actions under the Specific Plan fall in the “significant redevelopment projects” category under Group 1 Projects. A significant redevelopment project is defined as a project on a previously developed site that results in addition or replacement of total of 43,560 square feet (one acre) or more of impervious surface. The permit requires that in the case of a significant redevelopment project that would result in an increase of, or replacement of, more than 50 percent of the impervious surface of a previously existing development, and the existing development was not subject to stormwater treatment measures, the entire project be included in the treatment measure design.

The C.3 provision also requires preparation of a hydrograph modification management plan (HMP) in cases where the changes in the amount and timing of runoff would increase stormwater discharge rates and/or duration and increase the potential for erosion or other significant adverse impacts to beneficial uses. The actions under the Specific Plan shall comply with the provisions of the ACCWP NPDES Permit.

Oakland has jurisdiction over and/or maintenance responsibility for its municipal separate storm drain systems and/or watercourses in the City. Construction activities associated with adoption and development under the Specific Plan would be subject to the NPDES permit requirements for stormwater management and discharges.

Local

City of Oakland General Plan

The following objectives, policies, and actions from City of Oakland’s General Plan are applicable to adoption and development under the Specific Plan:

- ***Open Space, Conservation and recreation (OSCAR), Chapter 3-Conservation, Water Resources, Objective CO-5: Water Quality:*** To minimize the adverse effects of urbanization on Oakland’s groundwater, creeks, lakes, and nearshore waters.
- ***Safety Element, Chapter 6-Geologic Hazards, Policy GE-2:*** Continue to enforce ordinances and implement programs that seek specifically to reduce the landslide and erosion hazards.
 - Action GE-2.2:* Continue to enforce the grading, erosion and sedimentation ordinance by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation.
 - Action GE-2.3:* Continue to enforce provisions under the creek protection, stormwater management and discharge control ordinance designed to control erosion and sedimentation.
 - Action GE-2.5:* Enact regulations requiring new development projects to employ site-design and source-control techniques to manage peak stormwater runoff flows and impacts from increased runoff volumes.

- **Safety Element, Chapter 6-Flooding Hazards, Policy FL-1:** Enforce and update local ordinance, and comply with regional orders that would reduce the risk of storm-induced flooding.

Action FL-1.1: Amend, as necessary, the city's regulations concerning new construction and major improvements to existing structures within flood zones in order to maintain compliance with federal requirements and, thus, remain a participant in the National Federal Insurance Program.

Action FL-1.3: Comply with all applicable performance standards pursuant to the 2003 Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit that seek to manage increases in stormwater runoff flows from new-development and redevelopment construction projects.

Action FL-1.4: Continue to enforce the grading, erosion, and sedimentation ordinance by prohibiting the discharge of concentrated stormwater flows by other than approved methods.

- **Safety Element, Chapter 6-Flooding Hazards, Policy FL-2:** Continue or strengthen city programs that seek to minimize the storm-induced flooding hazard.

Action FL-2.1: Continue to repair and make structural improvements to storm drains to enable them to perform to their design capacity in handling water flows.

- **Safety Element, Chapter 6-Flooding Hazards, Policy FL-4:** Minimize further the relatively low risks from non-storm-related forms of flooding.

Action FL-4.1: Request from the state Division of Safety of Dams a timeline for the maintenance inspection of all operating dams in the city.

Action FL-4.2: Review for adequacy, and update if necessary, procedures adopted by the city pursuant to the Dam Safety Act for the emergency evacuation of areas located below major water-storage facilities.

Action FL-4.3: Inform shoreline-property owners of the possible long-term economic threat posed by rising sea levels.

Action FL-4.4: Stay informed of emerging scientific information on the subject of rising sea levels, especially on actions that local jurisdictions can take to prevent or mitigate this hazard.

Oakland's Energy and Climate Action Plan

The City of Oakland has developed an Oakland Energy and Climate Action Plan (ECAP) to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. The ECAP identifies energy and climate goals, clarifies policy direction, and identifies priority actions for reducing energy use and GHG emissions. On July 7, 2009, the Oakland City Council directed staff to develop the draft Oakland ECAP using a GHG reduction target equivalent to 36 percent below 2005 GHG emissions by 2020. The City adopted the ECAP on December 4, 2012.

In addition to greenhouse gas emissions, the ECAP recognizes that climate change will likely include sea level rise and flooding impacts. Furthermore the ECAP notes that climate change vulnerability is a function of exposure to climate impacts, sensitivity to those impacts and the capacity to adapt and recover. The ECAP includes several adaption and resilience strategies including the following:

- ***Climate Action Plan AD-1:*** The City shall continue to participate in local and regional efforts to assess potential sea level rise impacts and shall consider implementing appropriate future recommended adaptation strategies as they are developed.
- ***Climate Action Plan AD-2:*** Conduct a study of all local climate impacts in collaboration with local partners including the BCDC, the Pacific Institute and UC Berkeley.
- ***Climate Action Plan AD-6:*** Encourage and participate actively in efforts of regional partners including BCDC to engage in the development of a regional climate adaption strategy informed by climate impact modeling, scenario analysis and development of adaption strategies to advance regional climate adaption capacity and resilience. Collaborate with local partners to ensure that the actions of neighboring jurisdictions or other agencies do not indirectly exacerbate impacts to Oakland neighborhoods.

City of Oakland Municipal Code

The City of Oakland implements the following regulations to protect water quality and water resources:

- ***Creek Protection, Stormwater Management, and Discharge Control Ordinance (Chapter 13.16 of the Oakland Municipal Code).*** This ordinance prohibits activities that would result in the discharge of pollutants to Oakland's waterways or in damage to creeks, creek functions, or habitat. The ordinance requires the use of standard BMPs to prevent pollution or erosion to creeks and/or storm drains. Additionally, a creek protection permit is required for any construction work on creekside properties. The ordinance establishes comprehensive guidelines for the regulation of discharges to the city's storm drain system and the protection of surface water quality. The ordinance identifies BMPs and other protective measures for development projects. Under the ordinance, the City of Oakland Public Works Agency issues permits for storm drainage facilities that would be connected to existing city drainage facilities. In 1997, the ordinance was amended to include the requirement for a creek protection permit for any construction or related activity on creekside property. The ordinance includes enforcement provisions to provide more effective methods to deter and reduce the discharge of pollutants to the storm drain system, local creeks, and San Francisco Bay. The provisions also list clear guidelines for creekside residents to protect the creek and habitat.
- ***Grading Ordinance (Chapter 15.04.660).*** The Grading Ordinance requires a permit for grading activities on private or public property for projects that exceed certain criteria, such as amount of proposed excavation and degree of site slope. During project construction, the volume of the excavated fill material could exceed 50 cubic yards and could result in a 20 percent slope onsite, or the depth of excavation could exceed five feet at any location. Therefore, the project sponsor would be required to apply for the grading permit and prepare a grading plan, erosion and sedimentation control plan, and drainage plan.

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

The City's SCAs relevant to hydrology and water quality are listed below for reference. If the Specific Plan is approved by the City, all applicable SCAs would be incorporated into the Specific Plan, adopted as conditions of approval, and required, as applicable, of the adoption and development under the Specific Plan to help ensure less-than-significant impacts to hydrology and water quality. The SCAs are incorporated and required as part of the Specific Plan, so they are not listed as mitigation measures. Standard Conditions of Approval applicable to potential geologic impacts could also affect hydrologic resources and are listed in Section 4.5, *Geology, Soils and Geohazards*. Standard Conditions of Approval applicable to potential hydrology and water quality impacts due to adoption and development under the Specific Plan include:

- **SCA 34: Erosion and Sedimentation Control [when no grading permit is required]**

Ongoing throughout demolition, grading, and/or construction activities. The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. Plans demonstrating the Best Management Practices shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

- **SCA 55: Erosion and Sedimentation Control Plan**

Prior to any grading activities. The project applicant shall obtain a grading permit if required by the Oakland Grading Regulations pursuant to Section 15.04.780 of the Oakland Municipal Code. The grading permit application shall include an erosion and sedimentation control plan for review and approval by the Building Services Division. The erosion and sedimentation control plan shall include all necessary measures to be taken to prevent excessive stormwater runoff or carrying by stormwater runoff of solid materials on to lands of adjacent property owners, public streets, or to creeks as a result of conditions created by grading operations. The plan shall include, but not be limited to, such measures as short-term erosion control planting, waterproof slope covering, check dams, interceptor ditches, benches, storm drains, dissipation structures, diversion dikes, retarding berms and barriers, devices to trap, store and filter out sediment, and stormwater retention basins. Off-site work by the project applicant may be necessary. The project applicant shall obtain permission or easements necessary for off-site work. There shall be a clear notation that the plan is subject to changes as changing conditions occur. Calculations of anticipated stormwater runoff and sediment volumes shall be included, if required by the Director of Development or designee. The plan shall specify that, after construction is complete, the project applicant shall ensure that the storm drain system shall be inspected and that the project applicant shall clear the system of any debris or sediment.

Ongoing throughout grading and construction activities. The project applicant shall implement the approved erosion and sedimentation plan. No grading shall occur during the wet weather season (October 15 through April 15) unless specifically authorized in writing by the Building Services Division.

- **SCA 75: Stormwater Pollution Prevention Plan (SWPPP)**

Prior to and ongoing throughout demolition, grading, and/or construction activities. The project applicant must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the State Water Resources Control Board (SWRCB). The project applicant must file a notice of intent (NOI) with the SWRCB. The project applicant will be required to prepare a stormwater pollution prevention plan (SWPPP) and submit the plan for review and approval by the Building Services Division. At a minimum, the SWPPP shall include a description of construction materials, practices, and equipment storage and maintenance; a list of pollutants likely to contact stormwater; site-specific erosion and sedimentation control practices; a list of provisions to eliminate or reduce discharge of materials to stormwater; Best Management Practices (BMPs), and an inspection and monitoring program. Prior to the issuance of any construction-related permits, the project applicant shall submit to the Building Services Division a copy of the SWPPP and evidence of submittal of the NOI to the SWRCB. Implementation of the SWPPP shall start with the commencement of construction and continue through the completion of the project. After construction is completed, the project applicant shall submit a notice of termination to the SWRCB.

- **SCA 78: Site Design Measures for Post-Construction Stormwater Management**

Prior to issuance of building permit (or other construction-related permit). The project drawings submitted for a building permit (or other construction-related permit) shall contain a final site plan to be reviewed and approved by Planning and Zoning. The final site plan shall incorporate appropriate site design measures to manage stormwater runoff and minimize impacts to water quality after the construction of the project. These measures may include, but are not limited to, the following:

- a) Minimize impervious surfaces, especially directly connected impervious surfaces;
- b) Utilize permeable paving in place of impervious paving where appropriate;
- c) Cluster buildings;
- d) Preserve quality open space; and
- e) Establish vegetated buffer areas.

Ongoing. The approved plan shall be implemented and the site design measures shown on the plan shall be permanently maintained.

- **SCA 79: Source Control Measures to Limit Stormwater Pollution**

Prior to issuance of building permit (or other construction-related permit). The applicant shall implement and maintain all structural source control measures imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

Ongoing. The applicant, or his or her successor, shall implement all operational Best Management Practices (BMPs) imposed by the Chief of Building Services to limit the generation, discharge, and runoff of stormwater pollution.

- **SCA 80: Post-construction Stormwater Management Plan**

Prior to issuance of building permit (or other construction-related permit). The applicant shall comply with the requirements of Provision C.3 of the National Pollutant Discharge Elimination System (NPDES) permit issued to the Alameda Countywide Clean Water Program. The applicant shall submit with the application for a building permit (or other construction-related permit) a completed Construction-Permit-Phase Stormwater

Supplemental Form to the Building Services Division. The project drawings submitted for the building permit (or other construction-related permit) shall contain a stormwater management plan, for review and approval by the City, to manage stormwater run-off and to limit the discharge of pollutants in stormwater after construction of the project to the maximum extent practicable.

- a) The post-construction stormwater management plan shall include and identify the following:
 1. All proposed impervious surface on the site;
 2. Anticipated directional flows of on-site stormwater runoff; and
 3. Site design measures to reduce the amount of impervious surface area and directly connected impervious surfaces; and
 4. Source control measures to limit the potential for stormwater pollution;
 5. Stormwater treatment measures to remove pollutants from stormwater runoff; and
 6. Hydromodification management measures so that post-project stormwater runoff does not exceed the flow and duration of pre-project runoff, if required under the NPDES permit.
- b) The following additional information shall be submitted with the post-construction stormwater management plan:
 1. Detailed hydraulic sizing calculations for each stormwater treatment measure proposed; and
 2. Pollutant removal information demonstrating that any proposed manufactured/mechanical (i.e., non-landscape-based) stormwater treatment measure, when not used in combination with a landscape-based treatment measure, is capable of removing the range of pollutants typically removed by landscape-based treatment measures and/or the range of pollutants expected to be generated by the project.

All proposed stormwater treatment measures shall incorporate appropriate planting materials for stormwater treatment (for landscape-based treatment measures) and shall be designed with considerations for vector/mosquito control. Proposed planting materials for all proposed landscape-based stormwater treatment measures shall be included on the landscape and irrigation plan for the project. The applicant is not required to include on-site stormwater treatment measures in the post-construction stormwater management plan if he or she secures approval from Planning and Zoning of a proposal that demonstrates compliance with the requirements of the City's Alternative Compliance Program.

Prior to final permit inspection. The applicant shall implement the approved stormwater management plan.

- **SCA 81: Maintenance Agreement for Stormwater Treatment Measures**

- a) *Prior to final zoning inspection.* For projects incorporating stormwater treatment measures, the applicant shall enter into the "Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement," in accordance with Provision C.3.e of the NPDES permit, which provides, in part, for the following: The applicant accepting responsibility for the adequate installation/construction, operation, maintenance,

inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

- b) Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The agreement shall be recorded at the County Recorder's Office at the applicant's expense.

- **SCA 82: Erosion, Sedimentation, and Debris Control Measures**

Prior to issuance of demolition, grading, or construction-related permit: The project applicant shall submit an erosion and sedimentation control plan for review and approval by the Building Services Division. All work shall incorporate all applicable "Best Management Practices (BMPs) for the construction industry, and as outlined in the Alameda Countywide Clean Water Program pamphlets, including BMP's for dust, erosion and sedimentation abatement per Chapter Section 15.04 of the Oakland Municipal Code. The measures shall include, but are not limited to, the following:

- a) On sloped properties, the downhill end of the construction area must be protected with silt fencing (such as sandbags, filter fabric, silt curtains, etc.) and hay bales oriented parallel to the contours of the slope (at a constant elevation) to prevent erosion into the creek.
- b) In accordance with an approved erosion control plan, the project applicant shall implement mechanical and vegetative measures to reduce erosion and sedimentation, including appropriate seasonal maintenance. One hundred (100) percent degradable erosion control fabric shall be installed on all graded slopes to protect and stabilize the slopes during construction and before permanent vegetation gets established. All graded areas shall be temporarily protected from erosion by seeding with fast growing annual species. All bare slopes must be covered with staked tarps when rain is occurring or is expected.
- c) Minimize the removal of natural vegetation or ground cover from the site in order to minimize the potential for erosion and sedimentation problems. Maximize the replanting of the area with native vegetation as soon as possible.
- d) All work in or near creek channels must be performed with hand tools and by a minimum number of people. Immediately upon completion of this work, soil must be repacked and native vegetation planted.
- e) Install filter materials (such as sandbags, filter fabric, etc.) acceptable to the Engineering Division at the storm drain inlets nearest to the project site prior to the start of the wet weather season (October 15); site dewatering activities; street washing activities; saw cutting asphalt or concrete; and in order to retain any debris flowing into the City storm drain system. Filter materials shall be maintained and/or replaced as necessary to ensure effectiveness and prevent street flooding.
- f) Ensure that concrete/granite supply trucks or concrete/plaster finishing operations do not discharge wash water into the creek, street gutters, or storm drains.
- g) Direct and locate tool and equipment cleaning so that wash water does not discharge into the creek.

- h) Create a contained and covered area on the site for storage of bags of cement, paints, flammables, oils, fertilizers, pesticides, or any other materials used on the project site that have the potential for being discharged to the storm drain system by the wind or in the event of a material spill. No hazardous waste material shall be stored on site.
 - i) Gather all construction debris on a regular basis and place them in a dumpster or other container which is emptied or removed on a weekly basis. When appropriate, use tarps on the ground to collect fallen debris or splatters that could contribute to stormwater pollution.
 - j) Remove all dirt, gravel, refuse, and green waste from the sidewalk, street pavement, and storm drain system adjoining the project site. During wet weather, avoid driving vehicles off paved areas and other outdoor work.
 - k) Broom sweep the street pavement adjoining the project site on a daily basis. Caked-on mud or dirt shall be scraped from these areas before sweeping. At the end of each workday, the entire site must be cleaned and secured against potential erosion, dumping, or discharge to the creek, street, gutter, stormdrains.
 - l) All erosion and sedimentation control measures implemented during construction activities, as well as construction site and materials management shall be in strict accordance with the control standards listed in the latest edition of the Erosion and Sediment Control Field Manual published by the RWQCB.
 - m) Temporary fencing is required for sites without existing fencing between the creek and the construction site and shall be placed along the side adjacent to construction (or both sides of the creek if applicable) at the maximum practical distance from the creek centerline. This area shall not be disturbed during construction without prior approval of Planning and Zoning.
 - n) All erosion and sedimentation control measures shall be monitored regularly by the project applicant. The City may require erosion and sedimentation control measures to be inspected by a qualified environmental consultant (paid for by the project applicant) during or after rain events. If measures are insufficient to control sedimentation and erosion then the project applicant shall develop and implement additional and more effective measures immediately.
- **SCA 83: Creek Protection Plan**

Prior to and ongoing throughout demolition, grading, and/or construction activities

- a) The approved creek protection plan shall be included in the project drawings submitted for a building permit (or other construction-related permit). The project applicant shall implement the creek protection plan to minimize potential impacts to the creek during and after construction of the project. The plan shall fully describe in plan and written form all erosion, sediment, stormwater, and construction management measures to be implemented on-site.
- b) If the plan includes a stormwater system, all stormwater outfalls shall include energy dissipation that slows the velocity of the water at the point of outflow to maximize infiltration and minimize erosion. The project shall not result in a substantial increase in stormwater runoff volume or velocity to the creek or storm drains.

- **SCA 84: Regulatory Permits and Authorizations**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek. Prior to construction within the vicinity of the creek, the project applicant shall obtain all necessary regulatory permits and authorizations from the U.S. Army Corps of Engineers (Corps), RWQCB, California Department of Fish and Game, and the City of Oakland, and shall comply with all conditions issued by applicable agencies. Required permit approvals and certifications may include, but not be limited to the following:

- a) U.S. Army Corps of Engineers (Corps): Section 404. Permit approval from the Corps shall be obtained for the placement of dredge or fill material in Waters of the U.S., if any, within the interior of the project site, pursuant to Section 404 of the federal Clean Water Act.
- b) Regional Water Quality Control Board (RWQCB): Section 401 Water Quality Certification. Certification that the project will not violate state water quality standards is required before the Corps can issue a 404 permit, above.
- c) California Department of Fish and Game (CDFG): Section 1602 Lake and Streambed Alteration Agreement. Work that will alter the bed or bank of a stream requires authorization from CDFG.

- **SCA 85: Creek Monitoring**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek. A qualified geotechnical engineer and/or environmental consultant shall be retained and paid for by the project applicant to make site visits during all grading activities; and as a follow-up, submit to the Building Services Division a letter certifying that the erosion and sedimentation control measures set forth in the Creek Protection Permit submittal material have been instituted during the grading activities.

- **SCA 86: Creek Landscaping Plan**

Prior to issuance of a demolition, grading, or building permit within vicinity of the creek. The project applicant shall develop a final detailed landscaping and irrigation plan for review and approval by the Planning and Zoning Division prepared by a licensed landscape architect or other qualified person. Such a plan shall include a planting schedule, detailing plant types and locations, and a system for temporary irrigation of plantings.

- a) Plant and maintain only drought-tolerant plants on the site where appropriate as well as native and riparian plants in and adjacent to riparian corridors. Along the riparian corridor, native plants shall not be disturbed to the maximum extent feasible. Any areas disturbed along the riparian corridor shall be replanted with mature native riparian vegetation and be maintained to ensure survival.
- b) All landscaping indicated on the approved landscape plan shall be installed prior to the issuance of a Final inspection of the building permit, unless bonded pursuant to the provisions of Section 17.124.50 of the Oakland Planning Code.
- c) All landscaping areas shown on the approved plans shall be maintained in neat and safe conditions, and all plants shall be maintained in good growing condition and, whenever necessary replaced with new plant materials to ensure continued compliance with all applicable landscaping requirements. All paving or impervious surfaces shall occur only on approved areas.

- **SCA 89: Regulatory Permits and Authorizations**

Prior to issuance of a demolition, grading, or building permit. Prior to construction within the floodway or floodplain, the project applicant shall obtain all necessary regulatory permits and authorizations from the Alameda County Flood Control and Water Conservation District and shall comply with all conditions issued by that agency.

- **SCA 90: Structures within a Floodplain**

Prior to issuance of a demolition, grading, or building permit.

- a) The project applicant shall retain the civil engineer of record to ensure that the project's development plans and design contain finished site grades and floor elevations that are elevated above the Base Flood Elevation (BFE) if established within a 100-year flood event.
- b) The project applicant shall submit final hydrological calculations that ensure that the structure will not interfere with the flow of water or increase flooding.

- **SCA 91: Stormwater and Sewer**

Prior to completing the final design for the project's sewer service. Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

4.8.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Violate any water quality standards or waste discharge requirements;
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or proposed uses for which permits have been granted);
3. Result in substantial erosion or siltation on- or off-site that would affect the quality of receiving waters;
4. Result in substantial flooding on- or off-site;

5. Create or contribute substantial runoff which would exceed the capacity of existing or planned stormwater drainage systems;
6. Create or contribute substantial runoff which would be an additional source of polluted runoff;
7. Otherwise substantially degrade water quality;
8. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, that would impede or redirect flood flows;
9. Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
10. Expose people or structures to a substantial risk of loss, injury or death involving flooding;
11. Expose people or structures to a substantial risk of loss, injury, or death as a result in inundation by seiche, tsunami, or mudflow;
12. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course, or increasing the rate or amount of flow, of a creek, river or stream in a manner that would result in substantial erosion, siltation, or flooding, both on- or off-site; or
13. Fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect hydrologic resources. [Note: Although there are no specific, numeric/quantitative criteria to assess impacts, factors to be considered in determining significance include whether there is substantial degradation of water quality through (a) discharging a substantial amount of pollutants into a creek; (b) significantly modifying the natural flow of the water or capacity; (c) depositing substantial amounts of new material into a creek or causing substantial bank erosion or instability; or (d) substantially endangering public or private property or threatening public health or safety.]

Approach to Analysis

Adoption and development under the Specific Plan would not result in direct physical impacts within the Plan Area. However, adoption and development under the Specific Plan could eventually result in various types of construction activities within the Plan Area that would require ground disturbance and use of hazardous materials. These types of construction activities could result in impacts to hydrology and water quality. Potential impacts to hydrology and water quality are analyzed within the context of existing plans and policies, permitting requirements, local ordinances, and the City of Oakland's Standard Conditions of Approval. Impacts that would be substantially reduced or eliminated by compliance with these policies or requirements are found to be less-than-significant. Additional discussion of potential erosion impacts is presented in Section 4.5, *Geology, Soils and Geohazards* of this Draft EIR. Detailed analysis of potential impacts due to the use of hazardous materials is presented in Section 4.7, *Hazardous Materials*, of this EIR. Potential impacts to stormwater infrastructure are discussed in Section 4.14, *Utilities and Service Systems*, of this Draft EIR.

Impacts

Stormwater, Drainages and Water Quality

Impact HYD-1: Adoption and development under the Specific Plan would alter drainage patterns and increase the volume of stormwater, or the level of contamination or siltation in stormwater flowing from the Plan Area (Criteria 1 and 3 through 7). (Less than Significant)

As discussed in Chapter 3, *Project Description*, a key purpose of the Specific Plan is to enhance the condition of the Plan Area. The City could accomplish the project objectives through various means including those that require new construction or redevelopment of buildings and utilities. As such, adoption and development under the Specific Plan could potentially result in impacts to water quality from changes to stormwater flows, drainage patterns, and overall water quality. Impacts to these resources would occur if construction-related erosion or discharges of polluted waters were to reduce the quality of nearby surface waters or if an action increased the amount of impervious surface at a site resulting in increased stormwater runoff and flooding. These types of impacts would be considered potentially significant if new development or redevelopment is not designed appropriately.

Adoption and development under the Specific Plan could include construction activities that employ excavation, soil stockpiling, grading, and use of hazardous chemicals, such as fuels and oil. Construction could also occur along the day-lighted portion of Glenn Echo Creek north of Grand Avenue along Harrison Street. Construction activities could result in temporary erosion; transportation of sediments; and generate chemical wastes that, if not properly managed, could flow into the storm drainage system or nearby surface water bodies. Overall, construction could cause increased sediment in stormwater runoff that could accumulate in downstream drainage facilities; interfere with existing drainage patterns; and aggravate downstream flooding conditions that may exist and potentially increase sediment in Lake Merritt and ultimately San Francisco Bay. Construction could also result in transport of hazardous chemicals downstream and into Lake Merritt and the San Francisco Bay, which are listed as impaired water bodies by the SWRCB.

As would be required for all projects in Oakland, any project developed under the Specific Plan would be required to comply with uniformly-applied SCAs, consistent with General Plan Policies that include preparation of a Grading Plan, Erosion and Sedimentation Control Plan, and Drainage Plan. Compliance with the ACCWP NPDES Permit and implementation of the Construction Stormwater Pollution Prevention Plan (SWPPP) would require any project to incorporate Best Management Practices (BMPs) to control sedimentation, erosion, hazardous materials contamination of runoff during construction. Further, the C.3 provision of the ACCWP NPDES Permit requires that there be no net increase in stormwater runoff at a site after project construction. Thus, water quality and flooding impacts would be minimized for any construction under the Specific Plan.

Additionally, compliance with the City of Oakland Grading Ordinance; the Creek Protection, Stormwater Management, and Discharge Control Ordinance; and the SCAs would minimize sedimentation and contamination to stormwater and surface water during construction activities.

SCA 34 or 55, *Erosion and Sedimentation Control Plan*; SCA 75, *Stormwater Pollution Prevention Plan*; SCA 78, *Site Design Measures for Post-Construction Stormwater Management*; SCA 79, *Source Control Measures to Limit Stormwater Pollution*; SCA 80, *Post-construction Stormwater Pollution Management Plan*; SCA 81, *Maintenance Agreement for Stormwater Treatment Measures*; SCA 82, *Erosion, Sedimentation, and Debris Control Measures*; SCA 85, *Creek Monitoring*; and SCA 86, *Creek Landscaping Plan* would be applicable to adoption and development under the Specific Plan for protecting water quality during construction and after construction. SCA 91, *Stormwater and Sewer*, would be applicable to the adoption and development under the Specific Plan ensuring that stormwater infrastructure has the capacity for flows produced in the Plan Area. SCA 83, *Creek Protection Plan*, would be applicable to adoption and development under the Specific Plan that could have impacts to creeks and other water bodies. Therefore, the implementation of these plans, and adherence to the Standard Conditions of Approval would reduce the potential impact to a less-than-significant level.

Mitigation: None Required.

Flooding

Impact HYD-2: Adoption and development under the Specific Plan could be susceptible to flooding hazards as a result of being placed in a 100-year flood zone as mapped by FEMA (Criteria 8 through 10). (Less than Significant)

The majority of the Plan Area is located outside of the 100-year flood zone, as shown in Figure 4.8-1. However, a small area within the 100-year flood zone is located along the easternmost part of the Plan Area along Glen Echo Creek. Although adoption and development under the Specific Plan could occur in proximity to these areas, the extents of the flood zones are very limited and not in areas where substantial new development would occur that would expose people or structures to risks of loss of property and life from flooding. To the extent such development could occur, as discussed in the General Plan Safety Element, compliance with the City of Oakland Grading Ordinance; the Creek Protection and Stormwater Management Ordinances; and the SCAs would minimize flooding impacts. Additionally, SCA 89, *Regulatory Permits and Authorizations* and SCA 90, *Structures within a Floodplain*, would be required for the construction of adoption and development under the Specific Plan. Therefore, the implementation of these plans, and adherence to the SCAs would reduce risks of exposing people or structures to flood-related losses would reduce potential flooding impacts to a less-than-significant level.

Mitigation: None Required.

Impact HYD-3: Adoption and development under the Specific Plan could be susceptible to flooding hazards in the event of dam or reservoir failure (Criterion 10). (Less than Significant)

Strong ground shaking caused by an earthquake could damage a local dam or reservoir, resulting in failure and downstream flooding. Dam or reservoir failure would result in significant impacts where people experience increased risk or exposure to flood hazards as a result of adoption and development under the Specific Plan. The East Bay Municipal Utilities District (EBMUD) has four reservoirs located north of the Plan Area. As discussed in the setting and shown on Figure 4.8-2, the eastern portion of Plan Area could experience flooding if up to two of these dams were to experience dam failure. Thus, adoption and development under the Specific Plan could experience potentially significant impacts as a result of dam or reservoir failure.

As discussed in Impact HYD-1, environmental review for specific projects will indicate mitigation measures for flooding as needed. Further, the Safety Element of the City of Oakland General Plan policy states that the City will “minimize further the relatively low risks from non-storm-related forms of flooding” by requesting from the state Division of Safety of Dams submit a timeline for the maintenance inspection of all operating dams in the City and reviewing procedures adopted by the City pursuant to the Dam Safety Act for the emergency evacuation of areas located below major water-storage facilities. DSOD requires all dam operators to comply with annual inspections and seismic standards that minimize the potential for a catastrophic failure of the dam. Continued compliance with these General Plan policies will reduce potential impacts to a less-than-significant level.

Mitigation: None Required.

Sea Level Rise

Impact HYD-4: Adoption and development under the Specific Plan could be susceptible to inundation in the event of sea-level rise (Criterion 10). (Less than Significant)

The impact of flooding related to sea level rise pertains to the impact of an existing/future environmental condition on the Plan Area. CEQA only requires an analysis of impacts pertaining to a project’s impact on the environment. The impact of future growth in the Plan Area on the environment related to the project’s GHG emissions—the cause of sea level rise—is analyzed and discussed in Section 4.6, *Greenhouse Gases and Climate Change*. Per CEQA, this Draft EIR is not required to analyze or mitigate impacts pertaining to the impact of the environment on the Plan Area. An appellate court specifically identified the effect of sea level rise on a project as an impact of the environment on a project and, therefore, not required to be analyzed under CEQA. However, although not legally required by CEQA, this Draft EIR nevertheless discusses the impact of sea level rise on the Plan Area in the interest of being conservative and providing information to the public and decision-makers.

Based on the projected 16” and 55” sea level rise scenarios, the southern border of the Plan Area is adjacent to the extent of the maximum estimated sea level rise (BCDC, 2008). Although outside of the area anticipated to be affected by sea level rise, the estimated amount of sea level rise is an estimate and thus subject to variations or underestimation. If the amount of sea level rise has been underestimated, the southern portion of the Plan Area could be subject to risk and loss due to future sea level rise (ABAG, 2012b). Because the Plan Area is flanked by a low-lying shoreline on the southern boundary, a portion of the Plan Area could be subject to potentially significant risks of inundation due to future potential sea level rise if the infrastructure improvements are not implemented. Given the potential for sea level rise, it is reasonable to anticipate that FEMA will continue to update its flood hazards mapping over time as necessary to reflect changes in sea level. Thus, when implemented, the safety measures built into the General Plan policies in the Safety Element, and the SCAs related to construction within 100-year flood zones, and adaptive management measures to sea level rise would reduce these potential impacts to less-than-significant levels.

Further, although the Plan Area is located outside of 100 feet of high tide and therefore outside of BCDC’s jurisdiction, as the Bay water rises under the projected 16” and 55” sea level rise scenarios, this boundary would change and portions of the Plan Area would be subject to BCDC’s regulatory authority. Should this expanded jurisdiction occur during the life of the Plan, the City’s SCA 84, *Regulatory Permits and Authorizations*, would require compliance with BCDC in addition to other applicable requirements of regulatory agencies.

Furthermore, implicit in the discussion of global warming, greenhouse gas emissions and sea level rise extends beyond specific development projects, a specific plan area, or, indeed, an entire city as both a local and a regional issue and must be addressed in that context. The adopted Bay Plan and Oakland’s adopted ECAP specifically recognize this and include actions to participate in the preparation of a regional climate adaption strategy. As stated above, because the Specific Plan is not causing sea level rise, sea level rise will occur regardless of the adoption of Specific Plan and sea level rise is an impact of the environment on the project, it is not legally a CEQA impact.

Mitigation: None Required.

Use of Groundwater

Impact HYD-5: Adoption and development under the Specific Plan would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge (Criterion 2) (Less than Significant)

The Plan Area is underlain by the East Bay Plain groundwater basin. The San Francisco RWQCB has identified groundwater supplies in this basin for municipal, industrial and agricultural water supply. Impacts to the aquifer would occur if adoption and development under the Specific Plan resulted in reduced recharge to the aquifer or increased extraction from the aquifer. The amount of water able to infiltrate the aquifer through pervious areas within the Plan Area would not substantially decrease because the Plan Area is already largely developed and covered in

impervious surfaces. Additionally, compliance with the C.3 provisions of the NPDES Municipal Stormwater Permit for the ACCWP would require that recharge rates at a project site is equivalent to the recharge rate at the site prior to development. Also, potable water is supplied to the Plan Area through imported surface water by EBMUD. Therefore, the existing and potential use of groundwater for adoption and development under the Specific Plan would not increase. Consequently, impacts to groundwater would be less than significant.

Mitigation: None Required.

Inundation by Seiche, Tsunami, or Mudflow

Impact HYD-6: Adoption and development under the Specific Plan would not be susceptible to mudflow, seiche, and tsunami-related hazards (Criterion 11). (Less than Significant)

The Plan Area would not be susceptible to mudflow, which generally results from volcanic activity or catastrophic dam failure. Seiche waves would not be a risk in the Plan Area because the relatively shallow depth of water within Lake Merritt would not result in significant seiche-related impacts during a seismic event.

The Plan Area is located in an inland area that is not susceptible to tsunamis, which generally occur in areas along the shoreline and for a small distance inland. In addition, the modeled sources of tsunamis that are most likely to affect the Bay Area include a few potential local sources but are predominantly distant events. Consequently, tsunami events in the East Bay area are very rare and there is little historical record of past events that would enable the ability to evaluate the probability of such an event occurring. Therefore, the potential impact from tsunamis is considered less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact HYD-7: Adoption and development under the Specific Plan, combined with past, present, existing, approved, pending, and reasonably foreseeable future projects would not result in potentially significant cumulative impacts to hydrologic resources. (Less than Significant)

Geographic Context

The geographic context used for the cumulative assessment of water quality and hydrology impacts is the East Bay Plain of the San Francisco Bay Basin. This includes the City of Oakland and its surrounding areas.

Impacts

As discussed above, adoption and development under the Specific Plan would include conformance with State and local policies as well as SCAs that would reduce hydrology and water quality impacts to less-than-significant levels. Specifically, potential changes related to stormwater quality, stormwater flows, drainage, impervious surfaces, and flooding would be minimized via the implementation of stormwater control measures, stormwater retention measures, stormwater quality control measures that would integrate measures to reduce potential flooding impacts.

Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Cumulative projects that could combine with the less-than-significant incremental impacts of adoption and development under the Specific Plan to compound or increase any existing hydrology- or water-quality-related cumulative impacts include, for example, potential cumulative reductions in the water quality of San Francisco Bay, or degradation of urban stormwater quality. Other projects resulting in construction occurring within or nearby the Plan Area could result in similar or greater impacts to those caused by adoption and development under the Specific Plan. These projects include those listed in the City's Major Projects List in Appendix B to this Draft EIR. All projects would be subject to similar permit requirements and would be required to comply with City of Oakland ordinances and General Plan policies, as well as numerous SCAs that address the potential effects of hydrology and water quality and are discussed throughout this analysis. The potential impacts of adoption and development under the Specific Plan discussed previously in this section regarding hydrology and water quality would not be substantial, and would not substantially contribute to any cumulative impacts. Therefore, the Specific Plan impacts on hydrology and water quality are not cumulatively considerable when viewed in connection with the effects of the other past, present, and reasonably foreseeable probable future projects within the Plan Area and in the vicinity of the Plan Area.

Mitigation: None Required.

4.8.4 References

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WRT, *Draft Broadway/Valdez District Specific Plan, Existing Conditions Report*, August 2009.

4.9 Land Use, Plans and Policies

This section analyzes how the adoption and development under the Specific Plan may affect and comply with existing land uses, plans and policies. Specifically, it describes the existing land use patterns, adopted General Plan land use classifications, and zoning designations in and around the Plan Area. This section also describes the applicable plans and policies that guide development in the Plan Area and evaluates the consistency of the adoption and development under the Specific Plan with these plans and policies and other applicable land use regulations. Following the discussion of the relationship of the adoption and development under the Specific Plan to applicable plans and policies, potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary. Pursuant to the City of Oakland's General Plan (General Plan), as well as Section 15358(b) of the CEQA Guidelines, mitigation measures are proposed only to address physical impacts that may result from adoption and development under the Specific Plan.

4.9.1 Environmental Setting

Surrounding Existing Land Uses

The Plan Area is located at the north edge of Oakland's *Central Business District*. The Plan Area is surrounded by the neighborhoods whose land use and development patterns, while different from each other and from the Plan Area, have an influence on those within the Plan Area. The Plan Area, generally following the Broadway Corridor approximately 0.8 miles between I-580 to Grand Avenue, serves as an important transition between the Downtown and the Upper Broadway area. This length of Broadway is a critical link in Oakland's Main Street, which extends from Jack London Square (at the Estuary) to the Oakland Hills.

Regional freeway access to the Plan Area is provided by Interstates 580 and 980, and State Route 24. BART provides regional transit service to the area, with the 19th Street BART station located about 0.3 miles south of the Plan Area, and the MacArthur BART station approximately 0.75 miles to the northwest. The area also benefits from AC Transit bus service along Broadway.

The Plan Area is surrounded by the Uptown District and Lake Merritt / Kaiser Center Office District to the south, and the Kaiser Permanente Oakland Medical Center to the north. Pill Hill, which includes the Alta Bates Summit Medical Center, to the northwest, and the Art Murmur Gallery District (25th Street Garage District) border the area to the west, and the Richmond Avenue, Harrison/Oakland Avenue, and Adams Point residential neighborhoods occupy the hilly terrain to the east of the area. These surrounding neighborhoods are discussed further below.

Lake Merritt/Kaiser Center Office District. This district extends south of Grand Avenue between Broadway and Lake Merritt and is a major employment center with additional office developments planned and approved on the Kaiser Center properties on Webster between 20th and 21st Streets.

Uptown Entertainment District. This district is located southwest of the Plan Area. It is anchored by the Downtown's two historic theaters - the Paramount Theatre and the recently restored Fox Theater – which are surrounded by restaurants, cafés, and bars clustered near the southwest corner of the Plan Area. This district also contains several large residential developments, including the Forest City Uptown development and 100 Grand, both in the vicinity of Broadway and Grand Avenue.

Art Murmur Gallery District (25th Street Garage District). This district lies just west of the southern part of the Plan Area and has the distinctive architectural character of historic garages throughout this district which now house a number of galleries and cultural venues that form the Oakland Art Murmur (OAM). OAM includes monthly art walks and stroll events that attract hundreds of people from around the Bay.

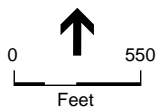
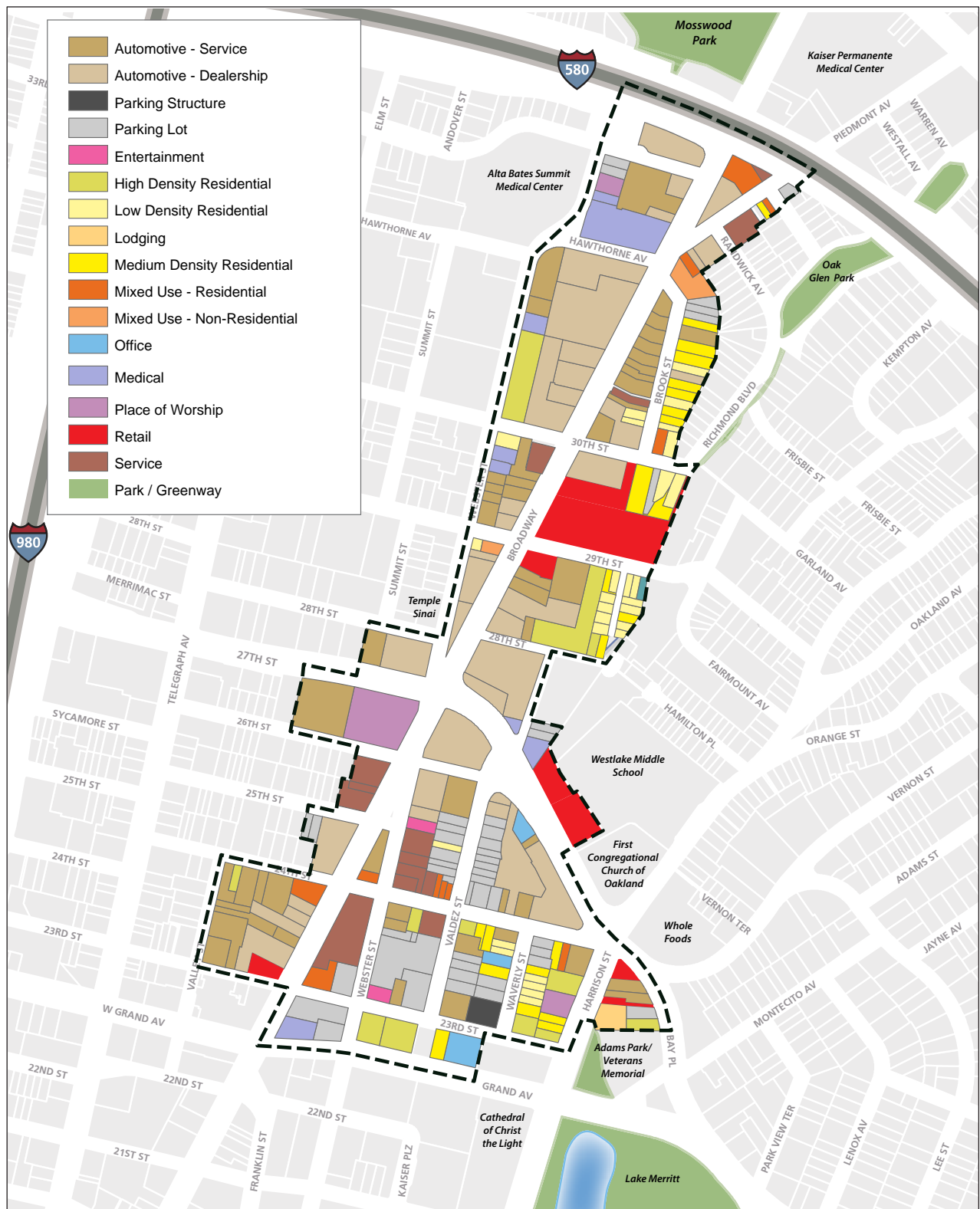
Medical Centers. As mentioned above, the Alta Bates Summit Medical Center is located in the area known as “Pill Hill” west of the North End subarea. The 20-acre campus includes a hospital, outpatient services, and related medical uses and facilities. Additional medical offices and related uses are located surrounding Pill Hill, including within the Plan Area. Kaiser Permanente Oakland Medical Center is located just north of the Plan Area, on the other side of I-580.

Residential Neighborhoods. The Plan Area is surrounded by residential neighborhoods to the east, west, and north. Housing in these neighborhoods is primarily in apartment buildings with five or more units combined with a mix of lower-density, single family homes, duplexes, and three/four-plexes. Several senior housing developments also are located in the surrounding area, including two high-rise complexes: Westlake Christian Terrace at Valdez and 28th, and St. Paul's Tower on Bay Place southeast of the Plan Area. The “Harri-Oak” (Harrison and Oakland Avenue) and Adams Point neighborhoods that occupy the hillsides just east of the Plan Area consist of a mix of houses and apartments. West of the Plan Area, the housing in the Koreatown/Northgate neighborhood along Telegraph Avenue is separated from the Plan Area by the medical related uses on Pill Hill. The residential neighborhoods north of the Plan Area are separated from it by I-580, Mosswood Park, and Kaiser Permanente Oakland Medical Center.

Plan Area Existing Land Uses

Altogether, the Plan Area includes approximately 95.5 acres, including 35.1 acres in public right-of-ways and 60.4 acres of developable land. **Figure 4.9-1** depicts the existing land uses in the Plan Area.

Although a few mid-rise commercial buildings occupy lots in the Valdez subarea, the dominant existing land use in the Plan Area is single-story auto-oriented retail including auto-service providers and car dealerships, and surface parking lots. Surface parking, some used by auto dealers as display and storage areas, occupies approximately 11 percent of the developable land.



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 4.9-1
Existing Land Uses

Together, auto related sales, service, and parking consume approximately 60 percent of the developable land in the Plan Area. As depicted in **Figure 4.9-2**, not all of that area is actively in use. Industry trends have significantly affected auto-related business in the Plan Area with many businesses closing or down-sizing. While the auto-business has shown a more recent improvement, the long-term outlook for automobile market in the Plan Area is in transition.

Non-automobile commercial uses represent the next most prevalent use in the Plan Area. This includes medical office, office, retail, and other services. The existing land use mix is more diverse in the Valdez subarea with influence from the nearby Uptown and Entertainment neighborhoods. For example, seven of the eight restaurants in the Plan Area are located in the Valdez subarea. Together, approximately two thirds of all developable land is devoted to automobile and non-automotive commercial uses.

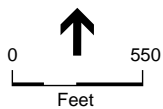
As described above, residential neighborhoods surround the Plan Area. Although there are approximately 4,020 households and approximately 7,530 people residing in the larger area bounded by Grand Avenue, Harrison Street, I-580 and I-980, the Plan Area itself exhibits a predominantly commercial focus. There are fewer than 600 households within the Plan Area (WRT, 2013). The residential units are primarily in higher-density, multi-family buildings scattered throughout the Plan Area but mainly along the eastern portion of the North End subarea and in the southeastern corner of the Valdez Triangle subarea on and near Waverly Street. Other non-commercial uses include two important institutional uses. These are the YMCA on Broadway and 24th Street, and the First Presbyterian Church, which occupies a large gothic building set back on the southeast corner of 27th Street and Broadway. There are no designated parklands within the Plan Area.

The built character of the Plan Area is varied by use, as described above, as well as by building architectural style. The majority of buildings are one-story (65 percent) and two-stories (27 percent), older (built before 1920 or 1950), and originally designed for utilitarian purposes. However, it is the absence of a vibrant built environment that marks the land use character of the Plan Area. In addition to lots developed with very low floor area ratios, the prevalence of lots with no structures, lots used for surface parking, and lots with abandoned structures contributes to the overall lack of activity in the area. Overall, almost 40 percent of the developable land within the Plan Area is considered underutilized (see Figure 4.9-2). The predominance of automobile-related uses, including long stretches of surface parking lots and numerous private driveways, contribute to the overall uninviting pedestrian environment of the Plan Area.

4.9.2 Regulatory Setting

Local Plans and Policies

Presented below are applicable plans and regulations that pertain to the adoption and development under the Specific Plan, followed by a discussion of the overall consistency (or inconsistency) with each plan.



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522

Figure 4.9-2
Underutilized Parcels

City of Oakland General Plan

The General Plan establishes comprehensive, long-term land use policies for the City and provides the primary policy direction for development in the City and within the Plan Area. The General Plan comprises a series of elements, each of which deals with a particular topic, which apply citywide. Consistent with state law, the General Plan includes the *Land Use and Transportation Element*; the *Historic Preservation Element*; the *Open Space, Conservation, and Recreation Element*; the *Safety Element*; the *Housing Element*; the *Noise Element*; and the *Scenic Highways Element*. The *Bicycle Master Plan*, and *Pedestrian Master Plan* have also been adopted into, and are now a part of, the General Plan.

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

Further, Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on *environmental* policies and plans, asking if the project would “conflict with any applicable land use plan, policy, or regulation . . . *adopted for the purpose of avoiding or mitigating an environmental effect*” (emphasis added). Even a response in the affirmative, however, does not necessarily indicate the project would have a significant effect, unless a physical change would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed elsewhere in this EIR. The compatibility of the adoption and development under the Specific Plan with General Plan policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the Specific Plan.

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

The General Plan contains many policies which may in some cases address different goals, policies and objectives and thus some policies may compete with each other. The Planning Commission and City Council, in deciding whether to approve a proposed project, must decide whether, on balance, the project is consistent (i.e., in general harmony) with the General Plan. The fact that a specific project does not meet all General Plan goals, policies and objectives does not inherently result in a significant effect on the environment within the context of the California Environmental Quality Act (CEQA).¹

The General Plan includes goals and policies that apply broadly to land use and development across the City, and that have been *adopted for the purpose of avoiding or mitigating an environmental effect*, in each of its aforementioned elements. This Land Use, Plans and Policies section of the EIR focuses on General Plan policies most directly to land use, which are primarily in the Land Use and Transportation Element (LUTE) and its associated Bicycle Master Plan

¹ City Council Resolution No. 79312 C.M.S.; adopted June 2005.

(BMP) and Pedestrian Master Plan. Applicable policies of other General Plan elements are discussed in the relevant sections of this EIR, as specified further below.

Land Use and Transportation Element (LUTE)

The City adopted the General Plan Land Use and Transportation Element (LUTE) on March 24, 1998. The LUTE identifies policies for utilizing Oakland's land as change takes place and sets forth an action program to implement the land use policy through development controls and other strategies. The LUTE describes the City as a series of places, neighborhoods, activity centers, transit-oriented districts and corridors. The General Plan identifies five places, known as Showcase Districts, each representing a dynamic area of regional importance targeted for continued growth. These places contain the facilities, transportation system, communication network and infrastructure to support far-reaching economic activities. The Plan Area falls within Oakland's Downtown Showcase District intended to promote a mixture of vibrant and unique districts with around-the-clock activity, continued expansion of job opportunities, and growing residential population.

The General Plan organizes the City into six general planning areas, each with distinct sets of key geographic areas targeted for community and economic expansion. The Plan Area falls within the Central/Chinatown planning area's Auto Row target area for improvement strategies. Goals and policies within the LUTE focus on the need to develop business attraction strategies for the area with the intent to support existing automobile dealership activities while developing complementary uses and improving physical conditions of pedestrian and bicycle facilities. The LUTE also identifies a strategy objective of growth and change for the Broadway Corridor.

The Plan Area falls within six land use classifications identified in the General Plan. The majority of the Plan Area is within the *Community Commercial* land use classification. The intent and desired character of it and other land use classifications and their locations within the Plan Area are described below.

- ***Community Commercial:*** The intent of the *Community Commercial District* is to “identify, create, maintain and enhance areas suitable for a wide variety of commercial and institutional operations along the City’s major corridors and in shopping districts or centers.” The large majority of the Plan Area falls within this district.
- ***Urban Residential:*** The intent of the *Urban Residential District* is to “create, maintain and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services.” Areas south of 26th Street, between Valdez Street and Bay Place, fall within this district.
- ***Mixed Housing Type Residential:*** The intent of the *Mixed Housing Type Residential District* is to “create, maintain, and enhance residential areas typically located near the City’s major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses.” A few parcels in the eastern blocks along either side of 30th Street and north of 29th Street fall within this district.
- ***Institutional:*** The intent of the *Institutional District* is to “create, maintain, and enhance areas appropriate for educational facilities, cultural and institutional uses, health services

and medical uses as well as other uses of similar character.” A few parcels along the northwestern portion of the Plan Area fall within this district.

- ***Neighborhood Center Mixed Use:*** The intent of the *Neighborhood Center Mixed Use District* is to “identify, create, maintain and enhance mixed use neighborhood commercial centers. The primary focus for this district is on smaller scale pedestrian-oriented centers with continuous street frontages and a mix of uses.” A small portion of the Plan Area along Bay place falls within this district.
- ***Central Business District:*** The intent of the *Central Business District* is “to encourage, support and enhance the downtown area as a high density, mixed use urban center of regional importance and a primary hub for business, communications, office, government, high technology, retail, entertainment, and transportation...” The desired character and uses include “...a mix of large-scale offices, commercial, urban (high-rise) residential, institutional, open space, cultural, educational, arts, entertainment, service, community facilities, and visitor uses.” The maximum floor-area ratio (FAR)² is 20.0, and the maximum allowable residential density is 300 units per gross acre. Different FARs may be encouraged for different areas. A small portion of the Plan Area along Grand Avenue falls within this district.

Surrounding the Plan Area are areas in the General Plan land use classifications of *Central Business District* to the south, *Mixed Housing Type Residential* to the east and north, *Community Commercial* and *Urban Residential* to the west. Areas designated *Institutional* exist north of I-580, west of Webster Street, and north of Bay Place. *Urban Open Space* classified lands surround Lake Merritt to the southeast, Mosswood Park to the north, and Oak Glen Park to the east. These classifications, where not described above, are described below.

- ***Urban Open Space:*** The intent of the *Urban Open Space District* is to “identify, enhance and maintain land for parks and open space.”

Proposed Changes to General Plan Land Use Classifications in the Plan Area

The Specific Plan establishes a regulatory framework guiding type, intensities and distribution of for future land uses and development with the Plan Area. The Specific Plan includes an extension of the *Central Business District* northward to 27th Street and throughout most of the Valdez subarea, and introduces or maintains *Mixed Housing Type Residential* in the eastern blocks along Brook Street and Richmond Boulevard, in order to be consistent with the underlying zoning districts that was updated as part of a citywide zoning updated completed in 2011. A few parcels in the eastern blocks along either side of 30th Street and north of 29th Street would change from *Mixed Housing Type Residential* to *Community Commercial*. *Community Commercial* would be retained throughout the remainder of the North End subarea and replace a small area in the Valdez Triangle subarea that is currently designated as *Urban Residential and Neighborhood Center Mixed-Use* and between Harrison Street and Bay Place would be designated *Community Commercial*. A small portion of parcels along the northwestern portion of the Plan Area would change from *Institutional* to *Community Commercial* (see Figures 3-3 and 3-4 in Chapter 3, *Project Description*). Adoption of the Specific Plan would be accompanied by a General Plan

² Floor-area ratio (FAR) is gross floor area of a building divided by total site area, excluding parking.

amendment that would effectively replace existing General Plan land use designations, goals and policies for the Plan Area.

Project Consistency with the LUTE

The Specific Plan would be adopted by ordinance and thus the Specific Plan policies would be enforceable to the same extent as the Planning Code contained within the City's Municipal Code. Further, adoption of the Specific Plan would include amendments to the General Plan and Planning Code to ensure consistency with the Plan. Future projects under the Broadway Valdez Development Program would be reviewed for consistency with the Specific Plan policies and conformance with development regulations and design guidelines. For these projects, the Specific Plan policies would take precedence over existing General Plan policies. Where policies relating to a particular subject are absent from the Specific Plan, existing General Plan policies and zoning controls would apply. Inasmuch as development under the Specific Plan would be governed by adopted Specific Plan policies and the existing General Plan policies, this development would be consistent with the General Plan policies, including those included in the LUTE. As noted above, conflicts with a General Plan, specifically those that do not relate to a physical change, do not inherently result in a significant effect on the environment within the context of CEQA.

The consistency of the Specific Plan with General Plan policies related to other potential impacts, such as transportation, are discussed in other applicable sections of this EIR. Specifically, policies from the LUTE are listed in Sections 4.1, *Aesthetics, Shadow, and Wind*; 4.3, *Biological Resources*; 4.6, *Greenhouse Gases*; 4.12, *Public Services*; 4.13, *Transportation and Circulation*; and 4.14 *Utilities and Service Systems*. The Specific Plan is consistent with relevant land use policies in the General Plan, as is required by State planning and zoning law. The City has no other applicable plans or policies adopted for the purpose of avoiding an environmental effect (habitat conservation plans are discussed below). The Specific Plan would not substantially conflict with existing General Plan policies adopted for mitigating an environmental effect.

Bicycle Master Plan and Pedestrian Master Plan

In December 2007, the City Council adopted the Oakland Bicycle Master Plan (BMP) and in November 2002, the City Council adopted the Pedestrian Master Plan as part of the LUTE. The City of Oakland Bicycle Master Plan calls for the implementation of the bikeway network improvements including Bike Lanes, Arterial Bike Routes, and Bicycle Boulevards throughout the Plan Area (City of Oakland, 2007) (see Figure 4.13-3 in Section 4.13, *Transportation and Circulation*).

The Pedestrian Master Plan identifies policies and implementation measures for achieving LUTE policies that promote a walkable city. The Plan designates a Pedestrian Route Network throughout Oakland with a concentration of high priority projects (including "City Routes") within the Plan Area (City of Oakland, 2002).

Project Consistency with the Bicycle Master Plan and Pedestrian Master Plan

The adoption and development under the Specific Plan would not conflict with the Bicycle Master Plan or Pedestrian Master Plan because all development within the Plan Area would comply with City of Oakland's Standard Conditions of Approval that ensures the submittal, approval and implementation of plans to the City to implement bicycle storage and parking facilities to accommodate the bicycle parking spaces required for the potential development projects. Compliance with the Standard Conditions of Approval would also ensure pedestrian safety, as discussed in detail in Section 4.13, *Transportation and Circulation*. Specific policies from the Pedestrian Master Plan are listed in Section 4.13, *Transportation and Circulation*. Policies from the Bicycle Master Plan are listed in Section 4.13, *Transportation and Circulation*.

Other General Plan Elements

As discussed above, other elements of the General Plan contain policies *adopted for the purpose of avoiding or mitigating an environmental effect*, but that are not specifically pertaining to land use, and are therefore discussed in the relevant sections of this EIR (though Chapter 4). Specifically:

- Policies from the Open Space, Conservation and Recreation (OSCAR) Element are listed and addressed in Sections 4.1, *Aesthetics, Shadow, and Wind*; 4.2, *Air Quality*; 4.3, *Biological Resources*; 4.6, *Greenhouse Gases*; 4.8, *Hydrology and Water Quality*; and 4.12, *Public Services*.
- Policies from the Scenic Highways Element are listed in Section 4.1, *Aesthetics, Shadow, and Wind*.
- Policies from the Historic Preservation Element are listed in Sections 4.4, *Cultural Resources*; and 4.6, *Greenhouse Gases*.
- Policies from the Safety Element are listed in Sections 4.5, *Geology, Soils, and Geohazards*; 4.6, *Greenhouse Gases*; 4.7, *Hazards and Hazardous Materials*; 4.8, *Hydrology and Water Quality*; and 4.12, *Public Services*.
- Policies from the Noise Element are listed in Section 4.10, *Noise*.

Oakland Planning Code

The Planning Code serves to implement General Plan policies and is found in the Oakland Municipal Code, Title 17. The Planning Code governs land uses and development standards, such as building height, bulk and setback, for specific zoning districts within Oakland. Permits to construct new buildings or to alter or demolish existing ones may not be issued unless the project proposed conforms to the Planning Code or an exception is granted pursuant to provisions of the Planning Code. Existing and Proposed Zoning Designations within the Plan Area are depicted in Figures 3-5 and 3-6 in Chapter 3, *Project Description*.

Zoning Designations in the Plan Area

Almost the entirety of the North End subarea, and the majority of the Valdez subarea, falls within the ***CC-2 Community Commercial Zone - 2***. The CC-2 Zone is intended to create, maintain, and enhance areas suitable for a variety of commercial and institutional operations and is specifically focused on areas with direct frontage, and access to frontage, along the City's major corridors and commercial areas. A small portion of the North End subarea, east of Brook Street and on either side of Richmond Avenue, are zoned ***RM-4*** and ***RM-3 Mixed Housing Type Residential Zone***. The *Mixed Housing Type Residential* zones are intended to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate.

Various zoning districts exist in the southern portion of the Plan Area. South of Bay Place and east of Valdez Street, including ***Urban Residential (RU-4 and RU-3)*** and ***CN-2 Neighborhood Center Commercial - 2***. The *Urban Residential* zones are intended to create, maintain, and enhance areas of multi-unit, low- to high-rise residential structures along the City's major corridors. These zones also encourage neighborhood businesses in areas with good access to transit, such as the Plan Area. The *Neighborhood Center Commercial* zones are intended to enhance the smaller-scale and pedestrian oriented character of established neighborhood commercial uses with continuous and active store fronts and opportunities for comparison shopping.

The most southerly parcels fronting Grand Avenue are zoned ***CBD-P Central Business District – Pedestrian Retail Commercial Zone***. The CBD zoning regulations are intended to encourage high density, mixed use, urban development along with supporting retail nodes and pedestrian-oriented streetscapes. The regulations intend to encourage a visually appealing skyline while preserving and enhancing existing neighborhood districts. The CBD-P is specifically zoned to create, maintain, and enhance areas for ground-level, pedestrian-oriented, active storefront uses, with office and residential uses in the upper stories.

All zones, although not all parcels, within the Plan Area, aside from the CBD-P parcels also fall within the ***D-BR Broadway Retail Frontage District Interim Combining Zone***, which combines with the commercial and residential zones. This combining zone, which was adopted in 2011, is designed specifically for the Plan Area in anticipation of the more comprehensive and detailed regulations associated with adoption of the Specific Plan. The overall intent of these regulations, which are supplementary to the underlying base zones, is to attract ground-level retail opportunities through permitted, restricted, and limited (including automotive-related) new uses, building height minimum, and minimum setbacks from the sidewalks portions of the Plan Area.

Existing Commercial / Corridor Height Limits apply to the majority of the Plan Area. Aside from a 45 foot height limit on parcels west of Piedmont Avenue and north of Randwick Avenue, the entire North End subarea is zoned for 75 feet. The areas zoned RM-3 would continue to have a 30 foot height limit and RM-4 a 35 foot height limit. The 75-foot height limit zone extends southward into the Valdez subarea to 27th Street where it increases to 120 feet. A few parcels

north of 27th Street and east of Valdez, adjacent to the Westlake Middle School and First Congregational Church of Oakland, have height limits of 60 feet. There is also a small area between 23rd and 24th Street, west of Harrison Street and including some parcels on either side of Waverly Street that have a 60-foot height limit. There is no height limit governing the CBD-P parcels along Grant Avenue.

Project Consistency with Oakland Zoning

As noted above, the Specific Plan would be adopted by ordinance and thus the Specific Plan policies would be enforceable to the same extent as the Zoning Ordinance contained within the City's Municipal Code. Adoption of the Specific Plan would be accompanied by adoption of new and permanent zoning regulations. Future proposals under the Broadway Valdez Development Program would be reviewed for consistency with the Specific Plan policies, conformance with development regulations and design guidelines, and conformance with the updated zoning regulations. As noted above, conflicts with zoning regulations, specifically those that do not relate to a physical change, do not inherently result in a significant effect on the environment within the context of CEQA. As shown in Figures 3-7 and 3-8 in Chapter 3, *Project Description*, height limits would remain the same or be reduced along the northeastern portion of the Plan Area; increased height limits are proposed in areas west of Broadway, near the elevated I-580 freeway and Alta Bates Summit Medical Center, ranging from 135 feet – 200 feet (formerly 75 feet), as well as in the southern portion of the Plan Area between Broadway and Valdez Street north of 23rd Street (with a height maximum of 250 feet instead of the existing 120 feet); there is also the potential for certain portions of the Valdez Triangle (in the Retail Priority Sites) that have a “by right” height maximum of 45 feet, to have increased height limits ranging from 200 feet to 250 feet provided that specified amounts/configuration of retail space are provided (see Chapter 3, *Project Description*). These proposed height limits, in combination with the proposed Maximum Base Heights, existing step-back requirements, and the City's projected Broadway Valdez Development Program inform the Physical Height Model which is the basis for analysis within this EIR (see Figure 3-11 in Chapter 3, *Project Description*). The Physical Height Model shows anticipated building heights in a similar pattern with taller towers and development focused on the northern and southern portions of the Plan Area.

To the extent that the Specific Plan would amend the Planning Code, the impacts of those amendments are considered in the relevant sections of this EIR. An amendment to the Planning Code constitutes an environmental impact only when it results in a substantial adverse physical change in the environment. The Specific Plan would not substantially conflict with existing Planning Code regulations that have been *adopted for the purpose of avoiding or mitigating an environmental effect*.

Redevelopment Plans

The Plan Area overlaps with the project areas of two redevelopment plans: the Broadway/MacArthur/ San Pablo Redevelopment Plan and the Central District Urban Renewal Plan. The general goal of these plans is to eliminate blight within the respective project areas

(Oakland Redevelopment Agency, 2007; Oakland Redevelopment Agency, 2009; Oakland Redevelopment Agency, 2012).

Broadway/MacArthur/San Pablo Redevelopment Plan

The Broadway/MacArthur/San Pablo Redevelopment Plan Project Area encompasses the entire northern portion of the Plan Area southward to 27th Street. The goals and objectives outlined within this plan that pertain to land use, plans, and policies are listed below:

- **Goal A:** Stimulate in-fill development and land assembly opportunities on obsolete, underutilized and vacant properties in the Project Area.
- **Goal B:** Stimulate opportunities for adaptive re-use and preservation of existing building stock in the Project Area.
- **Goal C:** Attract new businesses and retain existing businesses in the Project Area, providing job training and employment opportunities for Area residents.
- **Goal G:** Revitalize neighborhood commercial areas.

Central District Urban Renewal Plan

The Central District Urban Renewal Plan encompasses the southern portion of the Plan Area northward to 27th Street. This Redevelopment Plan lists the following major goal pertaining to land use, plans, and policies:

- **Goal A:** A strengthening of the Project Area's existing role as an important office center for administrative, financial, business service and governmental activities.
- **Goal B:** Revitalization and strengthening of the Oakland Central District's historical role as the major regional retail center for the Metropolitan Oakland Area.
- **Goal C:** Establishment of the Project Area as an important cultural entertainment center.

Project Consistency with Redevelopment Plans

Adoption and development under the Specific Plan would be consistent with the major goals of the applicable redevelopment plans pertaining to land use, plans, and policies. Furthermore, adoption and development under the Specific Plan would not result in a conflict with redevelopment plan goals that were *adopted for the purpose of avoiding or mitigating an environmental effect*.

Oakland Energy and Climate Action Plan

An Oakland Energy and Climate Action Plan (ECAP) has been developed to identify, evaluate and recommend prioritized actions to reduce energy consumption and GHG emissions in Oakland. Consistency with the ECAP is evaluated in Section 4.6, *Greenhouse Gases*.

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

There are no City of Oakland SCAs specific to land use.

4.9.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it would:

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

Approach to Analysis

This EIR analysis evaluates the general consistency of adoption and development under the Specific Plan with applicable land use plans and policies in order to determine the potential for significant environmental impacts. As discussed in the Setting section of this chapter, the General Plan has determined that “the fact that a specific project does not meet all General Plan goals, policies, and objectives does not inherently result in a significant effect on the environment within the context of [CEQA]” (City of Oakland, 2005). This EIR analysis also evaluates the adoption and development under the Specific Plan in terms of its potential to physically divide an existing community and its compatibility with nearby existing land uses.

Impacts

Land Use Compatibility / Physical Division of an Established Community

Impact LU-1: Adoption and development under the Specific Plan would not result in the physical division of an existing community or conflict with adjacent or nearby land uses (Criteria 1 and 2). (Less than Significant)

The existing street grid system establishes the framework for the Plan Area and provides for visual and physical connections between the Plan Area and surrounding neighborhoods. Adoption and development under the Specific Plan may include temporary or permanent street closures of three street segments to through traffic. These would include Waverly between 23rd and 24th Streets, 26th Street between Broadway and Valdez Street, and 34th Street between I-580 Off-Ramp and Broadway. These closures would consolidate parcels for the purposes of development. However, none of these street segments provide essential internal connections within or through the Plan Area and their closure would not create a new physical barrier to these internal connections nor result in a physical division within an established community.

The Specific Plan's proposed land use designations and policies are not intended to maintain the existing land use patterns within the Plan Area. On the contrary, the goals, policies, and proposed land use designations included in the Specific Plan promote the transformation of the Plan Area's existing land use patterns from low-density automobile oriented commercial uses to high-density, pedestrian-friendly, mixed-use development with a focus on destination retail. The Specific Plan would allow for taller buildings than currently exist or are currently permitted and would result in a higher density and intensity of mixed uses within the Plan Area.

Residential, office, retail and professional service uses envisioned for development under the Specific Plan would transform the North End subarea into a high-density mixed-use boulevard accommodating, in part, the needs of the adjoining medical complexes. Active street-fronting uses would be required along Broadway. Focused retail development along Valdez and 24th Streets along with mixed-use development, including street-fronting retail and service uses on the ground-level, throughout the triangle would transform the Valdez subarea into a more regional destination for comparison goods retail. Adoption and development under the Specific Plan is anticipated to provide new housing or offices on upper floors in mixed-use buildings where feasible throughout the Plan Area, with some areas providing for horizontal mixed use instead of vertical, while enhancing and preserving the existing residential uses along Brook Street and Richmond Boulevard.

While the primary focus of future Plan Area development is not on the automotive market, car dealerships represent an important existing land use and valuable source of sales tax revenue for the City of Oakland. While new automobile dealerships would be conditionally permitted under the Specific Plan, they would be restricted to a showroom with a small area for service in the Valdez Triangle with inventory offsite outside of the Valdez Triangle, and a showroom and a small area for service, and structured parking for inventory or inventory offsite in the North End. Considered in isolation, the land use changes anticipated under the Specific Plan could result in conflicts with the existing automobile-oriented uses within the Plan Area. In particular, safe pedestrian streetscapes and active street frontages are encouraged by Specific Plan policies and necessary to support both the residential, retail, and service development and the associated residential, customer, and employee populations. The automobile-oriented uses rely on surface parking lots and private driveways that interrupt the safe and active streetscapes encouraged and required by the Specific Plan.

However, a key consideration in this discussion is the role of the existing land uses along the Broadway corridor specifically as they relate to neighboring uses. As noted above, the underutilized sites and the predominance of automobile-related uses contribute to the overall uninviting pedestrian environment of the Plan Area and the corridor currently serves as a physical barrier between the burgeoning surrounding neighborhoods. Land use changes that would occur with adoption and development under the Specific Plan would compliment and connect the existing land uses adjoining the Plan Area including the business, entertainment, medical and residential uses. For this reason, the transformation, over time, of the Plan Area into a true mixed-use neighborhood and comparison goods retail destination, would support land uses nearby and adjacent to the Plan Area. To the extent that this transformation is already underway as a response to market forces and the growing needs of surrounding development, the Specific Plan would

serve as a mechanism for ensuring the future development within the Plan Area is coordinated, compatible, and well-planned.

The majority of the Plan Area is comprised of surface parking lots, vacant lots, one-story structures (65 percent), and two-story structures (27 percent). Existing zoning would allow for a maximum building height of 75 feet for the majority of the Plan Area and 120 feet for a large portion of the Valdez subarea. Adoption and development under the Specific Plan would introduce heights not already existing in the Plan Area. Proposed building height maximums would range between 45 feet along Brook Street and 250 feet along Grand Avenue and Broadway. Existing maximum height limits in the RM-3 and RM-4 zones of 30 and 35 feet respectively would not change. Figure 3-8 in Chapter 3, *Project Description*, depicts the proposed maximum building heights along with maximum base heights and height minimums. Figure 3-11 in Chapter 3, *Project Description*, depicts the Physical Height Model, which incorporates required setbacks along with other factors and forms the basis for the EIR analysis. According to the Physical Height Model, development under the Specific Plan would result in the most change, in terms building heights, toward the northern and southern borders of the Plan Area. The addition of taller buildings in the northern blocks of the Plan Area would be consistent with the surrounding development, including taller medical buildings, such as the 185-foot-tall Alta Bates Summit Medical Center, and the elevated I-580 freeway, and would not create a new physical barrier between established communities. Similarly, the development of taller towers toward the southern boundary of the Plan Area would be consistent with existing development south of the Plan Area and with the Specific Plan vision for creating an extension of the *Central Business District*. Further, proposed building height maximum and building base-height maximums are designed with consideration for proximity to historic buildings, historic districts, and residential uses and restrict future projects so that they remain in scale with the surrounding context.

As discussed in Section 4.1, *Aesthetics, Shadow, and Wind*, the proposed heights would result in less-than-significant impacts to view corridors and no scenic views or vistas would be obscured. With new development occurring along the existing street grid pattern and proposed building heights and massing controls resulting in buildings relatively compatible with existing buildings and with development adjacent to the Plan Area, adoption and development under the Specific Plan would not result in a physical or visual barrier, therefore would not physically divide the community.

In summary, although the Specific Plan would allow for taller buildings, the adoption and development under the Specific Plan would not physically divide the community. Although, as described above, adoption and development under the Specific Plan would result in a change in land use patterns throughout the Plan Area, the transition would occur incrementally over time. In addition, the developed Plan Area would represent a strengthening and revitalization of the community represented in the larger area including the residential, institutional, entertainment and downtown office uses surrounding the Plan Area. When considered in the context of this portion of the City, the transition of land use and land use intensity would benefit and serve the needs of land uses adjacent and nearby. A more active and pedestrian friendly environment would serve to enhance connections within the Plan Area, as well as to, and between, the surrounding

neighborhoods. Therefore, the Specific Plan would enhance connectivity in the community rather than result in a perceived or physical division. The impact would be less than significant.

In addition, the General Plan contains substantial policy requirements pertaining to compatibility of land uses that must be implemented throughout all of the City's neighborhoods, including those within the Plan Area. As noted above, adoption of the Specific Plan would be accompanied by a General Plan amendment. However, the Specific Plan would not replace the General Plan's existing policy directions on compatible land uses and thus these policies would apply to future development under the Specific Plan. Conformance to the General Plan, including LUTE policies listed below, would discourage development of incompatible land uses or land uses that would result in a division within an established community. Adherence to these policies is factored into the Broadway Valdez Development Program and reflected in the Physical Height Model (see Chapter 3, *Project Description*).

- **Policy N1.8:** The height and bulk of commercial development in Neighborhood Mixed Use Center and *Community Commercial* areas should be compatible with that which is allowed for residential development.
- **Policy N2.1:** As institutional uses are among the most visible activities in the City and can be sources of community pride, high quality design and upkeep should be encouraged. The facilities should be designed and operated in a manner that is sensitive to surrounding residential and other uses.
- **Policy N5.2:** Residential areas should be buffered and reinforced from conflicting uses through the establishment of performance-based regulations, the removal of non-conforming uses and other tools.
- **Policy N7.1:** New residential development in detached Unit and Mixed Housing Type areas should be compatible with the density, scale, design and existing or desired character of surrounding development.
- **Policy N7.2:** Infrastructure availability, environmental constraints and natural features, emergency response and evacuation times, street width and function, prevailing lot size, prominent development type and height, scenic values, distance from public transit and desired neighborhood character are among the factors that should be taken into consideration when developing and mapping zoning designations or determining compatibility. These factors should be balanced with the citywide need for housing.
- **Policy N8.2:** The height of development in *urban residential* and the higher density residential areas should step down as it nears lower density residential areas to minimize conflicts at the interface between the different types of development.

Implementation of General Plan policies, including but not limited to those described above, means that no significant land use impacts related to land use incompatibility or the physical division of an established community would occur as a result of the adoption and development under the Specific Plan.

Mitigation: None Required.

Policy Consistency / Change in Environment

Impact LU-2: Adoption and development under the Specific Plan would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect (Criterion 3). (Less than Significant)

Conflicts between a project and applicable policies do not constitute significant physical environmental impacts in and of themselves. A policy inconsistency is considered a significant adverse environmental impact only when it is related to a policy adopted for the purpose of avoiding or mitigating an environmental effect and it is anticipated that the inconsistency would result in a significant adverse physical impact based on the established significance criteria.

As discussed in the Setting section above, adoption and development under the Specific Plan generally would not conflict with applicable land use policies adopted for the purpose of avoiding or mitigating an environmental effect. As a result, no significant land use impacts related to the consistency of adoption and development under the Specific Plan with land use policies would occur.

Mitigation: None Required.

Habitat and Natural Community Conservation Plans

Impact LU-3: Adoption and development under the Specific Plan would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan (Criterion 4). (Less than Significant)

The Plan Area is not located within or in proximity to an area guided by a Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, adoption and development under the Specific Plan would not conflict with such plans.

Mitigation: None Required.

Cumulative Impacts

Impact LU-4: Development under the Specific Plan, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, does not reveal any significant adverse cumulative impacts in the area. (Less than Significant)

Geographic Context

The cumulative geographic context for land use, plans and policy considerations for the development under the Specific Plan consists of the Plan Area in addition to the surrounding

neighborhoods including the Uptown District, Lake Merritt / Kaiser Center Office District, Pill Hill, the Art Murmur Gallery District (25th Street Garage District), as well as surrounding residential neighborhoods (these surrounding neighborhoods are discussed above).

Impacts

As analyzed throughout this section, development under the Specific Plan would not result in a significant land use impact by potentially physically dividing an established community; conflicting with adjacent or nearby land uses; or conflicting with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect.

Development under the Specific Plan would not be located in or near an area guided by a habitat conservation plan or natural community conservation plan. Thus, development under the Specific Plan would not combine with, or add to, any potential adverse land use impacts that may be associated with other cumulative development. Similarly, because development under the Specific Plan would not result in a conflict with a land use plan, policy or regulation in manner that could result in a significant environmental effect, whether other present or future development would have such a conflict, the effect would not combine to create cumulative conflict.

In addition, past projects have been, and present and reasonably foreseeable future projects would be, subject to development guidance contained within the General Plan and other applicable land use plans to ensure land use compatibility. These projects include those in the Major Projects List in Appendix B to this Draft EIR. Based on the information in this land use section and for the reasons summarized above, development under the Specific Plan would not contribute to any significant adverse cumulative land use impacts when considered together with past, present, pending and reasonably foreseeable development.

Mitigation: None Required.

4.9.4 References

City of Oakland, 2002. *Pedestrian Master Plan. Part of the Land Use and Transportation Element of the Oakland General Plan*, adopted November 2002.

City of Oakland, 2007. *Land Use and Transportation Element of the Oakland General Plan*, March 24, 1998, amended to June 21, 2007.

City of Oakland, 2007. *Bicycle Master Plan. Part of the Land Use and Transportation Element of the Oakland General Plan*, adopted December 2007.

City of Oakland, 2013. *City of Oakland Planning Code*. CEDA: Planning and Zoning. <http://www2.oaklandnet.com/oakcal/groups/ceda/documents/report/oak032032.pdf>, accessed February 14, 2013.

Oakland Redevelopment Agency, 2007. *Redevelopment Plan for the Broadway/MacArthur/San Pablo Redevelopment Project*, Adopted June 25, 2000, as amended through March 6, 2007.

Oakland Redevelopment Agency, 2012. *Central District Urban Renewal Plan*, Adopted June 12, 1969, as amended through April 3, 2012.

Oakland Redevelopment Agency, 2009. *Central Redevelopment Project Five-Year Implementation Plan 2009-2014*, 2009.

WRT, 2013. *Public Review Draft Broadway Valdez District Specific Plan*, September, 2013.

4.10 Noise

This section analyzes potential impacts on the ambient noise environment caused by adoption and construction of development under the Specific Plan. It also analyzes the compatibility of noise-sensitive uses developed, such as residences and public open spaces with the existing noise environment. This section describes the environmental and regulatory setting of the Plan Area as well as basics of environmental acoustics, including definitions of terms commonly used in noise analysis. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.10.1 Environmental Setting

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the “loudness” of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear’s decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of decibels (dBA).¹ Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Some representative noise sources and their corresponding A-weighted noise levels are shown in **Table 4.10-1**.

Noise Exposure and Community Noise

An individual’s noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in Table 4.10-1 represent noise measured at a given instant in time; however, noise levels rarely persist consistently over a long period of time. Rather, community noise varies

¹ All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

**TABLE 4.10-1
TYPICAL NOISE LEVELS**

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Band
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	Normal speech at 3 feet
40-60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

SOURCE: Modified from Caltrans, 2009

continuously over time because of the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and wind. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of time to accurately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

- L_{eq} : The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).
- L_{max} : The instantaneous maximum noise level for a specified period of time.
- L_{50} : The noise level that is equaled or exceeded 50 percent of the specified time. This is the median noise level during the specified time.
- L_{90} : The noise level that is equaled or exceeded 90 percent of the specified time. The L_{90} is often considered the background noise level averaged over the specified time.

DNL: The Day/Night Average Sound Level is the 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night. Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance from nighttime noise. (Also referred to as “Ldn.”)

CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA “penalty” for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

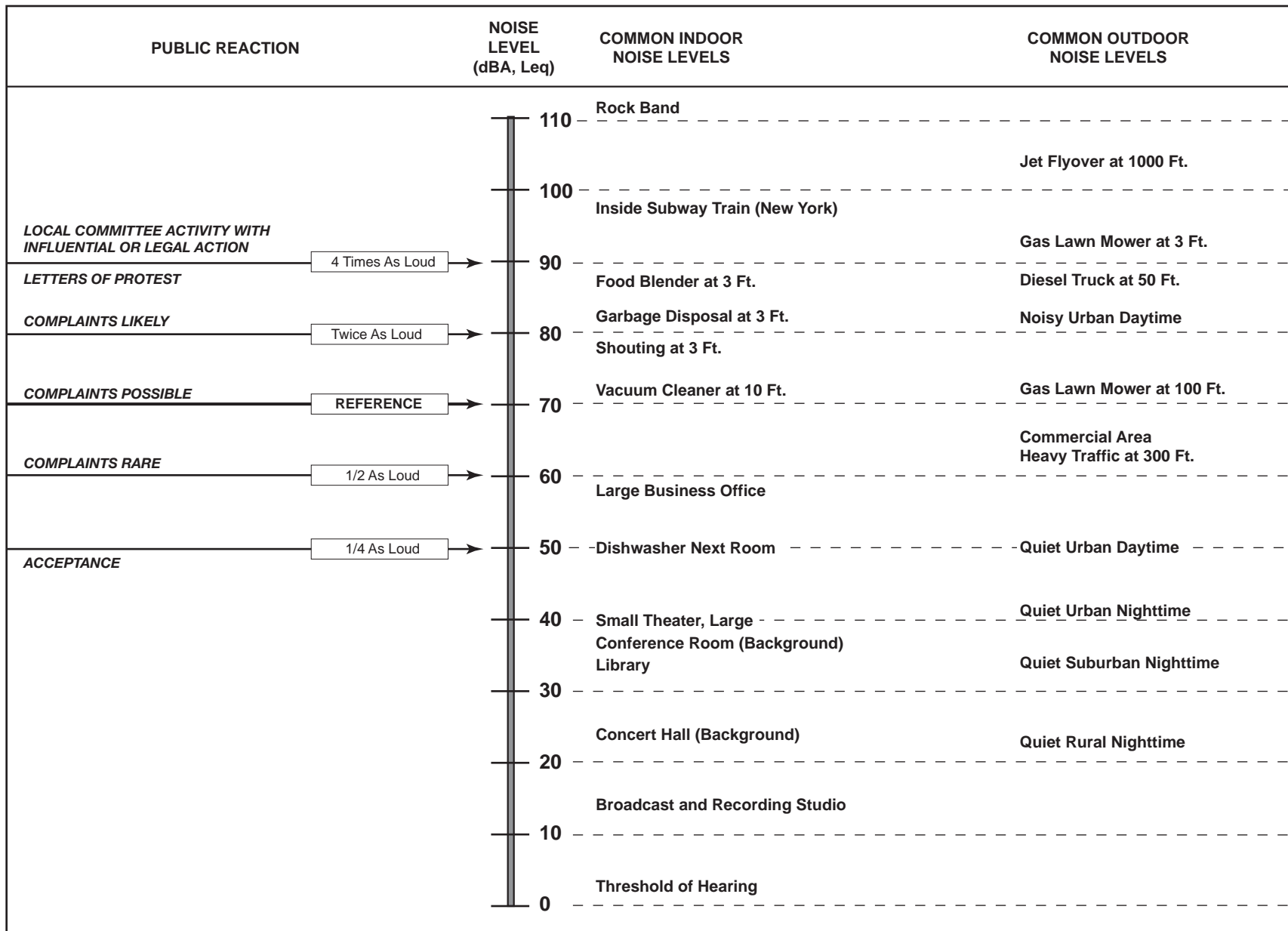
- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories (see **Figure 4.10-1**). Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called “ambient noise” level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA;
- Outside these controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive changes in the noise level of 3 dBA;
- A change in level of 5 dBA is a readily perceptible increase in noise level; and
- A 10 dBA change is recognized as twice as loud as the original source (Caltrans, 2009).

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.



SOURCE: Caltrans Transportation Laboratory Noise Manual, 1982;
and modification by ESA

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Figure 4.10-1
Effects of Noise on People

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles (known as a “line” source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA each time the distance doubles from the source, which also depends on environmental conditions (Caltrans, 2009). Noise from large construction sites would exhibit characteristics of both “point” and “line” sources, and attenuation will therefore generally range between 4.5 and 7.5 dBA each time the distance doubles.

Existing Noise Sources and Levels

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of noise in the urban environment. Along major transportation corridors, noise levels can reach 80 DNL, while along arterial streets, noise levels typically range from 65 to 70 DNL. However, noise levels on roadways, like all areas, can be affected by intervening development, topography, or landscaping. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities.

Roadway traffic generates noise throughout the City of Oakland. Railroad trains and BART intermittently generate noise levels that are significant along the railroad tracks. General aviation aircraft and jet aircraft contribute to intermittent noise levels in the City. Noise is also generated on individual parcels whether industrial, commercial or residential. These noise sources do not affect the overall noise environment throughout the community (Illingworth and Rodkin, 2004).

To characterize the noise environment within the Plan Area, short-term noise monitoring was conducted at eight locations throughout the Plan Area. **Table 4.10-2** presents noise data for roadways within the Plan Area as monitored in 2013. Noise measurement locations were selected based on proximity to residential uses anticipated to be developed under the Specific Plan. Locations were also selected at varying distances from Broadway to demonstrate the attenuation with distance from this major noise source throughout the Specific Plan Area. A noise monitoring location near I-580 at the northern end of the Specific Plan Area also was selected, as were existing residential areas on Brooks Street and near Richmond Avenue. Primary noise sources in the Plan Area vicinity include traffic on the network of streets surrounding the Plan Area. Noise from I-580 is a major source at the northern extent of the Plan Area, although it is elevated and noise levels at 300 feet were recorded to average 63 dBA at a location with direct line of sight. Traffic noise from I-980 is sufficiently distant not to affect the Plan Area. No major stationary or industrial noise sources are located within the area.

**TABLE 4.10-2
MONITORED NOISE ENVIRONMENTS WITHIN THE PLAN AREA**

Location	Duration	Noise Level (Leq, dBA)	Noise Level (L ₃₃ , dBA)	Major Noise Source
Brooks Street Residential Area	15 Minute	59.2	56	Vehicle traffic and automotive shops
Richmond Avenue Residential Area	15 Minute	67.6	62	Vehicle traffic / street construction
Webster and 34th Place of Worship	15 Minute	63.0	62	Vehicle traffic
27th Street west of Broadway Proposed Residential	15 Minute	62.5	62	Vehicle traffic/siren
27th Street at Valdez Proposed Residential	15 Minute	64.9	62	Vehicle traffic
24th Street at Valdez Mixed Use Residential	15 Minute	59.2	56	Vehicle traffic / Car lot PA
25th Street 200 feet west of Broadway	15 Minute	56.5	56	Vehicle traffic and automotive shops
Broadway at 30th Street	15 Minute	66.8	66	Vehicle traffic / Bus stop / crosswalk warning

SOURCE: ESA, 2013.

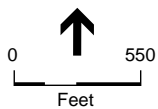
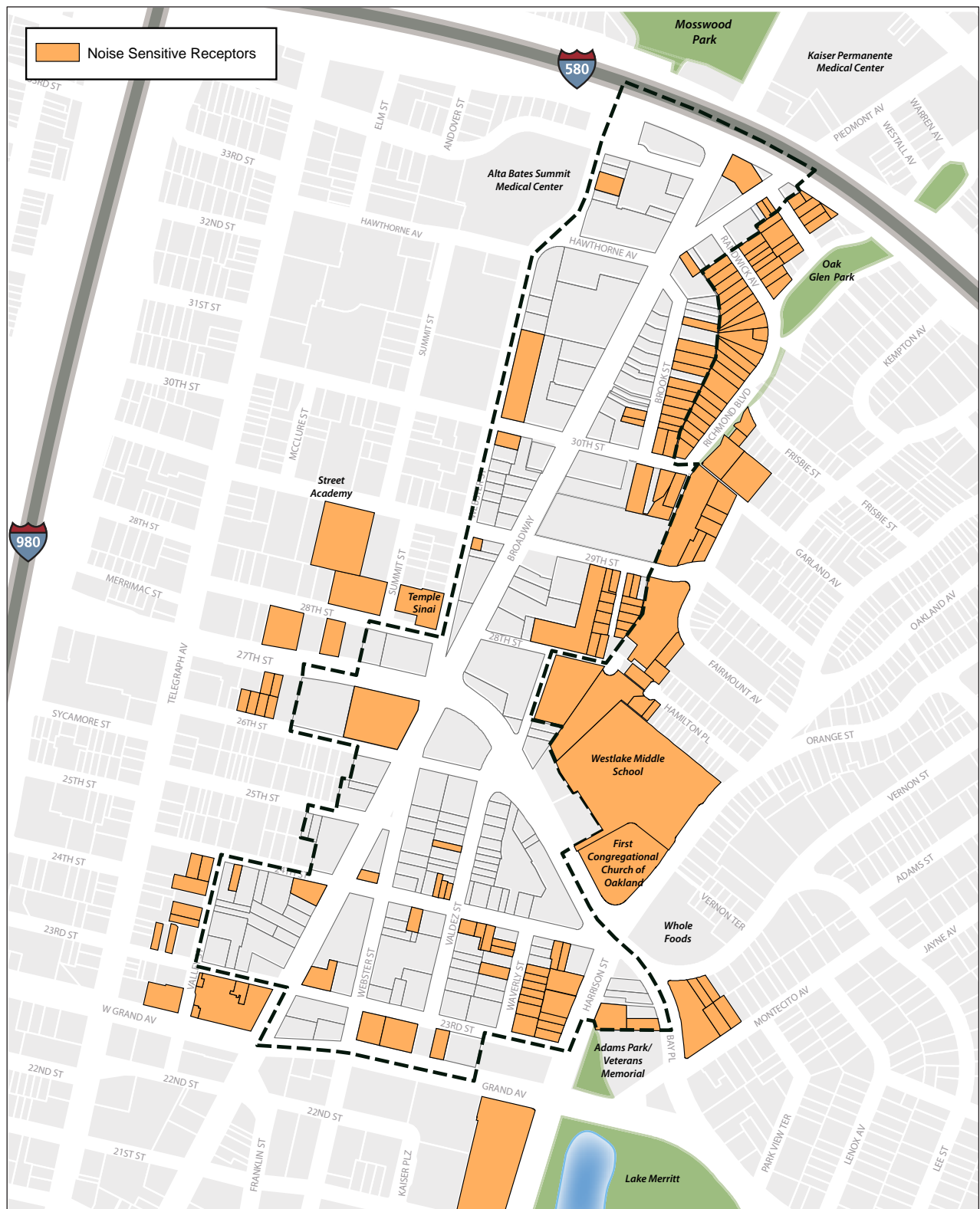
Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure, in terms of both duration and insulation from noise, and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses.

The Plan Area consists of a mixture of commercial, retail and office space as well as residential uses. Located within the Plan Area are residential areas, day care facilities, senior community facilities, and churches. The location of sensitive receptors are presented in **Figure 4.10-2**, based on existing land uses within the Specific Plan Area.

4.10.2 Regulatory Setting

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans; local noise ordinances establish standards and procedures for addressing specific noise sources and activities.



SOURCE: WRT, 2013

Broadway Valdez District Specific Plan . 208522
Figure 4.10-2
 Existing Sensitive Receptors in the Plan Area

Federal

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 Code of Federal Regulations (CFR) Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the centerline of the vehicle pathway. These standards are implemented through regulatory controls on truck manufacturers.

State of California

Aircraft Operations

The California Airport Noise Standards, Title 21, Section 5000 et seq. of the California Code of Regulations (CCR) apply to any airport that is deemed to have a “noise problem” as established by the local County Board of Supervisors in accordance with the provisions in the regulation. Currently, within the Bay Area, Norman Y. Mineta-San José International Airport and San Francisco International Airport have been given this designation. The Standards establish a noise exposure limit “acceptable to a reasonable person residing in the vicinity of an airport” of 65 dB CNEL.

Vehicle Operations

The State of California establishes noise limits for vehicles licensed to operate on public roads. The pass-by standard for heavy trucks is consistent with the federal limit of 80 dB. The pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanctions on vehicle operators by state and local law enforcement officials.

Noise Insulation Standard

The California Noise Insulation Standards found in CCR, Title 24 establish requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation noise. In this case, the noise insulation criterion is 45 dB L_{dn} /CNEL inside noise-sensitive spaces. For developments with exterior transportation noise exposure exceeding 60 dB L_{dn} /CNEL, an acoustical analysis and mitigation (if required) must be provided showing compliance with the 45 dB L_{dn} /CNEL interior noise exposure limit.

Local Plans and Policies

City of Oakland General Plan

The Oakland General Plan contains guidelines for determining the compatibility of various land uses with different outdoor noise environments (City of Oakland, 2005). The Noise Element recognizes that some land uses are more sensitive to ambient noise levels than others, due to the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved. The City uses state noise guidelines for judging the

compatibility between various land uses and their noise environments, which are summarized in **Figure 4.10-3** for various common land uses.

The Oakland General Plan Noise Element also identifies maximum interior noise levels generally considered acceptable for various common land uses (with windows closed). Relevant to the adoption and development under the Specific Plan, 50 dB is the maximum level acceptable for professional offices, research and development, auditoria, meeting halls, and 55 dB is the maximum level acceptable for retail, banks, restaurants, and sports clubs. The Noise Element contains the following applicable goals and policies:

Goal 1: To protect Oakland's quality of life and the physical and mental well-being of residents and others in the City by reducing the community's exposure to noise; and

Goal 2: To safeguard Oakland's economic welfare by mitigating noise incompatibilities among commercial, industrial and residential land uses.

- **Policy 1:** Ensure the compatibility of existing and, especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.
- **Policy 2:** Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.
- **Policy 3:** Reduce the community's exposure to noise by minimizing the noise levels that are *received* by Oakland residents and others in the City. (This policy addresses the *reception* of noise whereas Policy 2 addresses the *generation* of noise.)

City of Oakland Noise Ordinance

The City of Oakland also regulates noise through enforcement of its Noise Ordinance, which is found in Sections 8.18 and 17.120 of the Oakland Municipal Code. Per Chapter 8.18.020, the persistent maintenance or emission of any noise or sound produced by human, animal or mechanical means, between the hours of 9:00 p.m. and 7:00 a.m. which shall disturb the peace or comfort, or be injurious to the health of any person shall constitute a nuisance. Failure to comply with the following provisions shall constitute a nuisance.

- A. All construction equipment powered by internal combustion engines shall be properly muffled and maintained. Unnecessary idling of internal combustion engines is prohibited.
- B. All stationery noise-generating construction equipment such as tree grinders and air compressors are to be located as far as is practical from existing residences.
- C. Quiet construction equipment, particularly air compressors, is to be selected whenever possible.
- D. Use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Land Use Compatibility Guidelines							
LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE (L _{DN} OR CNEL, dB)						
	55	60	65	70	75	80	
Residential	NA						
			CA				
					NU		
Transient lodging – motels, hotels	NA						
				CA			
						NU	
Schools, libraries, churches, hospitals, nursing homes	NA						
			CA				
					NU		
Auditoriums, concert halls, amphitheaters	NA						
			CA				
							CU
Sports arenas, outdoor spectator sports	NA						
			CA				
							CU
Playgrounds, neighborhood parks	NA						
				NU			
							CU
Golf courses, riding stables, water recreation, cemeteries	NA						
					NU		
							CU
Office buildings, business commercial and professional	NA						
				CA			
						NU	
Industrial, manufacturing, utilities, agriculture	NA						
					CA		
							NU
NA	NORMALLY ACCEPTABLE: Development may occur without an analysis of potential noise impacts to the proposed development (though it might still be necessary to analyze noise impacts that the project might have on its surroundings).						
CA	CONDITIONALLY ACCEPTABLE: Development should be undertaken only after an analysis of noise-reduction requirements is conducted and if necessary noise-mitigating features are included.						
NU	NORMALLY UNACCEPTABLE: Development should generally be discouraged; it may be undertaken only if a detailed analysis of the noise-reduction requirements is conducted, and if highly effective noise mitigation features are included.						
CU	CLEARLY UNACCEPTABLE: Development should not be undertaken.						

SOURCE: City of Oakland, 2011

Broadway Valdez District Specific Plan . 208522

Figure 4.10-3

Land Use Compatibility Guidelines

Whenever the existence of any such nuisance shall come to the attention of the Health Officer, it shall be his or her duty to notify in writing the occupant of the premises upon which such nuisance exists, specifying the measures necessary to abate such nuisance, and unless the same is abated within forty-eight (48) hours thereafter, the occupant so notified shall be guilty of an infraction, and the Health Officer shall summarily abate such nuisance.

Chapter 17.120.050 of the Oakland Planning Code regulates operational noise from stationary sources, as cities and counties do not have regulatory authority over noise from mobile sources (transportation noise). As mentioned above, transportation noise is regulated at the state and federal level by noise limits placed on vehicle manufacturers. **Table 4.10-3** presents maximum allowable receiving noise standards applicable to long-term exposure for residential and civic land uses, for noise from stationary noise sources (not transportation noise). Once constructed, noise from a stationary source would be limited by the standards in Table 4.10-3. For example, between 7:00 a.m. and 10:00 p.m., residential and civic land uses, including public open spaces, may only be exposed to noises up to 60 dBA for a period of 20 cumulative minutes in a one-hour time period and a maximum of 80 dBA. The Noise Ordinance states that if the measured ambient noise level exceeds the applicable noise level standard in any category, then the stated applicable noise level shall be adjusted so as to equal the ambient noise level. In other words, if existing noise is measured to be louder than the maximum allowed (i.e., the “applicable noise level standard”), the existing noise level shall be considered the maximum allowed.

Per Chapter 17.120.060 of the Oakland Planning Code, all activities, except those located within the M-40 zone, or in the M-30 zone more than 400 feet from any legal residentially occupied property, shall be so operated as not to create a vibration which is perceptible without instruments by the average person at or beyond any lot line of the lot containing such activities. Ground vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempted from this standard. (Ord. 11895 Section 8, 1996: prior planning code Section 7711).

Table 4.10-4 presents noise level standards from the Noise Ordinance that applies to temporary exposure to short- and long-term construction noise. In this context, short-term refers to construction activity lasting less than 10 days at a time while long-term refers to construction activities lasting greater than 10 days at a time.

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

The City of Oakland’s Standard Conditions of Approval (SCA) relevant to reducing noise and vibration impacts due to adoption and development under the Specific Plan are listed below. If the Specific Plan is approved by the City, all applicable SCA would be adopted as conditions of approval and required of adoption and development under the Specific Plan, as applicable, to help ensure less-than-significant impacts from noise and vibration. The SCA are incorporated and required as part of all approved projects, so they are not listed as mitigation measures.

**TABLE 4.10-3
CITY OF OAKLAND OPERATIONAL NOISE STANDARDS AT RECEIVING PROPERTY LINE, DBA¹
(from Stationary Sources)**

Receiving Land Use	Cumulative Number of Minutes in a 1-Hour Time Period ²	Maximum Allowable Noise Level Standards (dBA)	
		Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
Residential and Civic ³	20 (L ₃₃)	60	45
	10 (L _{16.7})	65	50
	5 (L _{8.3})	70	55
	1 (L _{1.7})	75	60
	0 (L _{max})	80	65
Anytime			
Commercial	20 (L ₃₃)	65	
	10 (L _{16.7})	70	
	5 (L _{8.3})	75	
	1 (L _{1.7})	80	
	0 (L _{max})	85	
Anytime			
Manufacturing, Mining, and Quarrying	20 (L ₃₃)	70	
	10 (L _{16.7})	75	
	5 (L _{8.3})	80	
	1 (L _{1.7})	85	
	0 (L _{max})	90	

¹ These standards are reduced 5 dBA for simple tone noise, noise consisting primarily of speech or music, or recurring impact noise. If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

² L_x represents the noise level that is exceeded X percent of a given period. L_{max} is the maximum instantaneous noise level.

³ Legal residences, schools and childcare facilities, health care or nursing home, public open space, or similarly sensitive land uses.

SOURCE: City of Oakland, Planning Code Chapter 17.120.050. A, B, and C, 2008

**TABLE 4.10-4
CITY OF OAKLAND CONSTRUCTION NOISE STANDARDS AT
RECEIVING PROPERTY LINE, DBA**

Receiving Land Use	Daily 7:00 a.m. to 7:00 p.m.	Weekends 9:00 a.m. to 8:00 p.m.
Short-Term Operation (less than 10 days)		
Residential	80	65
Commercial, Industrial	85	70
Long-Term Operation (more than 10 days)		
Residential	65	55
Commercial, Industrial	70	60

During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (see Table 4.10-3). If the ambient noise level exceeds these standards, the standard shall be adjusted to equal the ambient noise level.

SOURCE: City of Oakland, Municipal Code Chapter 17.120.050.G.

- **SCA 28: Days/Hours of Construction Operation**

Ongoing throughout demolition, grading, and/or construction. The project applicant shall require construction contractors to limit standard construction activities as follows:

- a) Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pile driving and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday.
- b) Any construction activity proposed to occur outside of the standard hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened and such construction activities shall only be allowed with the prior written authorization of the Building Services Division.
- c) Construction activity shall not occur on Saturdays, with the following possible exceptions:
 - i. Prior to the building being enclosed, requests for Saturday construction for special activities (such as concrete pouring which may require more continuous amounts of time), shall be evaluated on a case by case basis, with criteria including the proximity of residential uses and a consideration of resident's preferences for whether the activity is acceptable if the overall duration of construction is shortened. Such construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division.
 - ii. After the building is enclosed, requests for Saturday construction activities shall only be allowed on Saturdays with the prior written authorization of the Building Services Division, and only then within the interior of the building with the doors and windows closed.
- d) No extreme noise generating activities (greater than 90 dBA) shall be allowed on Saturdays, with no exceptions.
- e) No construction activity shall take place on Sundays or federal holidays.
- f) Construction activities include but are not limited to: truck idling, moving equipment (including trucks, elevators, etc) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.
- g) Applicant shall use temporary power poles instead of generators where feasible.

- **SCA 29: Noise Control**

Ongoing throughout demolition, grading, and/or construction. To reduce noise impacts due to construction, the project applicant shall require construction contractors to implement a site-specific noise reduction program, subject to the Planning and Zoning Division and the Building Services Division review and approval, which includes the following measures:

- a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake

silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

- b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
- c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures as determined by the City to provide equivalent noise reduction.
- d) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determined an extension is necessary and all available noise reduction controls are implemented.

- **SCA 30: Noise Complaint Procedures**

Ongoing throughout demolition, grading, and/or construction. Prior to the issuance of each building permit, along with the submission of construction documents, the project applicant shall submit to the Building Services Division a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

- a) A procedure and phone numbers for notifying the Building Services Division staff and Oakland Police Department; (during regular construction hours and off-hours);
- b) A sign posted on-site pertaining with permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);
- c) The designation of an on-site construction complaint and enforcement manager for the project;
- d) Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities about the estimated duration of the activity; and
- e) A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

- **SCA 31: Interior Noise**

Prior to issuance of a building permit. If necessary to comply with the interior noise requirements of the City of Oakland's General Plan Noise Element and achieve an acceptable interior noise level, noise reduction in the form of sound-rated assemblies (i.e.,

windows, exterior doors, and walls) shall be incorporated into project building design, based upon recommendations of a qualified acoustical engineer and submitted to the Building Services Division for review and approval. Final recommendations for sound-rated assemblies would depend on the specific building designs and layout of buildings on the site and shall be determined during the design phases. Written confirmation by the acoustical consultant, HVAC or HERS specialist, shall be submitted for City review and approval, prior to Certificate of Occupancy (or equivalent) that:

- (a) Quality control was exercised during construction to ensure all air-gaps and penetrations of the building shell are controlled and sealed; and
- (b) Demonstrates compliance with interior noise standards based upon performance testing of a sample unit.
- (c) Inclusion of a Statement of Disclosure Notice in the CC&R's on the lease or title to all new tenants or owners of the units acknowledging the noise generating activity and the single event noise occurrences. Potential features/measures to reduce interior noise could include, but are not limited to, the following:
 - i. Installation of an alternative form of ventilation in all units identified in the acoustical analysis as not being able to meet the interior noise requirements due to adjacency to a noise generating activity, filtration of ambient make-up air in each unit and analysis of ventilation noise if ventilation is included in the recommendations by the acoustical analysis.
 - ii. Prohibition of Z-duct construction.

- **SCA 32: Operational Noise - General**

Ongoing. Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

- **SCA 38: Vibration**

A qualified acoustical consultant shall be retained by the project applicant during the design phase of the project to comment on structural design as it relates to reducing groundborne vibration at the project site. If required in order to reduce groundborne vibration to acceptable levels, the project applicant shall incorporate special building methods to reduce groundborne vibration being transmitted into project structures. The City shall review and approve the recommendations of the acoustical consultant and the plans implementing such recommendations. Applicant shall implement the approved plans. Potential methods include the following:

- (a) Isolation of foundation and footings using resilient elements such as rubber bearing pads or springs, such as a "spring isolation" system that consists of resilient spring supports that can support the podium or residential foundations. The specific system shall be selected so that it can properly support the structural loads, and provide adequate filtering of ground-borne vibration to the residences above.

- (b) Trenching, which involves excavating soil between the railway/freeway and the project so that the vibration path is interrupted, thereby reducing the vibration levels before they enter the project's structures. Since the reduction in vibration level is based on a ratio between trench depth and vibration wavelength, additional measurements shall be conducted to determine the vibration wavelengths affecting the project. Based on the resulting measurement findings, an adequate trench depth and, if required, suitable fill shall be identified (such as foamed styrene packing pellets (i.e., Styrofoam) or low-density polyethylene).

- **SCA 39: Pile Driving and Other Extreme Noise Generators**

Ongoing throughout demolition, grading, and/or construction. To further reduce potential pier drilling, pile driving and/or other extreme noise generating construction impacts greater than 90dBA, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the Planning and Zoning Division and the Building Services Division to ensure that maximum feasible noise attenuation will be achieved. This plan shall be based on the final design of the project. A third-party peer review, paid for by the project applicant, may be required to assist the City in evaluating the feasibility and effectiveness of the noise reduction plan submitted by the project applicant. A special inspection deposit is required to ensure compliance with the noise reduction plan. The amount of the deposit shall be determined by the Building Official, and the deposit shall be submitted by the project applicant concurrent with submittal of the noise reduction plan. The noise reduction plan shall include, but not be limited to, an evaluation of the following measures. These attenuation measures shall include as many of the following control strategies as applicable to the site and construction activity:

- a) Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
- b) Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
- c) Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
- d) Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example; and
- e) Monitor the effectiveness of noise attenuation measures by taking noise measurements.

- **SCA 57 : Vibrations Adjacent to Historic Structures**

Prior to issuance of a demolition, grading or building permit. The project applicant shall retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could damage other nearby historic structures, and design means and methods of construction that shall be utilized to not exceed the thresholds.

4.10.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding construction noise, except if an acoustical analysis is performed that identifies recommend measures to reduce potential impacts: During the hours of 7 p.m. to 7 a.m. on weekdays and 8 p.m. to 9 a.m. on weekends and federal holidays, noise levels received by any land use from construction or demolition shall not exceed the applicable nighttime operational noise level standard (see Table 2);
2. Generate noise in violation of the City of Oakland nuisance standards (Oakland Municipal Code section 8.18.020) regarding persistent construction-related noise;
3. Generate noise in violation of the City of Oakland Noise Ordinance (Oakland Planning Code section 17.120.050) regarding operational noise;
4. Generate noise resulting in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project; or, if under a cumulative scenario where the cumulative increase results in a 5 dBA permanent increase in ambient noise levels in the project vicinity without the project (i.e., the cumulative condition including the project compared to the existing conditions) and a 3 dBA permanent increase is attributable to the project (i.e., the cumulative condition including the project compared to the cumulative baseline condition without the project) [NOTE: Outside of a laboratory, a 3 dBA change is considered a just-perceivable difference. Therefore, 3 dBA is used to determine if the project-related noise increases are cumulative considerable.];
5. Expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities (and may be extended by local legislative action to include single-family dwellings) per California Noise Insulation Standards (CCR Part 2, Title 24);
6. Expose the project to community noise in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval;
7. Expose persons to or generate noise levels in excess of applicable standards established by a regulatory agency (e.g., occupational noise standards of the Occupational Safety and Health Administration [OSHA]);
8. During either project construction or project operation expose persons to or generate groundborne vibration that exceeds the criteria established by the Federal Transit Administration (FTA);
9. Be located within an airport land use plan and would expose people residing or working in the project area to excessive noise levels; or
10. Be located within the vicinity of a private airstrip, and would expose people residing or working in the project area to excessive noise levels.

Approach to Analysis

Based on the characteristics of the Specific Plan and the Plan Area location, adoption and development under the Specific Plan would not result in impacts related to the following criteria. No impact discussion is provided for these topics for the following reasons:

- **Airports.** The Plan Area is not located within the vicinity of a private airstrip nor is it located within the land use plan area for Oakland Airport or any other airport. Therefore, it can be assumed that no impact would occur with regard to criteria 9 and 10.
- **OSHA Standards.** The Specific Plan proposes a mix of commercial office and residential uses. Expose persons to or generate noise levels in excess of applicable standards of OSHA would occur from industrial uses that are not proposed within the Specific Plan. OSHA noise exposure standards are implemented at noise levels of 85 dBA for an 8-hour exposure period. Average noise levels monitored within the Plan area were below 70 dBA. Therefore, it can be assumed that no impact would occur with regard to criterion 7.

CEQA requires the analysis of potential adverse effects of a project on the environment. Potential effects of the environment on a project are legally not required to be analyzed or mitigated under CEQA. However, this EIR nevertheless analyzes potential effects of “the environment on the project” in order to provide information to the public and decision-makers. Where a potential significant effect of the environment on the project is identified, the document, as appropriate, identifies City Standard Conditions of Approval and/or project-specific non-CEQA recommendations to address these issues.

Impacts

Construction Noise

Impact NOI-1: Adoption and development under the Specific Plan would not result in substantial temporary or periodic increases in ambient noise levels in the Plan Area above existing levels without the Specific Plan and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Criteria 1, 2 and 8). (Less than Significant)

As indicated in Table 3-1 in Chapter 3, *Project Description*, adoption and development under the Specific Plan would allow for demolition and construction for a net increase of approximately 1.11 million square feet of retail space, 336,000 square feet of general office space, 359,000 square feet of medical office space, 1,796 residential units, and 181 hotel rooms over a 20-year planning period. Furthermore, adoption and development under the Specific Plan could include infrastructure improvements, including such items as streetscape improvements, traffic capacity improvements, and storm drainage improvements.

Construction, although typically short-term, can be a significant source of noise. Construction is most significant when it takes place near sensitive land uses, occurs at night, or in early morning hours. Local governments typically regulate noise associated with construction equipment and activities through enforcement of noise ordinance standards, implementation of General Plan policies and imposition of conditions of approval for building or grading permits. **Table 4.10-5**

shows typical exterior noise levels at various phases of commercial construction and **Table 4.10-6** shows typical noise levels associated with various types of construction equipment.

**TABLE 4.10-5
TYPICAL CONSTRUCTION NOISE LEVELS**

Phase	Noise Level (L_{eq}) ^a
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Exterior Finishing	89
Pile Driving	90-105

^a Estimates correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase and 200 feet from the other equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, *Noise from Construction Equipment and Building Operations, Building Equipment and Home Appliances*, December 1971

**TABLE 4.10-6
TYPICAL MAXIMUM NOISE LEVELS FROM CONSTRUCTION EQUIPMENT**

Construction Equipment	Noise Level (dBA, L_{eq} at 50 feet)
Backhoe	80
Rock Drill	98
Air Compressor	81
Dozer	85
Air Compressor	85
Mobile Crane	83
Grader	85
Front End Loader	85
Trucks	88
Cranes	83
Pile Driver (Sonic)	96
Pile Driver (Impact)	101

SOURCE: FTA, 2006.

Construction-related activities would temporarily increase ambient noise levels within the Plan Area over the duration of construction. Construction-related noise levels within and adjacent to the Plan Area would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The effect of construction noise would depend upon the level of construction activity on a given day, the related noise generated by that activity, the distance between construction activities, the nearest noise-sensitive uses, and the existing noise levels at those uses.

The dominant construction equipment noise source is usually a diesel engine. Stationary equipment consists of equipment that generates noise from one general area and includes items such as pumps, generators, compressors, etc. These types of equipment operate at a constant noise level under normal operation and are classified as non-impact equipment. Other types of stationary equipment such as pile drivers, jackhammers, and pavement breakers, etc., produce variable and sporadic noise levels and often produce impact-type noises. Impact equipment is equipment that generates impulsive noise, where impulsive noise is defined as noise of short duration (generally less than one second), high intensity, abrupt onset, rapid decay, and often rapidly changing spectral composition. For impact equipment, the noise is produced by the impact of a mass on a surface, typically repeating over time. Mobile equipment such as dozers, scrapers, graders, etc., may operate with power applied in a cyclic fashion in which a period of full power is followed by a period of reduced power. Other equipment such as compressors, although generally considered to be stationary when operating, can be readily relocated to another location for the next operation.

Construction-related noise levels generally fluctuate depending on the construction phase, equipment type and duration of use, distance between noise source and receptor, and presence or absence of barriers between the noise source and receptor. Existing sensitive receptors within and near the Specific Plan area were presented in Figure 4.10-2 in the Environmental Setting section. Adoption and development under the Specific Plan could introduce new sensitive receptors throughout the Plan Area.

Adoption and development under the Specific Plan could expose nearby residences to noise levels as high as 89 dBA at 50 feet using typical construction methods and up to 105 dBA at 50 feet if pile driving is required. However, even without pile driving, noise levels associated with construction would be significantly greater than existing noise levels at nearby receptors.

Effects of Extreme Noise Activities and Vibration

Noise from construction activities generally attenuates at a rate of 6.0 to 7.5 dBA per doubling of distance. As discussed above, the nearest sensitive uses could be as close as 50 feet from a given development project site. These areas would temporarily and intermittently experience maximum noise levels of up to 105 dBA with pile driving, typically the loudest source of construction noise. Impacts from pile driving can result from both elevated single-event or “impact” noise levels and from vibration. Pile driving could produce elevated noise levels, even when feasible noise reduction methods are used.

Implementation of SCA 28, *Days/Hours of Construction Operation*, SCA 29, *Noise Control*, SCA 30, *Noise Complaint Procedures*, and SCA 39, *Pile Driving and Other Extreme Noise Generators*, would reduce construction noise levels by limiting hours of construction activities, requiring best available noise control technology, and by requiring a project applicant and/or its contractors to notify any local residents (if any) of construction activities and to track and respond to noise complaints. The estimated noise level associated with pile driving could exceed the 90 dBA, L_{max} . To specifically address impacts from pile drilling and other extreme noise generating construction activities that may expose sensitive receptors to noise levels greater than 90 dBA, L_{max} , part of SCA 39 requires a project applicant to develop and submit for review and approval by the City a Site-

specific Construction Noise Reduction Plan that would ensure that maximum feasible noise attenuation will be achieved. The applicant is required submit this plan for review and approval.

Depending on the construction equipment used, groundborne vibrations can be perceptible within 30 to 100 feet of a source. Structural damage from pile driving typically does not occur in buildings more than 50 feet from the location of the activity (Caltrans, 2004). However, these vibrations could result in cosmetic or structural damage to within 50 feet of a project site and construction area. All development under the Specific Plan, if approved, would be required to incorporate SCA 39, *Vibration*, and SCA 57, *Vibrations Adjacent to Historic Structures*, to address the potential effects of groundborne vibration (see Section 4.4, *Cultural Resources*). SCA 57 requires that the project applicant retain a structural engineer or other appropriate professional to determine threshold levels of vibration and cracking that could affect portions of adjacent structures, and design means and methods of construction that shall be utilized to avoid potential impacts.

Implementation of SCAs 28, 29, 30, 39 and 57 would reduce impacts from construction noise and vibration. SCA's have been developed by the City of Oakland over the past decade to reduce construction noise impacts. SCA 28 restricts the hours and days of construction activity. SCA 29 requires contractors to implement a construction noise reduction program SCA 30 establishes construction noise complaint procedures, while SCA 39 establishes a set of site-specific noise attenuation measures to address noise from pile driving. These SCA's are comprehensive in their content and for practical purposes represent all feasible measures available to mitigate construction noise. Implementation of these measures would reduce construction impacts associated with extreme noise actions and vibration to less than significant levels.

Mitigation: None Required.

Operational Noise

Impact NOI-2: Adoption and development under the Specific Plan would not increase operational noise levels in the Plan Area to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 3). (Less than Significant)

Chapter 17.120.050 of the City of Oakland Planning Code specifies the maximum sound level received at residential, public open spaces and commercial land uses. The maximum sound level (L_{max}) received by residential uses cannot exceed 80 dBA and the L_{max} received by commercial land uses cannot exceed 85 dBA. Per Table 4.10-3, stationary source noise received at residential uses must not exceed 60 dBA and commercial land uses cannot exceed 65 dBA during daytime hours as measured at the property line over a 20 minutes in a one-hour time period. However, per the City of Oakland, if existing noise is measured to be louder than the applicable noise level standard, the existing noise level shall be considered the maximum allowed, which is the case along some portions of Broadway in the Plan Area (see Table 4.10-2).

The adoption and development under the Specific Plan would generate some noise from heating, ventilating, and air conditioning mechanical equipment. Since the mechanical equipment would be

standardized the equipment's noise generation would not be expected to exceed the City's established thresholds presented in Table 4.10-3. Also, development would adhere to SCA 31, *Interior Noise*, and SCA 32, *Operational Noise (General)*. Therefore, operational noise impacts from adoption and development under the Specific Plan related to stationary sources would be less than significant.

Mitigation: None Required.

Impact NOI-3: Adoption and development under the Specific Plan would not expose persons to exterior noise levels in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (Criterion 6). (Less than Significant)

Exposure of Residential Uses to Noise

The City of Oakland uses Land Use Compatibility Guidelines to determine noise-affected uses (see Figure 4.10-3 above). For family residential uses, noise environments of 60 DNL or less represent the normally acceptable noise exposure. Noise measurements were conducted at the locations of residential land uses as well as at existing commercial land uses and are presented in Table 4.10-2. Measurements taken at 24th Street, 25th Street and Brooks Street within the Plan Area indicate that the noise environment in these areas would be in the normally acceptable category for residential uses. Measurements taken at all other locations indicate that the noise environment in these areas would be in the conditionally acceptable category for residential uses. Conditionally acceptable means that new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. This would be achieved by adherence to SCA 31 which requires sound-rated assemblies, and/or other appropriate features/measures to meet land use compatibility requirements.

Exposure of Commercial and Retail Uses to Noise

Noise monitoring indicates that all monitoring locations are in a noise environment that would be considered normally acceptable.

Mitigation: None Required.

Impact NOI-4: Adoption and development under the Specific Plan would not expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities in the Plan Area to noise levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 5). (Less than Significant)

The Land Use Compatibility standards of the City's General Plan are exterior noise standards which allow for an assessment of exterior noise levels to determine whether standard construction

techniques would be sufficient to achieve appropriate noise levels for each land use. For multi-family dwellings, hotels, motels, dormitories and long-term care facilities, the land use compatibility standard of 60 dBA for normally acceptable environments assumes that standard construction techniques would achieve 15 dBA of attenuation and provide for an interior environment of 45 dBA. As discussed in Impact NOI-3, portions of the Plan Area exhibit noise levels considered conditionally acceptable for residential uses. However SCA 31 would ensure that appropriate sound-rated assemblies, and/or other features/measures would be implemented to meet interior noise levels requirements. Consequently, the adoption and development under the Specific Plan would have a less than significant impact with regard to interior noise exposures.

Mitigation: None Required.

Traffic Noise

Impact NOI-5: Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area (Criterion 4). (Significant and Unavoidable)

Additional vehicles traveling throughout the Plan Area as a result of the adoption and development under the Specific Plan would increase noise levels adjacent to nearby roads. Based on the City of Oakland's CEQA Thresholds, a project would be considered to generate a significant impact if it resulted in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Noise levels were determined for this analysis using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and the turning movements in the traffic section for Existing (2012), Existing Plus Project, conditions (see Section 4.13, *Transportation and Circulation*) (see Appendix G).

Trips associated with adoption and development under the Specific Plan would be distributed over the local street network and would affect roadside noise levels. Peak hour (evening) intersection turning data from the traffic study were analyzed to evaluate increases and resulting traffic-generated noise increases on roadway links most affected by project-related traffic and nearest the Plan Area. Noise levels at other times would be lower. The segments analyzed and the results of the noise increases resulting from modeling are shown in **Table 4.10-7**, below.

The increase in traffic noise from the Existing Plus Project scenario compared to the Existing scenario would increase peak hour noise levels by less than 5 dBA at all studied roadway segments with the exception of 24th Street east of Broadway and 26th Street east of Broadway, where the increase in roadside noise would be 6.4 and 5.1 dBA, respectively. Currently there are no sensitive receptors along this segment of 26th Street to be impacted by the projected increase in roadway noise. However there are currently residential uses along 24th Street east of Broadway. Consequently, roadway noise increases along 24th Street would be considered a significant impact.

**TABLE 4.10-7
PEAK-HOUR TRAFFIC NOISE LEVELS IN THE VICINITY OF THE PLAN AREA**

Roadway Segment	(A) Existing	(B) Existing Plus Project	(B-A) Difference between Existing Plus Project and Existing	(C) Cumulative No Project (2035)	(D) Cumulative Plus Project (2035)	(D-A) Difference between Cumulative Plus Project and Existing^d	(D-C) Difference between Cumulative Plus Project and Cumulative No Project^e
MacArthur Blvd east of Market Street	66.5	67.2	0.7	70.1	70.5	4.0	0.4
MacArthur Blvd east of Telegraph Avenue	66.6	67.5	0.9	69.8	70.3	3.7	0.5
Broadway south of MacArthur Blvd	68.0	68.9	0.9	70.2	70.8	2.8	0.6
Santa Clara Avenue east of Harrison Street	67.4	68.2	0.8	69.5	70.0	2.6	0.5
Broadway south of Piedmont Avenue	69.2	70.3	1.1	71.0	71.8	2.6	0.8
Hawthorne Avenue west of Broadway	61.5	65.4	3.9	61.9	65.6	4.1	3.7
Telegraph Avenue south of Hawthorne Avenue	68.1	68.9	0.8	70.5	71.0	2.9	0.5
Broadway north of 30th	68.6	69.9	1.3	70.7	71.5	2.9	0.8
27th Street west of Broadway	66.9	67.5	0.6	69.9	70.2	3.3	0.3
26th Street east of Broadway	53.2	58.3	5.1	55.4	59.3	6.1	4.9
25th Street east of Broadway	61.2	63.3	2.1	62.2	63.9	2.7	1.7
24th Street east of Broadway	57.3	63.7	6.4	58.9	64.2	6.9	5.3
27th Street west of Harrison Street	67.1	68.4	1.3	70.3	71.0	3.9	0.7
23rd Street west of Broadway	57.4	61.2	3.8	57.8	61.4	4.0	3.6
Harrison Street north of 23rd Street	68.9	69.5	0.6	71.7	72.1	3.2	0.4
Grand Avenue east of Brush Street	67.8	68.5	0.7	70.6	70.9	3.1	0.3
Grand Avenue east of Northgate Avenue	69.0	69.9	0.9	70.2	70.9	1.9	0.7
Valdez Street north of Grand Avenue	59.7	62.3	2.6	60.8	62.9	3.2	2.1
Broadway north of 20th Street	65.8	67.1	1.3	68.4	69.1	3.3	0.7

^a Considered significant if the incremental increase in noise from traffic is greater than the existing ambient noise level by 5 dBA Leq, per City of Oakland, CEQA Thresholds/Criteria of Significance Guidelines. Violations are in **bolded** text.

^b Road center to receptor distance is 15 meters (approximately 50 feet) for all roadway segments. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model.

^c The analysis considered the vehicle mix based on – cars 95 percent, medium trucks 3 percent, and heavy trucks 2 percent. Traffic speeds for all vehicle classes were set at 30 mph.

^d Considered significant if the incremental increase in noise is greater than 5 dBA.

^e Considered a cumulatively considerable contribution to a significant noise increase if the incremental increase in noise is greater than 3 dBA when the cumulative increase in the preceding column is greater than 5 dBA.

SOURCE: ESA, 2013

Adherence to SCA 25 requires a Transportation Demand Management (TDM) program to be developed and implemented for individual project greater than 50 residential units or greater than 50,000 square feet of non-residential use to reduce use of single-occupant vehicles and to increase the use of rideshare, transit, bicycle and walk modes for trips to and from, as well as within the Plan Area. Due to uncertainty pertaining to quantifying the effectiveness of implementing TDM strategies, the travel demand analysis used as a basis for calculating roadside noise levels does not assume additional trip reduction due to specific TDM strategies beyond those associated with internal, pass-by, and diverted linked trips.

Mitigation: None Feasible. A reduction of 29 percent of the traffic volumes on 24th Street would be required to achieve a less-than-significant conclusion. Measures included in the TDM plan that would be required of Specific Plan development projects greater than 50 units or 50,000 square feet would reduce project trips by at most 20 percent (see Section 4.13, *Traffic and Circulation*). Consequently, no feasible mitigation measures are available that would reduce this exterior noise impact to a level that would be less than significant.

Significance after Mitigation: Significant and Unavoidable.

Cumulative Noise Impacts

Impact NOI-6: Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels (Criterion 4). (Significant and Unavoidable)

Geographic Context

The geographic area considered for cumulative noise analysis includes areas within and surrounding the Plan Area and roadways examined in the transportation analysis in Section 4.13, *Transportation and Circulation*. These include areas of Oakland that encompass the projects included in the City of Oakland's Major Projects List in Appendix B to this Draft EIR and area projects incorporated into the regional travel demand model, as discussed in Section 4.07.2, *Cumulative Context*, in the front of Chapter 4 of this Draft EIR.

Impacts

Longer-term noise from cumulative development, which is the development under the Specific Plan, combined with past, present, pending, and reasonably foreseeable development in the area, would primarily occur from motor vehicle traffic. When considered alone, the adoption and development under the Specific Plan would generate noise mainly by adding more traffic to the area. Other anticipated projects would contribute to noise in the area due to increased traffic

volumes. Notably, any project that would individually have a significant project level noise impact also would be considered to have a significant cumulative noise impact.

As noted in Impact NOI-5 and based on the City of Oakland's CEQA Thresholds, a project would be considered to generate a significant impact if it resulted in a 5 dBA permanent increase in ambient noise levels in the project vicinity above levels existing without the project. As for Impact NOI-3, noise levels were determined for using the FHWA Traffic Noise Prediction Model and the turning movements in for the Cumulative Plus Project (2035) conditions (see Section 4.13, *Transportation and Circulation*) (see Appendix G). The segments analyzed and the results of the noise increases resulting from modeling are also shown in Table 4.10-7 for Cumulative Plus Project traffic, which includes Project traffic combined with traffic from other approved or pending projects for the year 2035 (assumed build-out year of the Broadway Valdez Development Program).

Table 4.10-7 shows the increase in traffic from between the Cumulative Plus Project (2035) scenario and Existing (2012) would increase peak hour noise levels by less than 5 dBA at most roadway segments, except at the roadway segments 24th Street east of Broadway, where the increase is 6.9 dBA, and 26th Street east of Broadway, where the increase is 6.1 dBA. The contribution of the adoption and development under the Specific Plan to the 2035 cumulative roadway noise increase (Cumulative No Project compared to Cumulative Plus Project) would be 5.3 dBA along 24th Street east of Broadway, and 4.9 dBA along 26th Street east of Broadway. Because these increases are more than the cumulative contribution significance threshold of 3 dBA, this is considered a considerable contribution to the cumulative impact in 2035 and a significant cumulative noise impact. Currently there are no sensitive receptors along this segment of 26th Street to be impacted by the projected cumulative increase in roadway noise. However there are currently residential uses along 24th Street east of Broadway. Consequently, cumulative roadway noise increases along 24th Street would be considered a significant cumulative impact.

Construction impacts resulting from cumulative development would remain less than significant as all cumulative development in the cumulative geographic context would incorporate SCAs for construction activities, as discussed in Impact NOI-1. Similarly, operational noise associated primarily with mechanical operations of cumulative development also would be at less than significant levels; all development would adhere to SCAs for operational noise, as discussed in Impact NOI-2.

All cumulative noise impacts associated with traffic noise would be significant. Cumulative noise impacts associated with construction and operations would be less than significant.

Mitigation: None Feasible.

Significance after Mitigation: Significant and Unavoidable.

Impact NOI-7: Stationary noise sources such as rooftop mechanical equipment and back-up generators in combination with traffic generated by adoption and development under the Specific Plan; and from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area; (Criterion 4). (Significant and Unavoidable)

The adoption and development under the Specific Plan would generate some noise from heating, ventilating, and air conditioning mechanical equipment. Specificity in terms of the size or specifications of stationary noise sources or their location is not available at the Specific Plan level of analysis. However, it is reasonable to conclude that such sources would operate within the restrictions of the City's Noise Ordinance. Chapter 17.120.050 of the City of Oakland Planning Code specifies the maximum sound level received at residential, public open spaces and commercial land uses. These restrictions can be used in combination with the predicted roadway noise levels presented in Table 4.10-7 to estimate a worst-case prediction of cumulative noise increase from both stationary and roadway noise sources. **Table 4.10-8** presents the cumulative noise increase at existing sensitive receptors in the Specific Plan Area from both roadway and stationary sources. These noise levels reflect daytime conditions which are when peak traffic contributions would occur. Only existing receptors are analyzed as new proposed receptors do not exist and would not experience a net increase in noise levels. Stationary source noise levels are considered in terms of the L_{33} (the noise levels exceeded 20 minutes of a one hour period) as this is the noise descriptor of the City's noise ordinance which best lends itself to addition to roadway noise estimates which are calculated in terms of a peak-hour hourly average. The roadway noise contribution is assumed to occur from the cumulative increase from the nearest arterial roadway analyzed in Table 4.10-7. This analysis uses the existing monitored noise level as a baseline for comparison, unlike the analysis in Table 4.10-7 which solely analyzes modeled traffic volumes, because this cumulative analysis considers multiple sources, not just vehicle traffic.

**TABLE 4.10-8
PEAK-HOUR CUMULATIVE NOISE LEVELS AT SENSITIVE RECEPTORS IN THE PLAN AREA**

Location	(A) Monitored Noise Level (Leq, dBA)	(B) Stationary Source Restriction (L_{33} , dBA)	(C) Cumulative Roadway only Noise Level (Leq)	(B+C) Resulting Cumulative Noise Level	Increase in Noise level over Existing Monitored
Brooks Street Residential Area	59.2	60	63.4 ^a	65.0	5.8
Richmond Avenue Residential Area	67.6	60	62.4 ^a	64.4	3.6
Webster and 34th Place of Worship	63.0	60	58.9 ^b	64.8 ^c	1.8
24th Street at Valdez Mixed Use Residential	59.2	60	64.2	65.6	6.4

^a Adjusted cumulative Broadway noise level to nearest residence accounting for distance and one row of intervening structures.

^b Adjusted cumulative Hawthorne Avenue noise level to nearest residence accounting for distance.

^c Proximity to I-580 captured in monitored baseline at this location results in noise levels that dominate over predicted cumulative increases (Columns B + C). Therefore the cumulative increase for this location would be the summation of columns A and B.

SOURCE: ESA, 2013.

Cumulative noise increases of greater than 5 dBA are predicted to occur at existing sensitive receptors on Brooks Street and 24th Street. In lieu of project-specific data, these potentially significant impacts assume stationary sources operating at an adjacent property at the maximum property line limit allowed by the noise ordinance. Consequently, cumulative noise impacts are conservatively identified as significant. As discussed in Impact NOI-6, cumulative traffic noise impacts would be significant and unavoidable. Consequently, the ability to mitigate the combined impact from stationary sources and roadway sources would depend on the location, size, noise rating and acoustical shielding provided for stationary noise sources. While a performance standard could be implemented as mitigation, designing such a standard with reference to net increases over historical noise levels is impractical given the variation in noise levels throughout the Specific Plan Area. Therefore, this cumulative noise impact is considered significant and unavoidable.

Mitigation: None Feasible.

Significance after Mitigation: Significant and Unavoidable.

4.10.4 References

California Department of Transportation (Caltrans), 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*, June 2004.

California Department of Transportation (Caltrans), 2009. *Technical Noise Supplement*, November 2009.

City of Oakland, 2005. *Noise Element, City of Oakland General Plan*, June 21, 2005.

City of Oakland, 2008. Planning Code Chapter 17.120.050.

City of Oakland, 2013. "CEQA Thresholds/Criteria of Significance Guidelines," 2013.

Federal Transit Administration (FTA), 2006. *Transit Noise and Vibration Impact Assessment (FTA-VA-90-1003-06)*, May 2006.

U.S. Environmental Protection Agency, 1971. *Noise from Construction Equipment and Building Operations, Building Equipment and Home Appliances*, December 1971.

4.11 Population, Housing, and Employment

This section addresses existing conditions and trends within the greater Plan Area as related to population, housing, and employment, and evaluates the possible impacts from adoption and development under the Specific Plan. Population and employment growth related to adoption and development under the Specific Plan are quantified and described along with the anticipated contributions to the greater downtown area and citywide growth. This section describes the environmental and regulatory setting relevant to population, housing and employment in the greater Plan Area. The impact assessment in this section focuses on potential physical environmental impacts that could result from possible displacement of housing and people, and on the inducement of population growth not previously contemplated. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.11.1 Environmental Setting

The following setting identifies existing conditions and trends for employment, housing, and population within the greater Plan Area, surrounding parts of Oakland, as well as the regional context. The relationship between jobs and housing is also discussed. Growth from adoption and development under the Specific Plan is identified and described to provide context for the impact assessment in this and other sections of the EIR.

As introduced in the Broadway Valdez Specific Plan Existing Conditions Report, dated April 2009, due to the irregular boundaries of the Plan Area, most of the demographic data in this section are reported for an area slightly larger than, and surrounding, the Plan Area; the data pertinent to this analysis of population, housing, and employment are generally available for geographic subareas that closely match the boundaries of this larger area, referred to as the “Plan Area and Nearby Areas” or the “greater Plan Area.” Like the Plan Area, the Nearby Areas extend north-south from Interstate 580 (I-580) to Grand Avenue, but extend further west of Broadway to Telegraph Avenue, and extend further east of Broadway to Harrison Street.¹

Employment

Existing Conditions, Recent Trends, and Projections

Plan Area and Nearby Areas

Currently, there are approximately 7,760 people employed in the greater Plan Area, which represents approximately 10 percent of the total greater downtown employment, and approximately 4 percent of the total citywide employment. Supporting employment data is presented in **Table 4.11-1**.

¹ A map of the “Plan Area and Nearby Areas” is provided in Figure 3.2, of the 2009 Existing Conditions Report.

**TABLE 4.11-1
EMPLOYMENT, HOUSEHOLDS, AND POPULATION FOR THE GREATER PLAN AREA, THE GREATER DOWNTOWN,
THE CITY OF OAKLAND, AND THE REGION: 2000, 2005, 2010, AND 2035**

	2000	2005	2010	2035	Change 2005-2010			Change 2010-2035		
					Change	Percent	Annual Rate	Change	Percent	Annual Rate
Employment										
Greater Plan Area ^a	-----	7,157	7,757	8,107	+600	+8%	+1.6%	+350	+5%	+0.2%
Greater Downtown ^b	80,440	82,160	76,500	122,010	-5,660	-7%	-1.4%	+45,510	+59%	+2.4%
City of Oakland ^c	199,470	202,570	188,600	281,900	-13,970	-7%	-1.4%	+93,300	+49%	+2%
Inner East Bay ^d	332,340	332,000	317,460	446,560	-14,540	-4%	-0.8%	+129,100	+41%	+1.64%
Total Bay Area ^e	3,753,460	3,449,740	3,475,040	5,107,390	+25,300	+1%	+0.2%	+1,632,350	+47%	+1.88%
Households										
Greater Plan Area ^f	3,396	3,620	3,304	-----	-316	-9%	-1.8%	-----	-----	-----
Greater Downtown ^b	18,040	19,650	21,950	43,310	+2,300	+12%	+2.4%	+21,360	+97%	+3.88%
City of Oakland ^c	150,790	154,580	159,180	212,000	+4,600	+3%	+0.6%	+52,820	+33%	+1.32%
Inner East Bay ^d	240,761	246,860	252,490	321,320	+5,630	+2%	+0.5%	+68,830	+27%	+1.1%
Total Bay Area ^e	2,466,020	2,583,080	2,667,340	3,302,780	+84,260	+3%	+0.7%	+635,440	+24%	+1.0%
Population										
Greater Plan Area ^f	6,366	6,850	5,880	-----	-968	-14%	-0.7%	-----	-----	-----
Greater Downtown ^b	32,190	35,640	39,550	83,340	+3,910	+11%	+2.2%	+43,790	+111%	4.44%
City of Oakland ^c	399,480	410,600	420,670	562,000	+10,300	+3%	+0.6%	+141,100	+34%	1.36%
Inner East Bay ^d	608,764	625,500	642,300	817,400	+16,800	+3%	+0.5%	+175,100	+27%	+1.1%
Total Bay Area ^e	6,783,760	7,096,500	7,341,700	9,073,700	+245,200	+3%	+0.7%	+1,732,000	+24%	+0.9%

^a The greater Plan Area includes the "Plan Area" and "Nearby Areas" and is defined in the *Broadway Valdez District Specific Plan Existing Conditions Report* (WRT, 2009). Employment estimates for the greater Plan Area are approximated based on data for traffic analysis zones (TAZs).

^b Greater Downtown is bounded by I-580, Lake Merritt and the Channel, Oakland Estuary, and I-980 and Market/Brush Street, as defined by TAZs. Employment and household estimates for the Greater Downtown are based on data from the *Proposed Amendments to the Central District Urban Renewal Plan EIR* (City of Oakland, 2011).

^c Employment, household, and population estimates for the City of Oakland are based on data from the *Proposed Amendments to the Central District Urban Renewal Plan EIR* (City of Oakland, 2011), except the 2035 data are from ABAG *Projections 2009*.

^d Inner East Bay includes Oakland and nearby cities of Albany, Alameda, Berkeley, Emeryville, Piedmont, and San Leandro. Data are from ABAG *Projections 2009*.

^e Total Bay Area includes all nine Bay Area counties. Data are from ABAG *Projections 2009*.

^f Household and population estimates for the greater Plan Area for 2000 and 2005 are approximated based on data from the *Broadway Valdez District Specific Plan Existing Conditions Report* (WRT, 2009). Household and population estimates for the greater Plan Area for 2010 are based on U.S. Census 2010.

Published household and population projections for the greater Plan Area for 2035 are not available at this time at a geographic level less than citywide.

SOURCE: See table footnotes.

Nearly one-half of the greater Plan Area employees are associated with medical services on Pill Hill, primarily the Alta Bates Summit Medical Center west of Broadway. Automotive-related business make up approximately one-third of the jobs in the greater Plan Area, and the remaining jobs are associated with a range of business uses, including retail and service businesses, restaurant/bars, institutional/non-profit uses, fitness/exercise uses, clubs, building materials/construction, and professional services (WRT, 2009). It is notable that health-related jobs and restaurant/bar-lounge/arts jobs have recently increased in the greater Plan Area, as has automotive-related employment which dipped in 2007 through 2009 due to the recession (WRT, 2013).

Of the nearly 60 percent increase in employment projected to occur in the greater downtown 2035, a relatively small portion of that growth is projected to occur within the greater Plan Area (see Table 4.11-1).

Oakland and the Region

Business activity and employment grew substantially in Oakland in the late 1990s and early 2000s, and is projected to continue to grow in the future. While regional employment growth occurred largely in the suburbs in prior decades, recent trends show increasing employment in Oakland, primarily given its central location, its good transportation/transit accessibility, and its relative affordability as a business location (WRT, 2009). Employment in Oakland was estimated at 188,600 in 2010, representing nearly 60 percent of all employment in the Inner East Bay, and approximately 6 percent of the region's employment.²

Employment growth in Oakland will continue to be supported by the City's efforts citywide, as well as local and regional Smart Growth initiatives that refocus forecasted growth to urbanized centers of the region, like the greater downtown. As the region's economy rebounds from the recent national recession, economic growth is forecast for the future. Projections for Oakland show growth of about 93,310 jobs from 2010 to 2035 – an increase of approximately 50 percent, about the same increase that is projected for the region during the same 25-year period (see Table 4.11-1).

Population and Housing

Existing Conditions, Recent Trends and Projections

Plan Area and Nearby Areas

Currently, there are approximately 3,300 households residing in the greater Plan Area with a population of approximately 5,890 residents.³ These households represent about 15 percent of the population in greater downtown Oakland. Supporting household and population data is presented in Table 4.11-1.

² "Inner East Bay" includes the cities of Albany, Alameda, Berkeley, Oakland, Piedmont, and San Leandro.

³ The number of occupied dwelling units (households) accounts for household vacancy rates and is therefore lower than the number of actual dwelling units in a particular area.

Oakland and the Region

There were approximately 420,900 people living in Oakland in 2010 - about 70 percent of the total population of the Inner East Bay, and nearly 6 percent of the total Bay Area population. There were 159,180 households in Oakland in 2010 and an average household size of 2.64 persons per household (see Table 4.11-1). The average household size in the greater Plan Area is substantially smaller than the citywide rate, at approximately 1.8 persons per household due the prevalence of multifamily dwelling units in the area (see Table 4.11-1).

The 2010 U.S. Census identified 169,710 housing units in Oakland (see **Table 4.11-2**). Of the occupied housing units (153,790), 56 percent were renter-occupied and 41 percent owner-occupied. Also, the overall housing vacancy rate declined from 7 percent in 1990 to 4 percent in 2000, but showed an increase to nearly 9 percent in 2010.

**TABLE 4.11-2
CHANGES IN HOUSING STOCK IN OAKLAND, 1990-2010**

	1990		2000		2010		Change	
							1990-2000	2000-2010
Total Housing Units	154,737		157,508		169,710		+2,771	+12,202
Occupied Housing Units	144,521	93.4%	150,790	95.7%	153,791	90.6%	+6,269	+3,001
Vacant Housing Units	10,216	6.6%	6,718	4.3%	15,919	9.4%	-3,498	+9,201
Owner-occupied Housing	60,153	41.6%	62,489	41.4%	63,142	41.1%	+2,336	+653
Renter-occupied Housing	84,368	58.4%	88,301	58.6%	90,649	58.9%	+3,933	+2,348

SOURCE: U.S. Census, 2010; City of Oakland, 2011.

As previously mentioned, since 2000, several factors led to renewed housing development in Oakland. In addition, new housing development has been encouraged in Oakland by regional and local Smart Growth land use policies to attract new housing development and bring additional residents to greater downtown Oakland. Oakland experienced an increase of about 12,200 housing units between 2000 and 2010, which was an increase of about 8 percent. During that period, about 50 percent of the new housing developed in Oakland had been built in downtown, with the major recession starting in 2007, markedly slowing the housing market. While the timing of economic recovery for the housing market is uncertain, once the housing market rebounds, the trend for housing development in the greater downtown, including areas north of Grand Avenue within the Specific Plan Area, are expected to be good. There will also be a large number of already approved projects and projects currently in predevelopment that are likely to be built before other new developments occur. The pipeline of approved and pre-development projects could affect the timing and nearer-term feasibility of mixed-use development with major retail and housing (WRT, 2013).

Most of the new housing is multi-family housing, focused in the downtown area, around the City's BART stations, along transportation/transit corridors, and in mixed-use neighborhoods. New housing in Oakland includes units covering a range of prices and rents, reflecting Oakland's

land use policies encouraging higher-density development. As identified in the *City of Oakland 2007-2014 Housing Element*, new housing is being built in Downtown Oakland (representing about one-half the new units built citywide 2000-2009) and in many other parts of the City, including North Oakland which encompasses the Plan Area. Approximately 18 of the 185 Housing Opportunities Sites identified in the Housing Element are located in the actual Specific Plan Area; these are sites that the City has identified where additional housing units could be developed pursuant to the existing *General Plan* land use designations.

Long-term projections for Oakland indicate potential for substantial growth of housing, households, and population. The ABAG projections anticipate growth of up to 54,160 households and 141,100 residents, from 2010 through 2035 (see Table 4.11-1). The ABAG projections reflect market factors as well as policy direction to increase the share of regional development that occurs in the Bay Area's major cities, in higher-density, urban locations that have good accessibility and are well served by transit. The rates of growth of households and population in Oakland are forecast to exceed the rates of growth for the Inner East Bay and the Bay Area overall (see Table 4.11-1).

Overall Relationship of Jobs and Housing

Oakland is both a place of residence and a place of employment. The total number of jobs in the City (188,600 in 2010) is relatively similar to the total number of employed residents (181,820 in 2010) (see **Table 4.11-3**). The overall relationship between jobs and employed residents in an area identifies the extent to which a community enjoys a balanced mix of land uses thereby offering job opportunities to local residents and housing opportunities for workers employed in local jobs. The resultant mix of who lives in Oakland and who works in Oakland, and the extent to which these are the same individuals, results from a complex set of interactions and decision factors that determine where people choose to live and work, how much they spend for housing, and their travel patterns. Jobs/housing balance evolves over time and reflects the role and location of particular areas within the larger regional context. Regional planning efforts in the Bay Area seek to "balance" the number of jobs and the number of employed residents, or to improve existing imbalances, for purposes of achieving goals related to improved housing availability and affordability, commute distances, congestion, and air quality.

Data and projections for Oakland indicate that Oakland has a good balance of jobs and housing, and that it will continue to have a relatively similar number of jobs and employed residents. In the future, the growth of employed residents of the City (107,800 employed resident growth 2010 to 2035) is anticipated to exceed the growth of jobs in Oakland (93,300 job growth 2010 to 2035), improving the "balance" of jobs and housing over time, as shown in Table 4.11-3, below. By 2035, the number of employed residents is anticipated to be similar to and even exceed the number of jobs in Oakland (ratio of jobs to employed residents of 0.97:1 in 2035 under the ABAG projections). Data for the Inner East Bay, including Oakland and its nearby cities, show that this larger surrounding area will have a slightly higher ratio of jobs to employed residents than Oakland alone. Overall, data for the East Bay in total (all of Alameda and Contra Costa counties including the Inner East Bay) show more employed residents than jobs, both currently

**TABLE 4.11-3
TRENDS IN JOBS AND EMPLOYED RESIDENTS: 2000-2035**

	2000	2005	2010	2035	2000-2010		2010-2035	
					Growth	Annual Rate	Growth	Annual Rate
Total Jobs								
Oakland	199,470	202,570	188,590	281,900	-10,880	-0.55%	93,310	1.96%
Inner East Bay ^a	332,340	332,000	317,460	466,560	-14,880	-0.45%	129,100	1.64%
Total Bay Area ^b	3,753,460	3,449,640	3,475,040	5,107,390	-278,420	-0.74%	1,632,350	1.88%
Employed Residents								
Oakland	178,716	175,180	181,820	289,620	3,104	0.17%	107,800	2.36%
Inner East Bay ^a	332,135	325,490	326,195	509,410	-5,940	-0.18%	183,215	2.24%
Total Bay Area ^b	3,452,117	3,225,100	3,410,300	4,835,300	-41,817	-0.12%	1,425,000	1.68%
Ratio Jobs-to-Employment Residents								
Oakland	1.12:1	1.16:1	1.04:1	0.97:1				
Inner East Bay ^a	1.00:1	1.02:1	0.97:1	0.88:1				
Total Bay Area ^b	1.09:1	1.07:1	1.02:1	1.06:1				
Employed Residents as Percent of Population								
Oakland	45%	43%	43%	52%				
Inner East Bay ^a	55%	52%	51%	62%				
Total Bay Area ^b	51%	45%	46%	53%				

^a Inner East Bay includes Oakland and nearby cities of Albany, Alameda, Berkeley, Emeryville, Piedmont, and San Leandro.

^b Total Bay Area includes all nine Bay Area counties.

SOURCE: U.S. Census; ABAG *Projections 2009*.

and in the future, indicating the important role of the East Bay as a place of residence for people employed in the East Bay and other parts of the region.

4.11.2 Contributions to Citywide Growth from Adoption and Development under the Specific Plan

This section describes and quantifies the potential growth in employment, households, and population that could occur from adoption and development under the Specific Plan. Population and employment changes, in and of themselves, are not normally considered to be significant environmental effects under CEQA. However, these changes and effects can be indicators of other impacts, and they can have influence on the significance of those impacts. Thus, the description of population and employment changes that follows is included to provide context for considering and understanding potential physical environmental impacts associated with changes in employment, housing, and population that are analyzed later in this section and in other sections of this EIR (e.g., traffic, public services, and air quality).

Growth and Development in the Plan Area

The Broadway Valdez Specific Plan established the Broadway Valdez Development Program, which is shown below in **Table 4.11-4**. As described in Chapter 3, *Project Description*, the Broadway Valdez Development Program represents the *reasonably foreseeable maximum development* that the City has projected can reasonably be expected to occur in the Plan Area over the next 25 years, and is thus the level of development envisioned by the Specific Plan and analyzed in this EIR. In total, approximately 3.7 million square feet of development is envisioned, including 1,800 residential units, a new 180-room hotel, and approximately 5,000 new jobs. This basis of this EIR analysis is distinctly different from the *theoretical maximum development potential* that could ultimately occur in the Plan Area. The development assumed for the EIR analysis attempts to project what might be feasible based on a number of market factors, including: market demand for various uses; broader regional economic and market conditions; backlog of approved or planned projects in the vicinity; recent development and business investment in the area; landowner intentions for their properties; and properties susceptible to change due to vacancy, dereliction, or absence of existing development. In addition, assumptions have been made about the reasonable distribution and intensity of new development within the Plan Area (see Chapter 3, *Project Description*; and Figure 3-11, Physical Height Model). Finally, adoption and development under the Specific Plan would replace some of the existing uses currently in the Plan Area. The replacement of these uses was considered as the Broadway Valdez Development Program was calculated and thus the square footages, units and hotel rooms shown in the Broadway Valdez Development Program in Table 4.11-5 below represent the net development in the Plan Area.

**TABLE 4.11-4
BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Valdez Triangle Subarea	North End Subarea	Total Plan Area (Rounded) ^a
Residential Units	1,030	767	1,800
Office (sq. ft.)	116,000	579,000	695,000
Retail (sq. ft.)	794,000	321,000	1,114,000
Hotel Rooms	180	-	180
Non-Residential Development (sq. ft.)	1,027,000	899,000	1,927,000
Total Development (sq. ft.)	2,057,000	1,666,000	3,723,000

^a Totals are rounded for consistency with the Project Description (Chapter 3).

SOURCE: WRT, 2013.

Some development likely would occur within the Plan Area even in the absence of Specific Plan adoption although it is difficult to project the exact amount and location of this development with any precision. However, a relatively small portion of that residential and employment population growth is projected to occur within the greater Plan Area by 2035 (see Table 4.11-1). Therefore, it is appropriately conservative to assume that the effects of Specific Plan adoption would result from buildout of the Broadway Valdez Development Program without accounting for development that would occur by 2035 in absence of the Plan.

Employment, Housing, and Population Growth

Buildout of the Broadway Valdez Development Program would introduce residential and employment population growth in the Plan Area. In total, this development would include the potential for 1,800 new housing units to be developed in the Plan Area. The new units would accommodate approximately 1,728 households with 3,230 residents. The estimates of potential housing and population growth are presented in **Table 4.11-5**.

**TABLE 4.11-5
HOUSING DEVELOPMENT AND POPULATION GROWTH FOR THE PLAN AREA WITH THE
BROADWAY VALDEZ DEVELOPMENT PROGRAM**

Potential Development	Housing Units	Households^a	Population^b
Valdez Triangle Sub Area	1,030	989	1,849
North End Subarea	767	736	1,376
Total (rounded)^c	1,800^c	1,728^c	3,230

^a Assumes an average, four percent vacancy factor.

^b Assumes an average of 1.87 persons per household, appropriate for higher-density housing assumed for development in the Plan Area, and the Existing Conditions Report, 2009 (Table 3-3).

^c Totals are rounded for consistency with Proposed Maximum Feasible Development Program (Table 4.11-4) and Project Description (Chapter 3).

SOURCE: City of Oakland.

The Broadway Valdez Development Program would include approximately 1.9 million square feet of commercial space. Businesses and other activities in the developments would support employment of approximately 4,500 jobs at full occupancy. The estimates are presented in **Table 4.11-6**.

**TABLE 4.11-6
NON-RESIDENTIAL SPACE AND EMPLOYMENT GROWTH POTENTIALS
FOR THE PLAN AREA WITH THE BROADWAY VALDEZ DEVELOPMENT PROGRAM**

Potential Development	Commercial Space (square feet/rooms)	Employment^a
Valdez Triangle Subarea – Office (General) – Retail – Hotel	116,000 794,000 <u>118,000</u> (180 rms) 1,027,000	2,132
North End Subarea – Office (General and Medical) ^b – Retail	579,000 <u>321,000</u> 899,000	2,373
Total	1,927,000 sq. ft.	4,505

^a Employment estimated by ESA, based on density factors by use, for the types of development proposed for downtown Oakland.

^b 220,000 square feet is assumed General Office; 359,000 square feet is assumed Medical Office, consistent with traffic study assumptions.

SOURCE: City of Oakland; ESA.

4.11.3 Regulatory Setting

Local Plans and Policies

The Oakland General Plan includes the following policies that pertain to population, housing, jobs, and related effects, and that apply to adoption and development under the Specific Plan.

Land Use and Transportation Element (LUTE). The LUTE of the Oakland General Plan contains the following policy that addresses issues related to population, housing, jobs, and related effects:

- **Policy N3.6:** The city strongly encourages the moving of dwellings which might otherwise be demolished onto vacant lots where appropriate and economically feasible.

Housing Element. The Housing Element of the Oakland General Plan contains the following policy that addresses issues related to population, housing, jobs, and related effects:

- **Substandard Housing Policy 1:** The city recognizes that housing is a valuable resource that should be carefully conserved and maintained and will take all necessary steps to prevent damage to the city's occupied or vacant residential property.
- **Housing Production Policy 8:** The city will make every attempt to preserve the existing housing stock whenever possible and to limit the conversion of residential units to non-residential units.
- **Housing Production Policy 12:** The city, where economically feasible, will cause to be relocated, rather than demolish, residential property acquired for public or private purposes and urges Federal and State agencies to use a similar approach.

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

There are no City of Oakland *Standard Conditions of Approval and Uniformly Applied Development Standards* (SCAs) that are specific to Population, Housing, and Employment.

4.11.4 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Induce substantial population growth in a manner not contemplated in the General Plan, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extensions of roads or other infrastructure), such that additional infrastructure is required but the impacts of such were not previously considered or analyzed;
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element; or

3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere in excess of that contained in the City's Housing Element.

Approach to Analysis

Using U.S. Census data, data from transit analysis zones (TAZ), and ABAG projections; the increases in population, housing, and employment that would result from adoption and development under the Specific Plan were quantified and evaluated for potential physical environmental impacts that could result from possible displacement of housing, people, businesses, and jobs, and on the inducement of population and employment growth in the Plan Area and surrounding areas.

Impacts

Induce Population Growth

Impact POP-1: Adoption and development under the Specific Plan could induce population growth, but not in a manner not anticipated in the General Plan (Criterion 1). (Less than Significant)

As shown in Table 4.11-5, housing development anticipated with implementation of the Broadway Valdez Development Program would add up to 1,800 housing units in the Plan Area, and accommodate growth of up to approximately 1,728 households and 3,230 residents. The growth of households and population due to the adoption and development under the Specific Plan would contribute to population growth expected in Oakland in the future. The amount of population growth anticipated from adoption and development under the Specific Plan would account for about two percent of total population growth projected for Oakland between 2010 and 2035, as shown in **Table 4.11-7**. When compared to *total* population anticipated in Oakland in 2035, the adoption and development under the Specific Plan would have contributed approximately 0.5 percent. Thus, the adoption and development under the Specific Plan would not result in "substantial" population growth in comparison to the amount of population growth and the total population anticipated for Oakland in the future.

**TABLE 4.11-7
POPULATION AND EMPLOYMENT GROWTH UNDER THE BROADWAY VALDEZ
DEVELOPMENT PROGRAM COMPARED TO FUTURE PROJECTIONS FOR OAKLAND**

	Population	Employment
Growth under the Specific Plan ^a	3,230	4,505
Growth in Oakland, 2010-2035 ^b	141,100	93,300
Specific Plan Growth as Percent of City Growth	2%	5%
Total for City of Oakland, 2035 ^b	562,000	281,900
Specific Plan Total as Percent of City Total	0.5%	1.5%

^a See Tables 4.11-5 and 4.11-6.

^b See Table 4.11-1.

Some level of population growth in the Plan Area was anticipated in Oakland's General Plan, and is supported and encouraged by General Plan Land Use and Housing Element policies and City zoning regulations. Well-served by regional transportation/transit facilities and close to downtown employment; the Plan Area is a preferred location for development of higher-density infill housing. Increasing the population in the Plan Area through new housing is a key component of the vision for downtown in the General Plan. Specifically, Oakland's Downtown Showcase District, which encompasses the Plan Area is intended to promote a mixture of districts with around-the-clock activity, continued expansion of job opportunities, and growing residential population (see Section 4.9. *Land Use, Plans, and Policies*). Overall, population growth associated with adoption and development under the Specific Plan would not result in population growth in a manner not anticipated in Oakland's General Plan and the impact would be less than significant.

Mitigation: None Required.

Substantial Displacement of Housing and People

Impact POP-2: Adoption and development under the Specific Plan could displace existing housing and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City's Housing Element (Criteria 2 and 3). (Less than Significant)

Adoption and development under the Specific Plan could require the demolition of existing housing units. Specifically, the Broadway Valdez Development Program could result in replacement of existing housing in areas around Waverly Street and 30th Street east of Broadway (see Figure 3-11 in Chapter 3, *Project Description*).

City Regulations for Removing Units from the Housing Market

Housing Element policies Substandard Housing Policy 1 and Housing Production Policy 8 and 12, in addition to LUTE Policy N3.6, would ensure that the housing stock in the City would be conserved and maintained. These policies protect housing from displacement and ensure long-term land use compatibility. Compliance with these policies would avoid any potential adverse effects related to the displacement of housing and people as a result of the future development in the Plan Area.

Further, City regulations governing the process for removal of rental housing by the private sector would mitigate some of the potential impacts associated with displacement. Development by the private sector that requires demolition of rental housing is subject to the Ellis Act (Government Code Sections 7060-7060.7) and the City of Oakland's Ellis Act Ordinance (Oakland Municipal Code Sections 8.22.400-8.22.480). Under that Ordinance, any owner can withdraw property from the rental market by filing with the City's Rent Adjustment Program a series of documents called the "Withdrawal Notices", including notices of termination given to existing tenants. The withdrawal of the units is effective after 120 days or is extended to one year for tenants who are disabled or 62 years of age or older. Under the Ordinance, lower-income households are entitled

to relocation assistance of two months' rent in effect at the time of the notice of termination, to mitigate the adverse impacts of displacement. The Ordinance also gives the tenants the right to re-rent the withdrawn units should the units be re-offered for rent within 10 years.

Relocation Implications for Residents

The people residing in housing units to be demolished would have to find other housing, potentially in nearby neighborhoods or in other parts of Oakland. There could be economic implications for the individuals involved. Households required to relocate would incur expenses associated with moving. However, lower-income households in rental housing displaced by private sector development would be entitled to relocation assistance under the City's Ellis Act, as described above. For some, rents/prices could be higher at a new location, or the housing might be less desirable for similar rents/prices. Others, however, might find it beneficial to relocate, if they find preferable or improved housing that better meets their needs, in terms of location, unit size/quality, and/or rent/price.

Replacement Housing as Part of Citywide Housing Production

From the perspective of the City's housing stock, the loss of up to approximately 30 housing units as a result of adoption and development under the Specific Plan would be offset by the production of a large amount of new housing within the Plan Area as well as elsewhere in Oakland as has been occurring and is expected to occur in the future, consistent with the City's Housing Element. As described earlier in the setting, approximately 4,600 new households were added in Oakland from 2005 through 2010 (see Table 4.11-1). Over the longer-term future, the ABAG projections forecast substantial housing growth in Oakland, averaging about 2,000 units per year from 2010 through 2035.

The levels of housing development anticipated in Oakland are consistent with Oakland's Housing Element and the City's General Plan. The construction of replacement housing for the up to 30 units that could be removed by adoption and development under the Specific Plan, would not be in excess of replacement housing anticipated in the City's Housing Element and related General Plan and zoning policies. Further, the Broadway Valdez Development Program anticipates approximately 1,800 additional housing units within the Plan Area (see Table 4.11-6). Overall, the removal of up to 30 housing units would not represent "substantial" numbers in the context of a total of approximately 169,710 housing units in Oakland in 2010 (the majority of which are renter-occupied), and the construction of large numbers of housing units in the future as described above.

Mitigation: None Required.

Cumulative Impacts

Inducement of Substantial Population Growth, Including Consideration of Indirect and Cumulative Project Effects

Impact POP-3: Adoption and development under the Specific Plan individually and in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Less than Significant)

Geographic Context

As discussed in Section 4.11.1, the analysis throughout this section considers the Plan Area and surrounding areas of Oakland, as well as a citywide and regional context. This represents the cumulative geographic context for the cumulative analyses presented throughout this section. Cumulative development includes those in the Major Projects List in Appendix B to this Draft EIR, and discussed in Section 4.07.2, *Cumulative Context*, in the front of Chapter 4 of this Draft EIR.

Impacts

Housing and Population Growth. As shown above in Table 4.11-7, the amount of population growth anticipated from adoption and development under the Specific Plan would account for about two percent of total population growth projected for Oakland between 2010 and 2035, and approximately 0.5 percent of the *total* population anticipated in Oakland in 2035. Thus, the adoption and development under the Specific Plan would not result in “substantial” population growth in comparison to the amount of population growth and the total population anticipated for Oakland.

Business and Employment Growth. Commercial development under the Specific Plan would add 1.9 million square feet of commercial space and would support business and employment growth of approximately 4,505 jobs in the Plan Area. This increase in employment would contribute to employment growth expected in Oakland in the future. The amount of employment growth anticipated from the Broadway Valdez Development Program would account for about five percent of total employment growth projected for Oakland between 2010 and 2035 and nearly 2 percent to the *total* employment anticipated for Oakland in 2035 (see Table 4.11-7). Thus, adoption and development under the Specific Plan would not result in “substantial” employment growth in comparison to the employment growth and total employment anticipated for Oakland in the future.

The major retail and mixed-use developments anticipated with adoption and development under the Specific Plan would also bring visitors, patrons, and shoppers to the Plan Area. Their spending would support the businesses and employees to be located in the new developments. There also could be some additional spending, such as for eating and drinking and services, that would support businesses in nearby parts of downtown.

Employment growth in the Plan Area has been anticipated to some extent in Oakland's General Plan, and is supported and encouraged by General Plan Land Use policies and by the City's Economic Development Strategy and related policies and activities. As noted above, a key component of the General Plan's vision for the Downtown Showcase District, including the Plan Area, is support for growth and continued expansion of job opportunities. Further, downtown Oakland is identified as a major regional commercial center for Oakland and the surrounding East Bay. Its roles include being a major regional office center, being a center for the arts and entertainment in Oakland, and providing major destination shopping opportunities for residents. By adding the majority of the Valdez Triangle subarea into the *Central Business District* land use classification, and encouraging mixed-use development, including destination retail within the Valdez Triangle subarea, adoption of the Specific Plan would facilitate development in support of these long-standing objectives for the Plan Area and the City's downtown.

Job-Induced Population Growth. Employment growth resulting from adoption and development under the Specific Plan would support the growth of households and population to provide the additional workers. The housing development anticipated under the Broadway Valdez Development Program also would temporarily generate additional workers. Cumulatively, citywide growth of employed residents in Oakland (59 percent increase) is projected to exceed the growth of jobs over time (49 percent increase). Thus, cumulatively, the substantial growth of housing and population anticipated to occur throughout the City could accommodate the number of additional workers resulting from adoption and development under the Specific Plan as well as the number of additional workers associated with other cumulative job growth.

Infrastructure-Induced Growth. Adoption and development under the Specific Plan would facilitate urban infill development and the intensification of activity in an area already well-served by existing transportation/transit systems and other infrastructure and utilities. Unlike commercial and residential development at an alternative location in an outlying part of the region, the development under the Specific Plan would occur in an already developed urban area and would not require construction or extension of new roads, utilities, and other infrastructure that might stimulate population growth in previously undeveloped areas.

Adoption and development under the Specific Plan could require on-site infrastructure improvements to accommodate new development to higher densities and for new uses. The infrastructure improvements would be specific to the development sites and would not induce substantial additional population growth in other areas.

Summary

Therefore, due to: (a) the role of the Specific Plan in facilitating development that fulfills key components of the General Plan's vision for the Downtown Showcase District, (b) the relatively small magnitude of Specific Plan-induced population and employment growth within the cumulative, citywide context, (c) the overall balance of growth of both jobs and housing anticipated in Oakland in the future, and (d) the Plan Area's location adjacent to Oakland's already developed Central Business District, the adoption and development under the Specific Plan would have a less than significant impact in inducing substantial population growth in a manner not contemplated by

the General Plan, either directed by facilitating development of housing or businesses, or indirectly through infrastructure improvements.

Mitigation: None Required.

4.11.5 References

City of Oakland, 2010. *Housing Element 2007-2014*, Adopted December 2010.

City of Oakland, 2011. *Proposed Amendments to the Central District Urban Renewal Plan EIR*, 2011.

WRT, 2009. *Broadway Valdez District Specific Plan: Existing Conditions Report, Draft*, August 2009.

WRT, 2013. *Public Review Draft Broadway Valdez District Specific Plan*, September, 2013.

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4.12 Public Services, Parks and Recreation Facilities

This section describes existing public services, parks and recreational facilities in the Specific Plan Area and analyzes how the adoption and development under the Specific Plan may affect those resources. It also evaluates the potential effects of adoption and development under the Specific Plan on the delivery of public services, and possible adverse physical impacts on the environment that could result from a need to provide new or physically altered facilities. The analysis reviews police services, fire protection and emergency medical response, public schools, and parks and recreational facilities. Potential impacts are discussed and evaluated and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.12.1 Environmental Setting

Police Services

The Oakland Police Department (OPD) is headquartered at 455 7th Street, approximately one mile from the Plan Area (OPD, 2012a). The Police Department currently employs 615 sworn police officers, with a civilian staff of 288 full-time and 55 part-time employees (Bolton, 2013). The City is geographically divided into 57 community policing beats. Neighborhood service coordinators are civilian employees who serve as a liaison between the community and the Police Department, and work with residents, businesses, schools, and other institutions to set priorities and develop strategies to improve public safety and reduce crime. Each neighborhood services coordinator handles multiple police beats (OPD, 2012b).

The Plan Area is primarily located within police beat 08X. This beat comprises the area bounded by 40th Street and I-580 to the north, Grand Avenue to the south, Harrison Street/Orange Street to the east and I-980 to the west (OPD, 2012a).

All emergency and non-emergency calls for police services are received through the Police Department's communications center located at 1701 Edgewater Drive. Calls for fire and medical services are routed to the Oakland Fire Department for dispatching. Priorities for responding to police calls are set by a computer-aided dispatch system that may be overridden by dispatchers. Police officers are dispatched from the police communications center by radio and/or laptop computers mounted in police vehicles (OPD, 2012a).

Table 4.12-1 shows a breakdown of crime reported in the City of Oakland in 2007-2011. The most frequent crime reported in 2011 was burglary. The number of total crimes in Oakland has decreased by approximately 33 percent between 2007 and 2011.

The Police Department's response times to calls for police services are recorded for the City of Oakland as a whole; the Police Department does not track response times for individual service areas. Response times generally reflect the perceived seriousness of the call. The Police Department ranks incoming calls for police services as follows: Priority 1 means imminent danger of death or

**TABLE 4.12-1
CITY OF OAKLAND CRIME REPORT 2007-2011**

Crime	2007	2008	2009	2010	2011
Murder	120	117	104	90	103
Aggravated Assault	2,939	2,999	2,578	2,473	2,455
Rape	247	215	222	199	165
Robbery	3,677	3,590	3,244	3,194	3,285
Burglary	8,274	7,703	8,816	8189	8,559
Motor Vehicle Theft	9,822	8,048	6,272	4,582	5,911
Larceny	5,921	6,231	6,139	5,462	5,557
Arson	268	283	210	144	130
Weapons – Possessing/Carrying	781	837	755	706	605
Drug Possession & Sales	3,811	4,459	3,870	2,908	1,732
Assaults – Simple	2,931	2,878	2,895	2,819	2,598
Prostitution & Commercialized Vice	285	334	643	511	261
Non-Rape Sex Crimes	947	760	659	659	556
Total Crimes	40,028	38,455	36,408	31,936	31,909

SOURCE: City of Oakland, 2011.

City of Oakland Police Department Disclaimer: This report is run by the date the crimes occurred. Because both reporting of crimes and data entry can be a month or more behind, not all crimes have been recorded yet. This can create a false reduction in crime in both property and violent crimes. For a more accurate week to week or month to month or current period to same period in a previous year comparison, it is best to compare periods that are between 30 and 60 days prior to the current date. The only certified crime statistics are the UCRs.

serious injury, felonies in progress, or serious public health hazards; Priority 2 refers to disputes with potential for violence, misdemeanor crimes in progress, stolen vehicle reports, and similar matters; and Priority 3 calls are reports of incidents that do not present danger to life or property.

The Department's last formal study analyzing response time goals and averages was conducted in 2010 and published in a Strategic Plan (OPD, 2010). The Strategic Plan reported that in 2009, OPD on average responded to Priority 1 calls in 14.8 minutes, 71 minutes for Priority 2 calls, and 148.3 minutes for Priority 3 calls. These response times did not meet Oakland's goals of 5 minutes for Priority 1 calls, between 10 and 15 minutes for Priority 2 calls, and 30 minutes for Priority 3 calls (OPD, 2010).

Fire Protection and Emergency Medical Services

The Oakland Fire Department (OFD) provides fire protection services and emergency medical services throughout the City. OFD operates 25 fire stations, including one at the Oakland International Airport. The Fire Department maintains a fleet of 24 Engines, 7 Trucks, and numerous other special operations, support, and reserve units throughout 3 Battalions. Total Operations Division staffing consists of 500 uniformed personnel. The actual number of assigned

personnel per station varies depending on the specific needs of that station. All personnel are trained as Paramedics or Emergency Medical Technicians (OFD, 2012a).

The nearest fire station to the Plan Area, Station 15, is located at 455 27th Street approximately 600 feet west of Broadway. Two other stations in the vicinity include Station 5 and Station 10. Station 5 is located at 934 34th Street (approximately one-mile west of Broadway); Station 10 is located at 172 Santa Clara Avenue (about 1/2-mile east of Broadway) (OFD, 2012b).

In addition to firefighting and emergency medical response capabilities, the Fire Department also has a hazardous materials unit that operates from Station 3 at 1445 14th Street and responds citywide to emergencies involving hazardous materials (OFD, 2012a).

The Oakland Fire Department Dispatch Center (FDDC) is located in downtown Oakland and is responsible for fire and medical emergency coordination and response. The FDDC receives approximately 60,000 calls for response annually, of which approximately 80 percent are medical in nature (OFD, 2012a). In 2012, the Engine at Fire Station 15 responded to 3326 calls for service, and the Truck responded to 1356 calls. The City's response time goal for the Fire Department is seven minutes or less, 90 percent of the time. In most cases, Station 15 responds to calls in less than five minutes (Hoffmann, 2013).

Public Schools

School Facilities and Attendance

The Oakland Unified School District (OUSD) operates the public school system in the City of Oakland. The OUSD administers 73 elementary schools, 16 middle schools, one junior high school, 28 high schools, and three K-12 schools. It is also responsible for four alternative schools, one special education school, three continuation schools, three community day schools, and one opportunity schools. The District's overall enrollment for the 2010-2011 school-year was 46,584 students (Ed-data, 2012).

The Plan Area is entirely located within District 3 of the OUSD (OUSD, 2013). The school immediately adjacent to the Plan Area is Oakland Emiliano Zapata Street Academy High School at 417 29th Street. Westlake Middle School is directly east of the Plan Area at 2639 Harrison Street. Across I-980 to the west are Hoover Elementary School and McClymonds High School. Lafayette Elementary, at 1700 Market Street, is west and south of the Plan Area (OUSD, 2013). Students from the Specific Plan Area may not necessarily attend nearby schools. Oakland Unified allows any student to apply to any school in the District. The goal of this open enrollment practice—called the School Options Program—is to ensure all families have equitable access to high-performing schools across the City (OUSD, 2013b). OUSD has offered Options enrollment program since the 2005-2006 school year, and since that time, enrollment patterns across OUSD have changed. As of November 2010, only 49% of OUSD students attended the school in their neighborhood attendance area (OUSD, 2011).

OUSD's overall enrollment peaked in the 1999-2000 school year at 55,000 (DataQuest, 2013), dropping to approximately 46,300 by the 2007-08 school year (OUSD, 2012). Enrollment has consistently hovered around 46,500 from the 2007-08 school year to the 2011-2012 school year. The District's medium range projections indicated that enrollment will be around 37,700 in the 2012-2013 school year, increasing slightly to 38,200 by 2019 (OUSD, 2012), representing an overall long term decline in enrollment.

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2012, the State Allocation Board (SAB) approved maximum Level 1 developer fees at \$0.51 per square foot of enclosed and covered space in any commercial or industrial development, and \$3.20 per square foot for residential development (SAB, 2012). These fees are intended to address the increased educational demands on the school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

Parks

The City of Oakland's Office of Parks and Recreation manages the City's parks and recreation centers within the city boundaries. Oakland's Public Works Agency maintains the park facilities; maintenance includes litter pickup and removal, pruning, weeding, turf mowing, irrigation system repairs and planting (City of Oakland Public Works, 2013). The Open Space and Recreation of Element (OSCAR) of the General Plan states a parkland acreage goal of 10 acres per 1,000 residents and a local-serving park acreage goal of 4 acres per 1,000 residents (City of Oakland, 1996).

Oakland's parks are categorized by size and intended service area. Generally, local-serving parks "meet the active recreational needs of the community" surrounding the park, rather than the City as a whole (Oakland, 1996). The Plan Area is located in the City's Central Planning Area, as identified by the Open Space, Conservation, and Recreation (OSCAR) Element of the Oakland General Plan. As stated in the OSCAR, the Central Planning Area has a per capita local-serving park acreage of 1.65 acres per 1,000 residents, which is less than half the adopted standard of 4.0 local-serving park acres per 1,000 residents (City of Oakland, 1996).

Overall, Oakland has approximately 5,937 acres of parkland, including 4,101 acres of parks managed by Office of Parks and Recreation, and 1,836 acres of open space managed by East Bay Regional Parks District (EBRPD) within the City of Oakland. With this acreage, and a population of 390,724 in 2012, Oakland has around 15.2 acres of parkland per 1,000 residents, meeting its overall parkland acreage goal. Oakland's 5,937 park acres make up 16.6% of its total land area (Trust for Public Land, 2012).

Oakland also has 73 playgrounds, resulting in 1.9 playgrounds per 1,000 residents. The Office of Parks and Recreation employed a staff of 440 in 2012, or about 11.3 workers for every 1,000 residents (Trust for Public Land, 2012).

There is no designated parkland within the Plan Area. The only public open space consists of two plazas along Broadway - one at 25th Street and one at 27th Street. These plazas were created as part of a redevelopment effort in the 1970s to enhance the image of Broadway's Auto Row by investing in new streetscape amenities. The intent was to create spaces that could be jointly used by adjacent automobile dealers to display their vehicles and by the public. In spite of the new lighting, decorative paving, and public art, the plazas receive very little public use.

Nearby parks and open spaces serve resident, employee and visitor populations of the Plan Area. The nearest park to the Plan Area is the 11-acre Mosswood Park, located across I-580 from the northern boundary of the Plan Area at Broadway and MacArthur Boulevard. Amenities at Mosswood Park include an amphitheater, baseball field, community garden, and tennis and basketball courts. The park has been recently improved: the City added dog runs for big and small canines in 2008, and in August of 2011, a new tot lot at Mosswood Park was completed, in a collaborative effort between the City, Kaiser Permanente, and Kaiser OMC architecture and construction firms (GMNA, 2013; City of Oakland, 2008b). Annually, the City, Kaiser, and the community also collaborate to implement a Mosswood Park cleanup day, which includes improvements to planted areas and structures. (McCarthy, 2011).

Other parks near the Plan Area include Oak Glen Park northeast of the Plan Area; Adams Park at the southeast corner of the Plan Area; and the 75-acre Lakeside Park surrounding Lake Merritt. Although not located within the Plan Area, and not designated parkland, Glen Echo Creek, which flows parallel to the Plan Area's eastern boundary and south into Lake Merritt, provides a linear open space accessible to the northern portion of the Plan Area. Oak Glen Park extends along the banks of the creek as it flows underneath I-580 just a block east of Piedmont Avenue, providing 2.79 acres of shaded parkland.

Southeast of the Plan Area, Adams Park features the Veterans' Memorial Building, which is the site of the Downtown Oakland Senior Center. Lakeside Park, between Grand Avenue and Lake Merritt, features paved trails for biking and walking and several specialty gardens including the Japanese Bonsai and Suiseki Gardens and other vegetable and fruit demonstration gardens.

Open space within city limits also contributes to the City's parkland acreage goal. The EBRPD, which acquires and develops regional parks, open spaces, and regional trails throughout the East Bay, also provides open space and recreational facilities within Oakland's city limits. EBRPD parks in Oakland include the 290-acre Leona Canyon Regional Open Space Preserve, the 741-acre Martin Luther King, Jr. Regional Shoreline Park, the 1,829-acre Redwoods Regional Park, the 660-acre Sibley Volcanic Regional Preserve, and the 82-acre Roberts Regional Recreational Area (EBRPD, 2013). Additionally, the Port of Oakland operates Middle Harbor Shoreline Park, a 38-acre shoreline park, with more than two miles of pathways encircling Middle Harbor Basin (Port of Oakland, 2013).

Recreational Facilities

The City's Office of Parks and Recreation also operates community-based centers located throughout City. The centers offer various public recreation, programs, including sports (swimming, boating,

golf, basketball, soccer, softball, tennis, horseback riding), arts and crafts, culture arts and dance, gardening, computer lab, drama, mentoring, general learning, summer and holiday day camps and after-school activities. OPR provides sports and physical activities for all ages and ability levels. There are no recreation centers within the Specific Plan Area; the nearest recreation center is Mosswood Park Recreation Center, at 3612 Webster Street. The Mosswood Performing Arts and Recreation Center features a dance studio, computer lab, kitchen and indoor rental space (Office of Parks and Recreation, 2011, 2013).

4.12.1 Regulatory Setting

Local Plans and Policies

City of Oakland General Plan

Policies contained in the Oakland General Plan pertain to the various public services and recreation:

Land Use and Transportation Element (LUTE)

- ***Policy N.12.1:*** The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times.
- ***Policy N.12.2:*** Adequate public school capacity should be available to meet the needs of Oakland's growing community. The City and the Oakland Unified School District (OUSD) should work together to establish a continuing procedure for coordinating residential and commercial development and exploring the imposition of mutually agreed upon reasonable and feasible strategies to provide for adequate school capacity. The City and OUSD should jointly consider, where feasible and appropriate, funding mechanisms such as assessment districts, redevelopment Agency funding (AB1290), uses of surplus City-owned land, bond issues, and adjacent or shared use of land or school facilities with recreation, libraries, child care and other public uses.
- ***Policy N.12.5:*** In its capital improvement and public service programs, the City should give priority to reducing deficiencies in, and disparities between, existing residential areas.

Safety Element

- ***Policy FI-1:*** Maintain and enhance the city's capacity for emergency response, fire prevention and fire fighting.

Action FI-1.1: Periodically assess the need for new or relocated fire stations and other facilities, changes in staffing levels, and additional or updated supplies, equipment, technologies and in-service training classes.

Action FI-1.2: Strive to meet a goal of responding to fires and other emergencies within seven minutes of notification 90 percent of the time.

Action FI-1.5: Continue to participate not only in general mutual-aid agreements but also in agreements with adjoining jurisdictions for cooperative response to fires.

- **Policy FI-2:** Continue, enhance or implement programs that seek to reduce the risk of structural fires.

Action FI-2.1: Adopt and amend as needed updated versions of the California building and fire codes so that optimal fire-protection standards are used in construction and renovation projects.

Action FI-2.2: Continue to enforce provisions under the local housing code requiring the use of fire-resistant construction and the provision of smoke detectors and fire-extinguishing systems.

Action FI-2.3: Continue to review development proposals to ensure that they incorporate required and appropriate fire-mitigation measures, including adequate provisions for occupant evacuation and access by fire-fighting personnel And Equipment.

Action FI-2.5: Continue to conduct periodic fire-safety inspections of commercial, multi-family and institutional buildings.

Open Space, Conservation and Recreation (OSCAR) Element

- **Policy REC-3.1:** Use level of service standards of 10 acres of total parkland and 4 acres of local-serving parkland as a means of determining where unmet needs exist and prioritizing future capital investments.
- **Policy REC-3.3:** Consider a range of factors when locating new parks or recreational facilities, including local recreational needs, projected operating and maintenance costs, budgetary constraints, surrounding land uses, citizen wishes, accessibility, the need to protect or enhance a historic resource, and site visibility.
- **Policy REC-10.2:** To the extent permitted by law, require recreational needs created by future growth to be offset by resources contributed by that growth. In other words, require mandatory land dedication for large-scale residential development and establish a park impact fee for smaller-scale residential development projects, including individual new dwelling units. Calculate the dedication or fee requirement based on a standard of 4 acres of local-serving parkland per 1,000 residents.

In addition, the park and recreation portion of the OSCAR Element contains the following principles applicable to the implementation of the Specific Plan:

- A park should be available within walking distance of every Oakland resident. No person should have to travel too far from home to gain access to recreational services.
- Recreation needs created by new development should be offset by resources contributed by that growth. In other words, new development should pay its fair share to meet the increased demand for parks resulting from that development.

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

The City of Oakland's standard practice is to incorporate relevant Standard Conditions of Approval (SCAs) as part of project approvals. SCAs relevant to reducing impacts on public services due to

the adoption and development under the Specific Plan are listed below. If the Specific Plan is approved by the City, all applicable SCA would be adopted as conditions of approval and required, as applicable, of the projects developed under the Specific Plan. These SCAs would help ensure less-than-significant impacts to public services.

- **SCA 4: Conformance with other Requirements**

Prior to issuance of a demolition, grading, P-job, or other construction related permit (for a project constructed in the Specific Plan Area):

- a. The project applicant shall comply with all other applicable federal, state, regional and/or local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City's Building Services Division, the City's Fire Marshal, and the City's Public Works Agency. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in SCA 3, *Scope of This Approval, Major and Minor Changes*.
- b. The applicant shall submit approved building plans for project-specific needs related to fire protection to the Fire Services Division for review and approval, including, but not limited to automatic extinguishing systems, water supply improvements and hydrants, fire department access, and vegetation management for preventing fires and soil erosion.

- **SCA 71: Fire Safety Phasing Plan**

Prior to issuance of a demolition, grading, and/or construction and concurrent with any p-job submittal permit (for a project constructed in the Specific Plan Area):

The project applicant shall submit a separate fire safety phasing plan to the Planning and Zoning Division and Fire Services Division for their review and approval. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. Fire Services Division may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase.

- **SCA 73: Fire Safety**

Prior to and ongoing throughout demolition, grading, and/or construction (for a project constructed in the Specific Plan Area):

The project applicant and construction contractor will ensure that during project construction, all construction vehicles and equipment will be fitted with spark arrestors to minimize accidental ignition of dry construction debris and surrounding dry vegetation.

4.12.2 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
 - Fire protection;
 - Police protection;
 - Schools; or
 - Other public facilities.
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Approach to Analysis

The increases in population and land use intensity that would result from adoption and development under the Specific Plan were evaluated based on the web-based information regarding the various public services agencies with jurisdiction over the Specific Plan Area and their service capabilities, service ratios, response times, and performance objectives. Additionally, the adoption and development under the Specific Plan was evaluated for conformity with the goals, objectives and policies of the General Plan related to public services and recreation.

Impacts

Police Services Impacts

Impact PSR-1: Adoption and development under the Specific Plan could result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)

Adoption and development under the Specific Plan would increase land use intensity and overall density in and around the Plan Area. This related population increase could result in an increase in reported crimes. However, adherence to General Plan Policies N.12.1 and N.12.5, described above, by the City during review of individual development projects would reduce the potential for project-related service deficiencies. Although a population increase could result in an increase in reported crime, the new construction and rehabilitation of existing structures under the Specific Plan would infill building sites currently vacant and underused; serve to revitalize the corridors and community; and could result in a reduction in criminal activity within the Plan Area.

Therefore, adoption and development under the Specific Plan would not result in an increased demand for police services such that new or physically altered police facilities would be required, the construction of which could have significant environmental effects. As such, the adoption and development under the Specific Plan would have a less-than-significant impact on police services.

Mitigation: None Required.

Fire Protection and Emergency Medical Services Impacts

Impact PSR-2: Adoption and development under the Specific Plan could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)

The increase in development intensity and overall density in and around the Plan Area would result in an increase in demand for fire protection and emergency services. However, adherence by the City to General Plan Policies N.12.1, N.12.5, FI-1, and FI-2, as well as the SCAs described above, during review of individual development projects would reduce the potential for service deficiencies and related impacts. The Oakland Fire Department is currently able to meet or exceed their response time goal 90 percent of the time. As such, it is anticipated that the Specific Plan would have a less-than-significant impact on fire protection and emergency medical response services.

Mitigation: None Required.

Public Schools Impacts

Impact PSR-3: Adoption and development under the Specific Plan could result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives (Criterion 1). (Less than Significant)

Adoption and development under the Specific Plan is assumed to include up to 1,800 new residential units within the Plan Area, likely increasing the student enrollment at local schools. These new students would be added to district-wide enrollment incrementally over time as development under the Specific Plan occurs. New students would be distributed among the schools within the Plan Area and beyond through OUSD's Options Enrollment Program, thereby reducing substantial enrollment impacts to any one school.

For projects developed under the Specific Plan, adherence to General Plan Policy N.12.2, described above, would reduce the potential for impacts to school facilities associated with increased enrollment. Moreover, given the declining student enrollment in OUSD schools, which is projected to continue, as well as the geographic distribution of students across the City resulting from the Options Enrollment Program, the district would have adequate capacity within its existing facilities to accommodate new students generated by adoption and development under the Specific Plan.

Pursuant to Senate Bill 50 (SB 50), applicants for individual development projects would be required to pay school impact fees established to offset potential impacts from new development on

school facilities. Therefore, although adoption and development under the Specific Plan could indirectly increase resident populations and potential student enrollment in Oakland, payment of fees mandated under SB 50 is the mitigation measure prescribed by the statute, and payment of such fees is deemed full and complete mitigation. Therefore, no additional mitigation would be required.

Mitigation: None Required.

Parks and Recreation Impacts

Impact PSR-4: Adoption and development under the Specific Plan could increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities (Criteria 1 through 3). (Less than Significant)

No additions or expansions of parks or recreational facilities are proposed as part of the Specific Plan, and no new parks or recreational facilities, nor expansion of existing parks or recreational facilities, would be required as a result of adoption and development under the Specific Plan.

Adoption and development under the Specific Plan would increase residential and daytime populations within the Specific Plan Area. These additional residents would increase demand for, and use of, neighborhood parks and recreation centers serving the Specific Plan Area, as well as regional parks serving the East Bay area. New demand would be distributed evenly throughout the Specific Plan Area due to the mix of uses proposed (commercial, entertainment, and residential) throughout the Plan Area. Increases in permanent and daytime population as a result of adoption and development under the Specific Plan is commensurate with the growth envisioned in the General Plan; any demand generated by new residents of the Specific Plan Area was considered and included in the OSCAR Element of the General Plan (1996).

As stated above, the OSCAR identifies about 1.65 acres of local parkland per 1,000 residents in the Central Planning area of the City, which is below the 4.0 acres of local-serving parkland per 1,000 resident standard. The City of Oakland has remained short of its stated local-serving parks standard since 1994. However, the City also puts forth in its General Plan an overall parkland standard of 10 total acres per 1,000 residents. The City exceeded this standard in 2012, with 15.2 acres of parkland per 1,000 residents.

Adherence to the General Plan's OSCAR Policies 3.1, 3.3, and 3.10, described above, would reduce potential impacts to recreational facilities from adoption and development under the Specific Plan. The City would nevertheless continue to exceed its overall park standard of 10 acres of total parkland per 1,000 residents, and would continue to fall short of its stated local-serving parkland goal of 4 acres per 1,000 residents, regardless of adoption and development under the Specific Plan, and the impact would be less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact PSR-5: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would not result in a cumulative increase in demand for police, fire, and school services. (Less than Significant)

Geographic Context

The cumulative geographic context for public services and recreation considerations for adoption and development under the Specific Plan consists of the Specific Plan Area in addition to all areas of the City, as public services and recreation facilities are provided citywide.

Impacts

Cumulative development within Specific Plan boundaries, combined with cumulative development (which considers those projects in the Major Projects List in Appendix B to this Draft EIR), would increase demand for police and fire protection services. These developments, however, would provide additional tax revenue and other development fees that would go toward paying for increased public services. Adherence to the General Plan policies listed under Impacts PSR-1 and PSR-2 would reduce the potential for significant impacts. Cumulative development, in combination with adoption and development under the Specific Plan would result in a less-than-significant cumulative impact on police and fire services.

Regarding schools, as stated above under Impact PSR-3, OUSD has experienced substantially decreased enrollment over the past decade, and enrollment is anticipated to continue decreasing. In addition, pursuant to Senate Bill 50 (SB 50), individual project applicants would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Under OUSD's Options Enrollment Program, students from the Specific Plan Area may attend schools anywhere in the City. Considering the existing educational facilities citywide and in the vicinity of the Plan Area, and declining enrollment trends and forecasts, the Specific Plan, in combination with past, present and reasonably foreseeable future projects, would not result in the need for new or physically altered school facilities and the impact would be less than significant.

Mitigation: None Required.

Impact PSR-6: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Specific Plan Area, would result in an increased demand for recreational facilities. (Less than Significant)

As stated above, the City's goal is to provide 10 acres of total parkland and 4 acres of local-serving parkland per 1,000 residents, and the Central Planning area currently has 1.65 acres of local parkland per 1,000 residents. The Specific Plan would facilitate population growth, which would be combined with other growth in the vicinity to further reduce the 1.65-acre ratio. The growth in the vicinity could result from projects included in the Major Projects List in Appendix B to this Draft EIR. Therefore, growth from adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects in the Plan Area and vicinity, would contribute to a cumulatively considerable deficit of local-serving parkland per resident.

Adherence to the General Plan policies 3.1, 3.3, and 3.10, described above, would reduce the potential impacts of projects developed under the Specific Plan. Therefore, the effect of the adoption and development under the Specific Plan, in combination with other foreseeable development, would not be cumulatively significant.

Mitigation: None Required.

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4.13 Transportation and Circulation

This section describes the transportation, circulation, and parking conditions, including transit services and pedestrian and bicycle facilities in the Broadway Valdez District Specific Plan Area and vicinity. This section describes the regulatory setting relevant to transportation and circulation issues in the Plan Area. Potential impacts of the development under the Specific Plan are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary, followed by identification of the residual impact significance after mitigation measures are implemented.

Figure 4.13-1 illustrates the location of the Plan Area and the local and regional street system. The analysis evaluates the traffic-related impacts of the Broadway Valdez Development Program (i.e. the Project) during the weekday morning and evening and Saturday peak hours. The analysis was conducted in compliance with City of Oakland and Alameda County Transportation Commission (ACTC) guidelines. Traffic conditions are assessed for the following six scenarios:

- **Existing** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- **Existing Plus Project Buildout** – Existing conditions plus project-related traffic resulting from the buildout of the Broadway Valdez Development Program.
- **2020 No Project** – Future conditions with planned population and employment growth, and planned transportation system improvements, for the year 2020. This scenario assumes no traffic growth in the Specific Plan area. Traffic projections were developed using the most recent version of the Alameda Countywide Travel Demand Model provided by the ACTC (ACTC Model).
- **2020 Plus Project Phase 1** – Future forecasted conditions for the year 2020. This scenario assumes completion of developments within the Specific Plan Area expected by year 2020. Traffic projections were developed using the ACTC Model.
- **2035 No Project** – Future conditions with planned population and employment growth, and planned transportation system improvements, for the year 2035. This scenario assumes no traffic growth in the Specific Plan Area. Traffic projections were developed using the ACTC Model.
- **2035 Plus Project Buildout** – Future forecasted conditions for the year 2035. This scenario assumes buildout of the Broadway Valdez Development Program. Traffic projections were developed using the ACTC Model.

4.13.1 Existing Setting

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



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-1
Study Area Context

Study Area

Intersection operations at 57 intersections in the vicinity of the Plan Area (listed below) were evaluated during the weekday evening (PM) and Saturday peak periods for Existing, 2020 and 2035 conditions. In addition, intersection operations at 14 intersections were also evaluated during the weekday morning (AM) peak period (**Bold** – Indicates intersection that were evaluated during the weekday AM peak period as well as the weekday PM and Saturday peak periods. All intersections located within the Downtown area or provide direct access to Downtown unless marked with *; intersections under jurisdiction of Caltrans are marked with #).

1. SR 24 Eastbound Off-Ramp/Aileen Street/ Telegraph Avenue #
2. SR 24 Westbound On-Ramp/56th Street/ Telegraph Avenue #
3. Broadway Terrace/Broadway
4. College Avenue/Broadway
5. Claremont Avenue/52nd Street/ Telegraph Avenue
6. 51st Street/Telegraph Avenue
7. **51st Street/Pleasant Valley Avenue/ Broadway**
8. 40th Street/Telegraph Avenue
9. 40th Street/Broadway
10. **West MacArthur Boulevard/ Market Street***
11. West MacArthur Boulevard/Telegraph Avenue
12. MacArthur Boulevard /Broadway
13. **MacArthur Boulevard/Piedmont Avenue***
14. **Santa Clara Avenue /Harrison Street**
15. **Perry Place/I-580 Eastbound Ramps/ Oakland Avenue #**
16. Grand Avenue/Lake Park Avenue/ Santa Clara Avenue
17. Lake Park Avenue/Lakeshore Avenue
18. Grand Avenue/MacArthur Boulevard
19. **MacArthur Boulevard/I-580 Eastbound On-Ramp/Lakeshore Avenue #**
20. **Piedmont Avenue/Broadway**
21. Hawthorne Avenue/Brook Street/ Broadway
22. Hawthorne Avenue/Telegraph Avenue
23. 30th Street/Broadway
24. 29th Street/Broadway
25. 27th Street/San Pablo Avenue
26. 27th Street/ Martin Luther King Jr. Way
27. **27th Street/I-980 Westbound Off-Ramp/ Northgate Avenue #**
28. 27th Street/I-980 Eastbound On-Ramp/ Northgate Avenue #
29. **27th Street/Telegraph Avenue**
30. 27th Street/Broadway
31. 26th Street/27th Street/Valdez Street*
32. 26th Street/Broadway
33. 25th Street/Telegraph Avenue
34. **25th Street/Webster Street/Broadway**
35. 24th Street/Telegraph Avenue
36. 24th Street/Broadway
37. **27th Street/24th Street/Bay Place/ Harrison Street**
38. 23rd Street/Telegraph Avenue
39. 23rd Street/Broadway
40. 23rd Street/Harrison Street
41. West Grand Avenue/Mandela Parkway
42. West Grand Avenue/Adeline Street
43. **West Grand Avenue/Market Street**
44. West Grand Avenue/Brush Street
45. West Grand Avenue/San Pablo Avenue
46. West Grand Avenue/Martin Luther King Jr. Way
47. West Grand Avenue/Northgate Avenue
48. West Grand Avenue/Telegraph Avenue
49. **Grand Avenue/Broadway**
50. Grand Avenue/Webster Street
51. Grand Avenue/Valdez Street
52. **Grand Avenue/Harrison Street**
53. 20th Street/Broadway
54. 18th Street/I-980 Westbound Off-Ramp/ Brush Street #
55. 17th Street/I-980 Eastbound On-Ramp/ Castro Street #
56. 5th Street/I-880 Southbound On-Ramp/ Broadway #
57. 6th Street/I-880 Northbound Off Ramp/ Broadway #

In general, major intersections along arterials where the development under the Specific Plan would increase traffic volumes by 50 or more peak-hour trips are identified as potential study intersections. This threshold is selected because it generally corresponds to five percent or more of current traffic volumes along major arterials, which is similar to the typical day-to-day fluctuation in traffic volumes and can be noticeable to most people. Figure 4.13-1 shows the 57 study intersections.

Considering that the development under the Specific Plan would generate fewer trips during the weekday AM peak hour than during the weekday PM or Saturday peak hours, and most study intersections currently operate at better conditions during the AM peak hour than during the PM peak hour, it is expected that evaluation of traffic operations during the weekday PM and Saturday peak hours would capture impacts at the study intersections. Therefore, this analysis evaluates operations at major intersections during the weekday AM peak hour only where the project would add 50 or more AM peak-hour trips, and where previous analyses have documented worse conditions during the AM peak hour than during the PM peak hour.

Existing Roadway Network

Regional vehicular access to the Plan Area is provided by Interstate 580 (I-580), Interstate 880 (I-880), Interstate 980 (I-980), and State Route 24 (SR 24), while local access is provided via Broadway, Telegraph Avenue, Harrison Street, Grand Avenue, and 27th Street. These and other major roadways in the study area are described below.

- **I-980** is an eight-lane freeway west of the Plan Area that connects SR 24 and I-580 to I-880. I-980 has an average annual daily traffic volume (AADT) of approximately 113,000 vehicles near the Plan Area (Caltrans, 2012a). Ramps at 17th and 27th Streets provide the nearest freeway access to the Plan Area.
- **SR 24** is an eight-lane freeway that is the continuation of I-980 east of I-580 and extends to Walnut Creek. SR 24 has an AADT of approximately 146,000 vehicles east of I-980 (Caltrans, 2012a). Ramps at Telegraph Avenue, 51st Street, and Martin Luther King Jr. Way provide the nearest freeway access to the Plan Area.
- **I-580** is an eight-lane freeway between SR 101, in Marin County, and I-5 south of Tracy. I-580 is located just north of the Plan Area and has an AADT of approximately 230,000 vehicles per day near SR 24/I-980 (Caltrans, 2012a). The Webster Street off-ramp and Oakland Avenue/Harrison Street and Grand Avenue/Lakeshore Avenue Interchanges provide the nearest access to the Plan Area.
- **I-880** is an eight-lane freeway between I-80 in Emeryville and I-280 in San Jose. I-880 has an AADT of approximately 199,000 vehicles south of Broadway (Caltrans, 2012a). Broadway and Jackson Street ramps provide the nearest access to the Plan Area.
- **Broadway** is a major north-south arterial between Jack London Square and SR 24. Broadway is the main thorough-fare through the Plan Area. It provides four travel lanes through the Plan Area, with a center median north of 27th Street.

- **Telegraph Avenue** is a major north-south arterial extending from Broadway in Downtown Oakland to Berkeley. Telegraph Avenue generally provides two travel lanes in each direction in the study area.
- **Harrison Street** is an arterial extending from Downtown Oakland to east of I-580. In the vicinity of I-580, Harrison Street forms a one-way couplet with Oakland Avenue. Harrison Street generally provides three travel lanes in each direction.
- **MacArthur Boulevard** is a major east-west arterial just north of the Plan Area that extends from Hollis Street in West Oakland/Emeryville generally paralleling I-580 to San Leandro in the east and beyond. It varies in width from four to six lanes, with a two-lane cross section and a center median just north of the Plan Area.
- **27th Street/Bay Place** is a generally four-lane, east-west arterial that extends from San Pablo Avenue to Grand Avenue.
- **Grand Avenue/West Grand Avenue** is a generally four-lane major arterial extending from West Oakland to Downtown Oakland and the City of Piedmont.
- **Piedmont Avenue** is a two-lane, minor north-south arterial extending from Broadway to 51st Street. Piedmont Avenue provides one lane in each direction.
- **Webster Street** is a north-south street extending from City of Alameda to 51st Street. In the Plan Area, Webster Street is discontinuous between 25th and 28th Streets. South of 25th Street, Webster Street is to the east of Broadway; north of 28th Street, Webster Street is to the west of Broadway. Webster Street provides one travel lane in each direction. South of Grand Avenue, Webster Street is one-way southbound.

Other local streets in the Specific Plan Area include:

- **Valdez Street** is a north-south street extending from Grand Avenue to 28th Street. North of 27th Street, Valdez Street provides one southbound-only lane. South of 27th Street, Valdez Street provides one travel lane in each direction.
- **23rd Street** is a two-lane east-west local street that extends between Harrison Street and Martin Luther King Jr. Way in Oakland.
- **24rd Street** is a two-lane east-west local street that extends between Harrison Street and Telegraph Avenue in Oakland. 24th Street is one-way westbound between Harrison and Valdez Streets.
- **29th Street** is a two-lane east-west local street that extends between Harrison Street / Oakland Avenue and Martin Luther King Jr. Way in Oakland.
- **30th Street** is a two-lane east-west local street that extends between Richmond Boulevard and Peralta Street in Oakland.

Other local streets in the project area include Hawthorne Avenue, Brook Street, Valdez Street, Waverly Street and 25th through 34th Streets. In general, these streets provide one travel lane in each direction and provide access to and from the adjacent uses.

Previous environmental documents have identified intersections that either currently operate at an unacceptable LOS or are projected to operate at an unacceptable LOS in the future. This EIR identifies these intersections as “impacted intersections” because components of the proposed project may affect those locations. Appendix G.A presents the intersections that previously published environmental documents identified as having significant and unavoidable impacts.

Existing Transit Service

Transit service providers in the Plan Area vicinity include Alameda-Contra Costa Transit District (AC Transit) which provides local and Transbay bus service with connections to the Transbay Terminal in San Francisco, the Bay Area Rapid Transit (BART) which provides regional rail service, and various shuttle services. **Figure 4.13-2** shows the existing transit services in the Plan Area. Each service is described below.

AC Transit

The Alameda-Contra Costa Transit District (AC Transit) is the primary bus service provider in 13 cities and adjacent unincorporated areas in Alameda and Contra Costa Counties, with Transbay service to destinations in San Francisco, San Mateo and Santa Clara Counties.

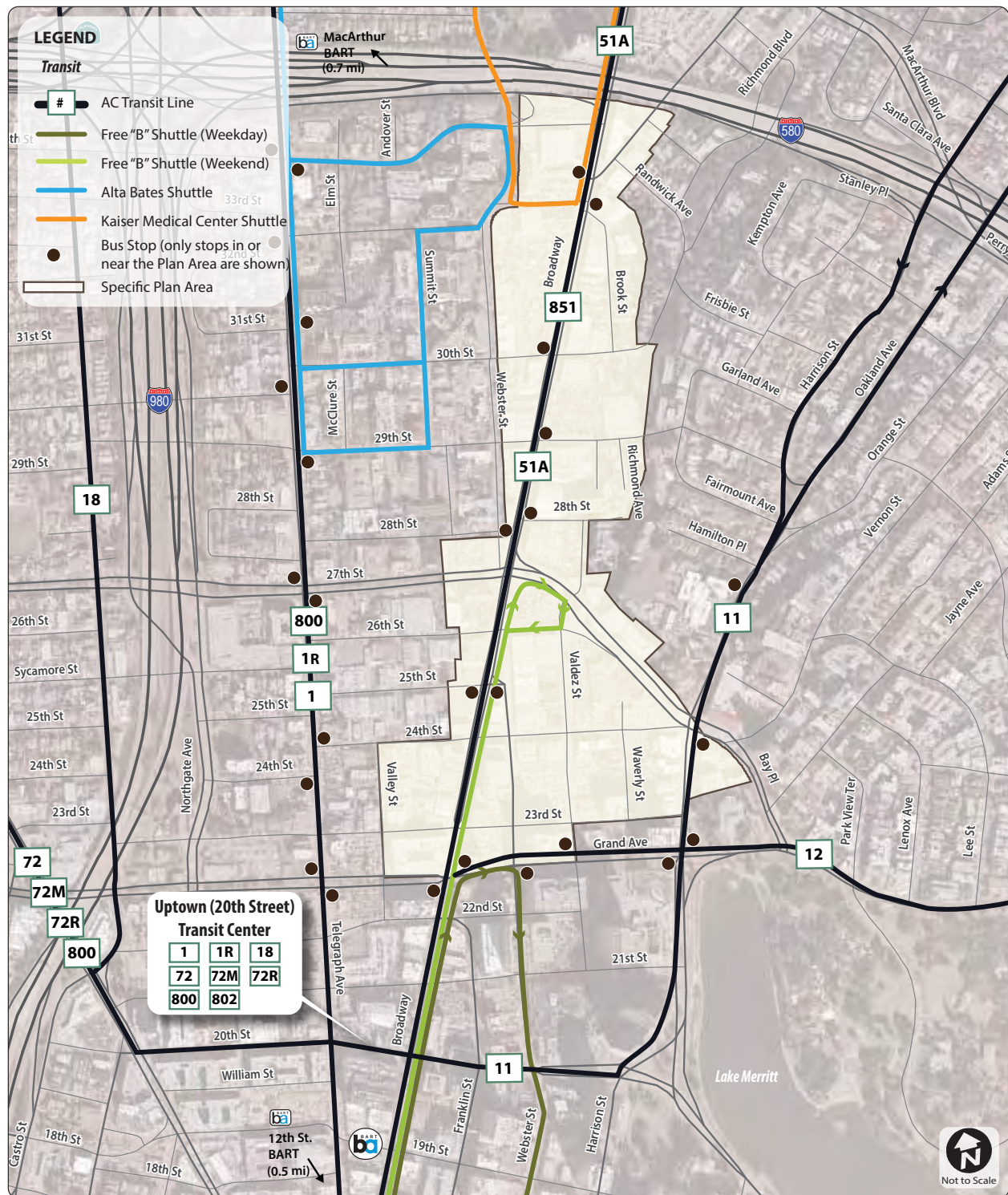
Table 4.13-1 summarizes the characteristics of the AC Transit routes operating in the Plan Area and vicinity.

Table 4.13-2 shows the capacity and loads (passengers) of the AC Transit routes serving the Plan Area and vicinity. Average and maximum load factors are also shown. Load factor is defined as the ratio of occupied seats to the number of seats on the bus; i.e., a load factor of 100 percent or more indicates that the bus operates at or above its seated capacity. Route 51A directly serves the Plan Area along Broadway and is currently over capacity during peak service periods, with maximum loads of up to 166 percent, and average daily load factors of 38 to 57 percent. Route 1 along Telegraph Avenue is also over capacity, with a maximum load factor of 115 percent. Route 1R, the express route along Telegraph Avenue, experiences higher daily loads and reaches its seated capacity in the northbound direction near the Alta Bates Summit Campus. Route 11 along Harrison Street operates below capacity, and Route 12 along Grand Avenue, south of the Plan Area, operates at or below capacity. Both all-night routes, Routes 800 and 851, operate with excess capacity.

Bay Area Rapid Transit (BART)

BART provides regional rail service throughout the East Bay and across the Bay to San Francisco and the Peninsula. The nearest BART stations to the Plan Area are:

- The 19th Street BART station, about 0.3 miles south of the Plan Area, is located underground beneath Broadway in downtown Oakland. Four portals along Broadway between 18th and 20th Streets provide access to the station. The 19th Street Station does not have designated motor vehicle parking or pick-up/drop off facilities.
- The MacArthur BART Station, about 0.6 miles northwest of the Plan Area, is elevated and located in the median of SR 24. Station access is provided just south of 40th Street. The Station provides designated motor vehicle parking and pick-up/drop off facilities.



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-2
Existing Transit Services

**TABLE 4.13-1
AC TRANSIT ROUTES IN THE VICINITY OF THE PLAN AREA**

Line	Route	Nearest Stops	Weekday		Weekend		Bus Type
			Hours	Headway ^a	Hours	Headway ^a	
Local Routes							
1	Downtown Berkeley to Bay Fair BART station	Telegraph Ave. at 36th St., 34th St., 32nd St., 31st St., 30th St., 29th St., 27th St., 24th St., and W. Grand Ave	5:30 AM to 12:00 AM	15-20 minutes	5:00 AM to 1:00 AM	15-20 minutes	60-foot articulated buses with a 47-person seating capacity
1R	Downtown Berkeley to Bay Fair BART station (limited stops)	Telegraph Ave. at 31st St., 30th St., and 24th St.	6:00 AM to 8:00 PM	12 minutes	7:30 AM to 7:00 PM	15 minutes	
11	Piedmont to Dimond Business District	Harrison St. at Bay Place	6:00 AM to 8:00 PM	30 minutes	7:00 AM to 8:30 PM	60 minutes	40-foot buses with a 32-person or 40-person seating capacity
12	Berkeley BART station to downtown Oakland	W Grand Ave. at Harrison St., Webster St., Valdez St., and Broadway	6:00 AM to 10:50 PM	20-30 minutes	6:00 AM to 10:50 PM	30 minutes	30-foot buses with a 25-person seating capacity
51A	Rockridge BART station to Fruitvale BART station	Broadway at W. Grand Ave., 25th St., 28th St., 29th St., 30th St., and Piedmont Ave.	5:00 AM to 12:30 AM	10-20 minutes	5:30 AM to 12:30 AM	15-20 minutes	40-foot buses with a 32-person seating capacity
Night Routes							
800	Downtown San Francisco to Richmond BART Station	Telegraph Ave. at 34th St., 32nd St., 31st St., 30th St., 29th St., 27th St., and 24th St.	12:20 AM to 6:20 AM	60 minutes	11:50 PM to 7:30 AM	60 minutes	40-foot buses with a 32-person or 40-person seating capacity
851	Fruitvale BART Station to Downtown Berkeley	Broadway at 25th St., 28th St., 29th St., 30th St., and Piedmont Ave	12:20 AM to 5:00 AM	60 minutes	12:20 AM to 5:00 AM	60 minutes	40-foot buses with a 32-person or 40-person seating capacity

^a The frequency, or interval of time between buses traveling in any given direction along a designated route.

SOURCE: AC Transit, August 2012.

**TABLE 4.13-2
AC TRANSIT BOARDINGS AND ALIGHTINGS (Weekday)**

Bus Route and Stop Location	Direction	Average Capacity (Seats)	Average Load (Passengers) ^a	Average Load Factor ^b	Maximum Load (Passengers) ^c	Maximum Load Factor ^d	Boardings (Ons) ^e	Alightings (Offs) ^f
Route 1 on Telegraph Avenue at West Grand Avenue	Southbound	47	20.5	44%	44	94%	28	27
	Northbound		24.1	51%	53	113%	32	43
Route 1 on Telegraph Avenue at 24th Street	Southbound	47	20.5	44%	44	94%	97	54
	Northbound		23.7	50%	53	113%	60	87
Route 1 on Telegraph Avenue at 27th Street	Southbound	47	19.8	42%	44	94%	40	39
	Northbound		23.6	50%	54	115%	29	39
Route 1 on Telegraph Avenue at 29th/30th Street	Southbound	47	19.8	42%	44	94%	101	37
	Northbound		22.9	49%	50	106%	22	62
Route 1 on Telegraph Avenue at 31st/32nd Street	Southbound	47	18.8	40%	42	89%	12	15
	Northbound		23.6	50%	54	115%	29	39
Route 1 on Telegraph Avenue at 34th Street	Southbound	47	18.8	40%	42	89%	37	23
	Northbound		23.7	50%	53	113%	60	87
Route 1 on Telegraph Avenue at 36th Street	Southbound	47	18.6	40%	41	87%	27	7
	Northbound		24.1	51%	53	113%	32	43
Route 1R on Telegraph Avenue at 24th Street	Southbound	47	23.1	49%	45	96%	156	74
	Northbound		24.7	53%	62	132%	82	157
Route 1R on Telegraph Avenue at 30th/31st Street	Southbound	47	21.9	47%	44	94%	176	81
	Northbound		23.8	51%	59	126%	105	160
Route 11 on Harrison Street at West Lake Middle School/Bay Place	Eastbound	40	12.3	31%	24	60%	30	3
	Westbound		12.4	31%	35	88%	6	30
Route 12 on West Grand Avenue at Broadway	Eastbound	25	10.9	44%	19	76%	9	3
	Westbound		11.9	48%	24	96%	9	32
Route 12 on West Grand Avenue at Webster Street	Eastbound	25	11.5	46%	20	80%	25	3
	Westbound		12.5	50%	24	96%	3	19
Route 12 on West Grand Avenue at Harrison Street	Eastbound	25	11.7	47%	20	80%	20	12
	Westbound		12.9	52%	25	100%	19	28
Route 51A on Broadway at West Grand Avenue	Southbound	32	15.0	47%	37	116%	101	73
	Northbound		18.2	57%	53	166%	73	89
Route 51A on Broadway at 25th Street	Southbound	32	14.6	46%	37	116%	45	34
	Northbound		18.1	57%	53	166%	28	40
Route 51A on Broadway at 28th Street	Southbound	32	14.6	46%	37	116%	277	53
	Northbound		16.4	51%	53	166%	55	215
Route 51A on Broadway at 29th/30th Street	Southbound	32	12.3	38%	34	106%	76	47
	Northbound		15.5	48%	53	166%	67	158
Route 51A on Broadway at Piedmont Avenue	Southbound	32	12.0	38%	35	109%	71	21
	Northbound		14.8	46%	53	166%	20	93

TABLE 4.13-2 (Continued)
AC TRANSIT BOARDINGS AND ALIGHTINGS (Weekday)

Bus Route and Stop Location	Direction	Average Capacity (Seats)	Average Load (Passengers) ^a	Average Load Factor ^b	Maximum Load (Passengers) ^c	Maximum Load Factor ^d	Boardings (Ons) ^e	Alightings (Offs) ^f
Route 800 on Telegraph Avenue at 24th Street	Southbound	40	8.5	21%	12	30%	0	2
	Northbound		15.2	38%	26	65%	1	4
Route 800 on Telegraph Avenue at 27th Street	Southbound	40	8.9	22%	14	35%	0	1
	Northbound		15.2	38%	26	65%	1	1
Route 800 on Telegraph Avenue at 29th/30th Street	Southbound	40	9.1	23%	14	35%	3	0
	Northbound		14.9	37%	26	65%	1	2
Route 800 on Telegraph Avenue at 31st/32nd Street	Southbound	40	8.6	22%	14	35%	0	1
	Northbound		15.7	39%	26	65%	2	0
Route 800 on Telegraph Avenue at 34th Street	Southbound	40	8.7	22%	15	38%	0	1
	Northbound		15.6	39%	26	65%	1	1
Route 851 on Broadway at 25th Street	Southbound	40	4.0	10%	7	18%	0	0
	Northbound		6.3	16%	11	28%	0	0
Route 851 on Broadway at 28th Street	Southbound	40	4.0	10%	7	18%	0	1
	Northbound		6.1	15%	11	28%	0	1
Route 851 on Broadway at 29th/30th Street	Southbound	40	4.1	10%	7	18%	0	1
	Northbound		5.9	15%	10	25%	1	2
Route 851 on Broadway at Piedmont Avenue	Southbound	40	4.1	10%	7	18%	0	0
	Northbound		5.8	15%	10	25%	0	1

- ^a Number of passengers on the bus averaged on a typical weekday.
^b Average load divided by average seated capacity.
^c Maximum number of passengers on the bus observed on a typical weekday.
^d Maximum load divided by average seated capacity.
^e Total number of passengers boarding the bus at this location on a typical weekday.
^f Total number of passengers alighting the bus at this location on a typical weekday.

Bold indicates load factor above 100 percent.

SOURCE: Data collected in March 2012 through June 2012 and provided by AC Transit in August 2012.

Table 4.13-3 summarizes number of passengers using both 19th Street and MacArthur BART Stations. About 24,000 riders access the 19th Street Station, and about 19,000 riders access the MacArthur BART Station on a typical weekday.

The Richmond-Fremont, Richmond-Millbrae and Pittsburg/Bay Point-San Francisco International Airport (SFO) lines all provide service at the 19th Street and MacArthur BART Stations. Both stations are served by about 32 trains per hour during the peak periods. **Table 4.13-4** summarizes peak-hour loads near the Plan Area. Currently, the Pittsburg/Bay Point-Daily City route operates above BART's planning capacity, while the other routes operate below capacity.

**TABLE 4.13-3
BART STATION ENTRIES AND EXITS (Weekday)**

	AM Peak Hour (7:30 AM to 8:30 AM)	PM Peak Hour (5:00 PM to 6:00 PM)	Daily
19th Street BART Station			
Entries	930	2,370	11,850
Exits	2,340	990	12,000
Total ^a	3,270	3,360	23,850
MacArthur BART Station			
Entries	1,260	980	9,670
Exits	820	1,280	9,510
Total ^a	2,080	2,260	19,180

^a Does not include passengers transferring between lines at the platform level.

SOURCE: BART, October 2012.

**TABLE 4.13-4
BART PEAK-HOUR LOADS BY LINE**

Line	Total Capacity (Passengers/Car)^a	Maximum Load Peak Hour	Maximum Load (Passengers/Car)	Load Factor
Pittsburg/Bay Point-Daly City	107	8:00 AM	114	1.07
Daly City-Pittsburg/Bay Point	107	4:00 PM	106	0.99
Colma/Daly City-Richmond	107	5:00 PM	99	0.93
Richmond-Daly City/ Colma	107	8:00 AM	101	0.96
Fremont-Richmond	107	5:00 PM	92	0.86
Richmond-Fremont	107	5:00 PM	58	0.54

Bold indicates maximum load above capacity.

^a BART defines total capacity to include 67 seated and 40 standing passengers.

SOURCE: September 2007 data provided by BART in January 2008.

Shuttle Service

The following shuttle services operate in or near the Plan Area:

- The Oakland Free Broadway shuttle (“Free B”) operates along Broadway between Jack London Square and Grand Avenue on weekdays and between Jack London Square and 27th Street on weekend nights. The free shuttle service connects the Valdez Triangle to Downtown Oakland, Jack London Square, and 12th and 19th BART Stations. About 2,000 rider use the “Free B” on typical weekdays (City of Oakland, 2011).
- The Alta Bates Summit Medical Center shuttle operates a free shuttle system between the MacArthur BART Station, the Alta Bates Berkeley campus and the various Alta Bates Summit campus buildings during weekday business hours. The shuttle system primarily serves Alta Bates staff, patients, and visitors, but can also be used by the general public.

- Kaiser Medical Center shuttle operates a free shuttle system between the MacArthur BART Station and the various Kaiser Medical Center buildings and parking facilities during the weekday business hours. The shuttle system primarily serves Kaiser staff, patients, and visitors, but can also be used by the general public.

Existing Bicycle Network

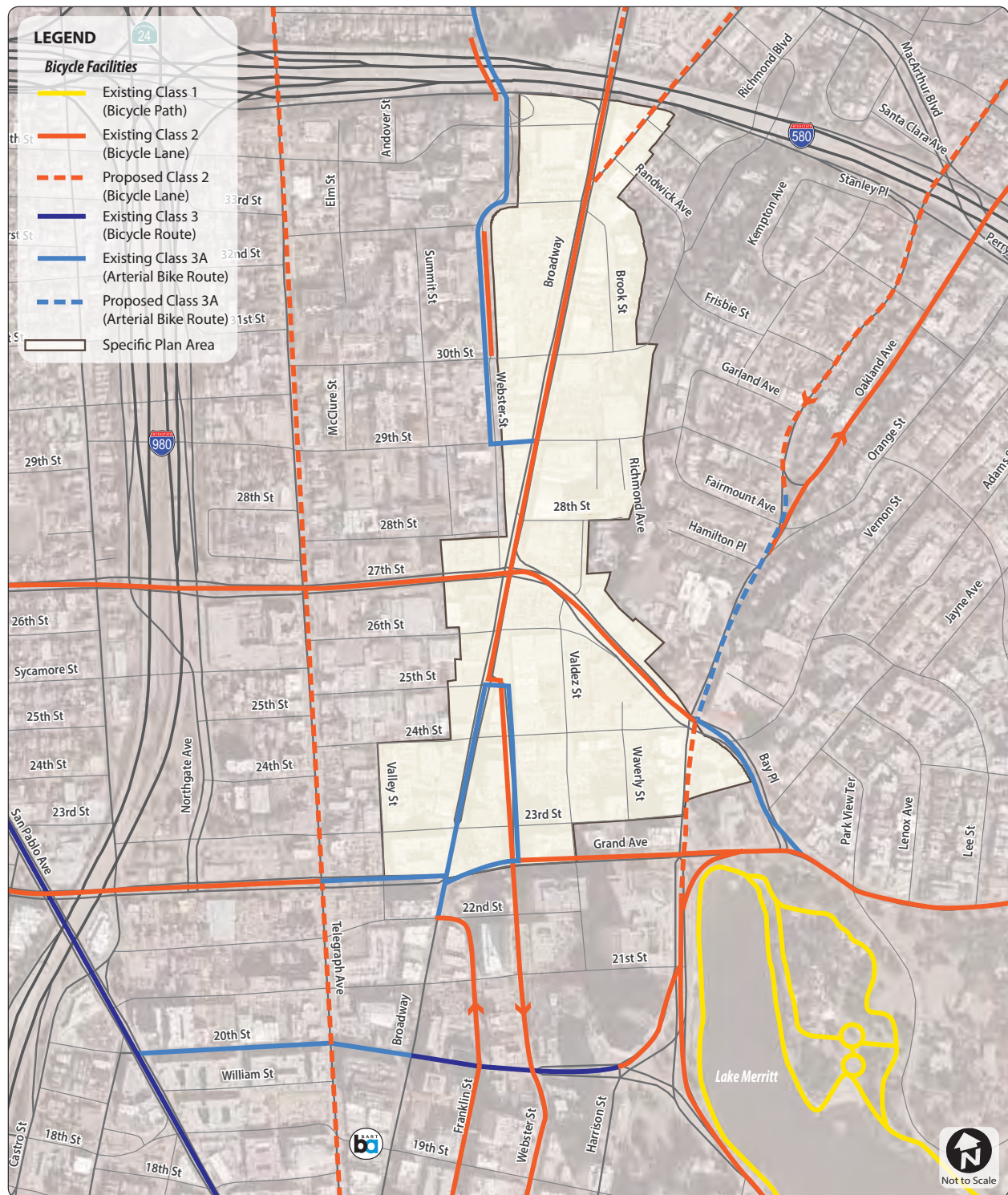
Bicycle and pedestrian facilities can be classified into several types, including:

- **Class 1 Paths.** These facilities are located off-street and can serve both bicyclists and pedestrians. Recreational trails can be considered Class 1 facilities. Class 1 paths are typically 8 to 10 feet wide excluding shoulders and are generally paved.
- **Class 2 Bicycle Lanes.** These facilities provide a dedicated area for bicyclists within the paved street width through the use of striping and appropriate signage. These facilities are typically 5 to 6 feet wide.
- **Class 3 Bicycle Routes.** These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is then designated as a bicycle route through the use of signage informing drivers to expect bicyclists.
 - **Class 3A Arterial Bicycle Routes** – These facilities are found along some arterial streets where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity. Speed limits as low as 25 miles per hour (mph), shared lane bicycle stencils, wide curb lanes, and signage are used to encourage shared use.
 - **Class 3B Bicycle Boulevards** – These facilities are found along residential streets with low traffic volumes. Assignment of right-of-way to the route, traffic calming measures and bicycle traffic signal actuation are used to prioritize through-trips for bicycles.
- **Sidewalks.** The exclusive realm of pedestrians, sidewalks provide pedestrian access and circulation. Sidewalks can vary in width from about 5 to 20 feet; wider sidewalks are typically found in heavily urbanized and downtown areas.

Figure 4.13-3 shows the existing and planned bicycle facilities in the Plan Area and vicinity (based on the City of Oakland's 2007 *Bicycle Master Plan Update*). The majority of the planned bicycle network in the Plan Area and vicinity has been completed.

Class 2 bicycle lanes on Broadway serve as the primary north-south bicycle connection, and Class 2 bicycle lanes on 27th Street and Grand Avenue serve as the primary east-west bicycle connections in the Plan Area. In addition, Webster Street is designated as a Class 3A Arterial Bicycle Route south of Broadway (Webster Street and Franklin Street form a one-way couplet south of Grand Avenue and provide the primary bicycle access to and from Downtown Oakland) and Class 3B Bicycle Boulevard north of 29th Street. Class 2 bicycle lanes on Broadway and Class 3B facilities on 29th Street connect the two segments of Webster Street.

Major bicycle facilities in the Plan Area and surrounding areas that need to be completed include Class 2 bicycle lanes on Piedmont Avenue north of Broadway and on Broadway north of I-580, and a combination of Class 2 bicycle lanes and Class 3A arterial bicycle route on Harrison Street.



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-3
Existing and Proposed Bicycle Facilities

Existing Pedestrian Network

The City of Oakland's *Pedestrian Master Plan* (November 2002) designates Broadway and Grand and Telegraph Avenues as City Routes, 27th Street and Piedmont Avenue as District Routes, and Webster and 29th Streets as Neighborhood Routes. The *Pedestrian Master Plan* states the following about these types of routes:

“City routes designate streets that are destinations in themselves – places to live, work, shop, socialize and travel. They provide the most direct connections between walking and transit and connect multiple districts in the City.”

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

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

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Sidewalks are provided on both sides of all streets, except one segment, in the Plan Area. Webster Street under I-580 is the only street segment in the Plan Area that provides a sidewalk only on one side of the street. Sidewalks are typically 10 feet wide along Broadway, but can vary in width from 6 feet on a segment of Valdez Street and 24th Street to 15 feet along segments of Brook Street or 23rd Street.

Signalized intersections in the Plan Area provide striped crosswalks along with pedestrian signal heads, audible signals, and pedestrian push buttons on some approaches. Unsignalized intersections along arterials in the Plan Area provide striped crosswalks across some approaches.

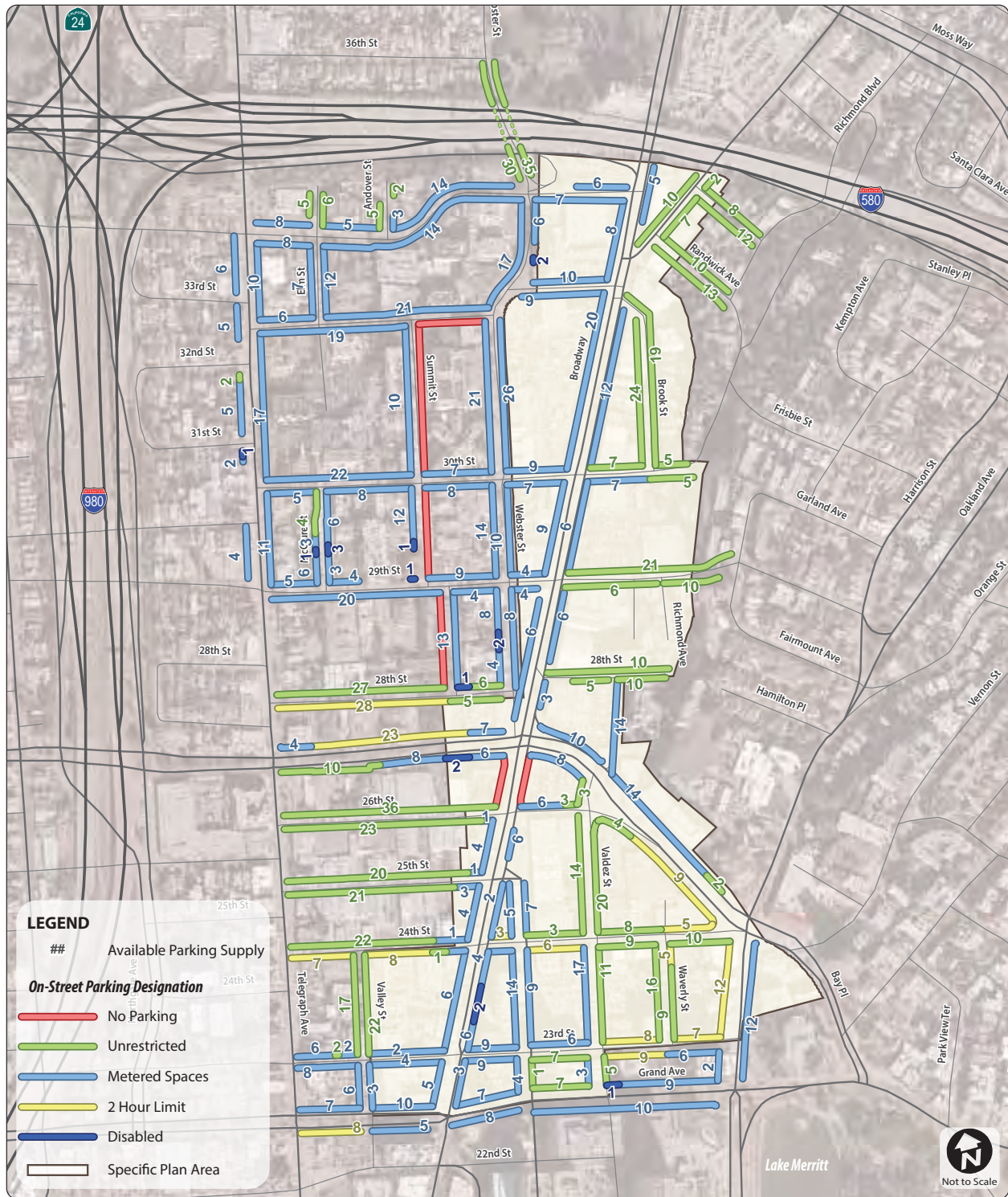
Marked crosswalks are also provided on at least one approach of unsignalized intersection along Broadway, 27th Street, and Harrison Street in the Plan Area. In addition, high visibility uncontrolled crosswalks (i.e., “ladder crossing”) are provided across Broadway at 23rd Street and mid-block between Hawthorne Street and 30th Street. However, intersections of two local streets, such as Brook Street/30th Street and Waverly Street/24th Street intersections, occasionally provide marked crosswalks.

Existing Parking Conditions

Data was collected to assess current on-street and off-street parking conditions in the Plan Area. **Figure 4.13-4A** shows the on-street parking designation and supply within the Plan Area and surroundings; **Figure 4.13-4B** shows the publicly available major off-street parking facilities in the Plan Area and vicinity. Both on-street and off-street parking conditions are described below:

On-Street Parking

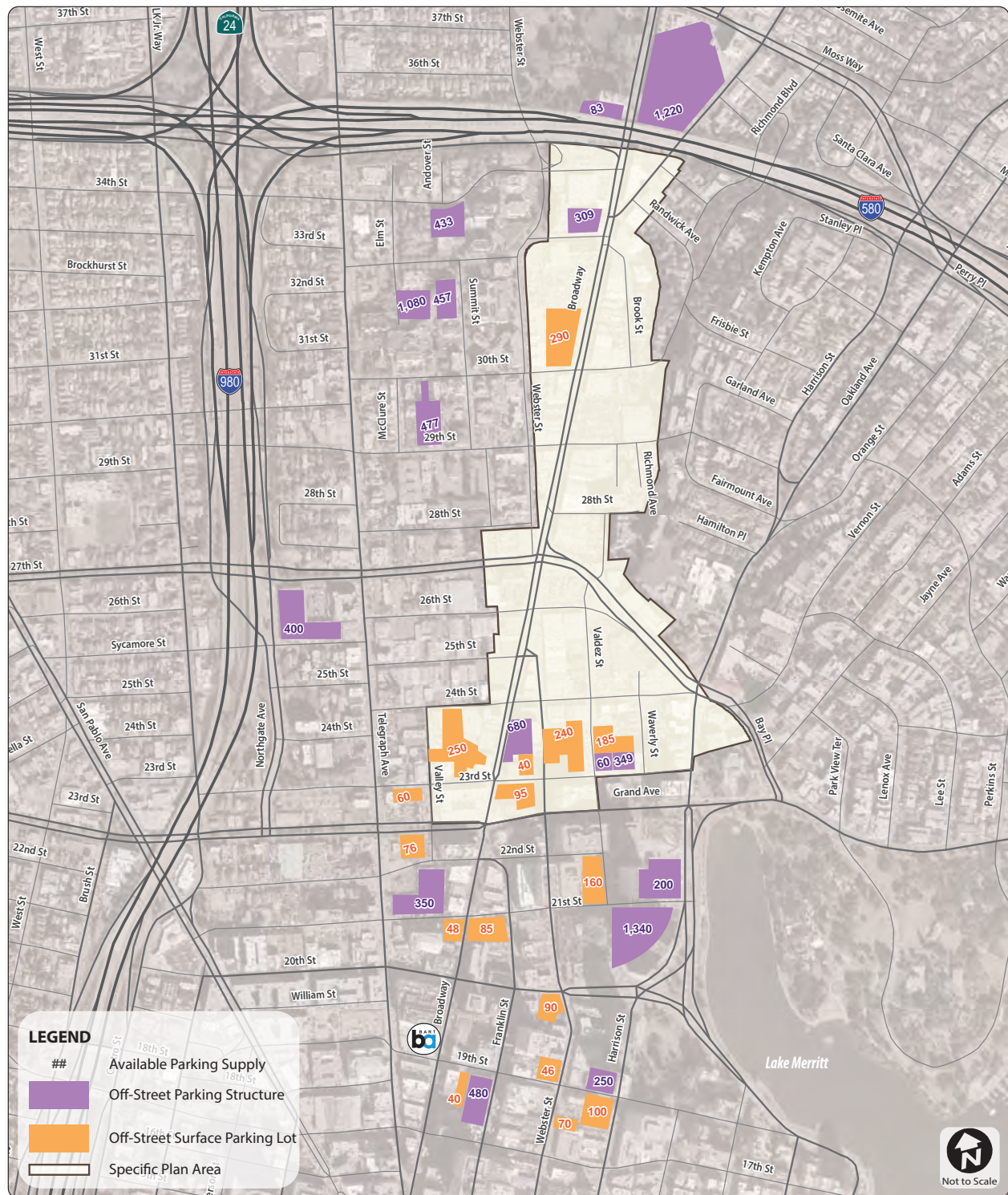
Nearly all the streets within the Plan Area provide some form of on-street parking. About 800 on-street parking spaces are within the Plan Area boundaries. On-street parking in the Plan Area can be classified into the following categories:



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-4a
Existing On-Street Parking Supply



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-4b
Existing Off-Street Parking Supply

- ***Metered Spaces*** are located along the major arterials, such as Broadway and 27th Street and surrounding the Alta Bates Summit Medical Center. Nearly all metered spaces have a two-hour time limit. The individual parking meters at many of the metered parking spaces have been replaced by parking pay stations that typically serve larger areas. The approximately 400 metered spaces in the Plan Area have an overall occupancy of about 70 to 80 percent during weekday afternoons.
- ***Time-Restricted*** free parking spaces are scattered throughout the Valdez subarea. All time-restrictive parking spaces in the Plan Area have a posted limit of two hours. Approximately 70 time-restricted spaces are located in the Plan Area with typical occupancy of about 80 to 85 percent during weekday afternoons.
- ***Unrestricted Parking*** is parking that is free year-round and has no time limits. Unrestricted parking is located along the majority of the side streets to the east and west of Broadway, with the exception of the area surrounding the Alta Bates Summit Medical Center. The Plan Area provides about 330 unrestricted on-street parking spaces with typical weekday afternoon parking occupancy of over 90 percent.
- ***Disabled Spaces*** are identified with a painted blue curb and handicap sign. A total of 6 disabled parking spaces are provided along major thoroughfares and near the major medical facilities.

Off-Street Parking

About 2,500 off-street parking spaces open to the general public are provided within the Plan Area boundaries, with about 1,400 spaces in public garages and about 1,100 spaces in surface lots. These facilities either charge an hourly rate and/or require purchase of a monthly pass.

About 1,900 spaces are in the Valdez subarea. Parking facilities in the Valdez subarea generally operate with excess capacity with typical occupancies between 50 and 70 percent on weekdays. Although, parking facilities near the south end of the Valdez subarea operate with higher parking occupancies.

About 600 parking spaces are provided in the North End subarea. Parking facility occupancies in the North End subarea are higher than the in the Valdez subarea, with most facilities operating at or near capacity on weekday afternoons.

In addition, the following off-street parking facilities are also available in the vicinity of the Plan Area:

- The Alta Bates and Kaiser Medical Centers provide more than 3,700 parking spaces in various garages near the North End subdistrict. These facilities are operated by the medical centers for their employees and patients/visitors; however, most garages are open to the general public for a fee. The medical center garages generally operate at or near capacity during weekday business hours.
- Northern portions of Downtown Oakland provide more than 2,600 spaces in parking garages and more than 700 spaces in surface parking lots.

Existing Traffic Conditions

New traffic data was collected in June 2012 at three major intersections in the Plan Area vicinity. In comparison to traffic volume data collected in association with separate projects in 2007/2008, the new 2012 volumes were generally lower (see Appendix G.B for more detail). Therefore, this analysis uses the previously-collected intersection traffic counts in 2008 through 2010 where available because it would yield more conservative results.

In June and November 2012 on sunny days while area schools were in normal session, weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak period intersection traffic counts (vehicle turning movements, as well as pedestrian and bicycle volumes) were conducted at the study intersections that did not have previous data available (Table 4.13-6, under Existing Intersection Operations, below, indicates the data collection date for all study intersections and Appendix G.C presents the traffic counts at the study intersections). Saturday peak period (12:00 PM to 4:00 PM) traffic counts were conducted at all the study intersections in November 2012. For each intersection, the single hour with the highest traffic volumes during each of the three count periods was identified as the “peak hour” and used as the basis for the intersection operational analysis.

Appendix G.D presents the weekday AM and PM and Saturday peak-hour volumes, as well as the existing intersection lane configurations and traffic control devices, and existing pedestrian and bicycle volumes for all study intersections (Figures C-1, C-2, and C-3, respectively). Traffic signal timing data for all of the signalized study intersections was obtained from the City of Oakland Transportation Services Division.

Analysis Methods

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

Signalized Intersections

Signalized intersection operations are evaluated using methods provided in the 2000 *Highway Capacity Manual* (HCM), published by the Transportation Research Board (TRB, 2000), and the Synchro traffic analysis software program. These methods evaluate average control delays and then assign an LOS. Control delay is defined as the delay associated with deceleration, stopping, moving up in the queue, and acceleration experienced by drivers at an intersection. **Table 4.13-5** provides description of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

Unsignalized intersection LOS is also analyzed using the 2000 HCM and Synchro software. Delay is calculated for movements that are controlled by a stop sign or that must yield the right-of-way. The movement or approach with the highest delay is reported. The LOS ranges for unsignalized

**TABLE 4.13-5
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE**

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

SOURCE: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, 2000.

intersections are shown in Table 4.13-5. They are lower than the delay ranges for signalized intersections because drivers will tolerate more delay at signals.

Existing Intersection Operations

Existing operations were evaluated for the weekday PM and Saturday peak hours at all study intersections and for weekday AM peak hour at select study intersections. The existing vehicle, bicycle, and pedestrian volumes were used with the existing lane configurations and signal timing

parameters as inputs into the LOS calculations to evaluate current operations. **Table 4.13-6** summarizes the intersection analysis results. Appendix G.E provides the detailed intersection LOS calculation worksheets.

Most study intersections currently operate at acceptable LOS. The following two intersections currently experience unacceptable LOS during one or more peak hours. Both intersections are located in Downtown Oakland or provide direct access to Downtown Oakland where LOS E is the LOS standard.

39. 23rd Street/Broadway operates at LOS F during the PM peak hour on the eastbound side-street stop-controlled approach. This intersection currently does not meet the peak-hour volume signal warrant (per *California Manual on Uniform Traffic Control Devices* [Caltrans, 2012b]).
44. West Grand Avenue/Brush Street operates at an overall LOS D during the weekday PM peak hour and LOS A during the Saturday peak hour. Additionally, the southbound side-street stop-controlled approach operates at LOS F during both peak hours. The intersection currently meets the peak-hour volume signal warrant. Signalization of the intersection is currently under design and expected to be completed in 2013.

Alameda County Transportation Commission (ACTC) Analysis of Existing Conditions

The ACTC conducts periodic monitoring of the freeways and major roadways in Alameda County. The most recent *Level of Service Monitoring on the Congestion Management Program Roadway Network* was released in January 2013 (ACTC, 2013). The ACTC monitoring report assesses existing freeway operations through “floating car” travel time surveys, which are conducted on all freeway segments during the evening peak hours (4:00 PM to 6:00 PM), and on selected freeway segments during the morning peak hours (7:00 AM to 9:00 AM). Based on the results of these surveys, ACTC assigns a LOS grade to each segment according to the method described in the 1985 HCM. Any segment with an average speed less than 30 miles per hour is assigned LOS F. Freeway interchanges with speeds below 50 percent of free flow speed are assigned LOS F. The travel time surveys concluded that 27 freeway segments, 11 arterial segments and one freeway-to-freeway connectors within Alameda County operate at LOS F during the PM peak hours, including the following nine freeway segments in the Plan Area vicinity:

- I-80 eastbound: Toll Plaza to I-580
- I-580 eastbound: I-80 to I-980 (grandfathered segment)
- I-580 westbound: SR 24 to I-880
- I-880 northbound: between I-80 Ramps
- SR 13 northbound: Moraga Avenue to Hiller Drive
- SR 13 southbound: Redwood Road to I-580
- SR 24 eastbound: I-580 to Broadway/SR 13 (grandfathered segment)
- SR 24 eastbound: Broadway/SR 13 to Caldecott Tunnel (grandfathered segment)
- SR 13/SR 24 Interchange

**TABLE 4.13-6
EXISTING INTERSECTION LOS SUMMARY**

Intersection		Traffic Control ^a	Peak Hour	Count Date	Delay ^b	LOS ^c
1	SR 24 Eastbound Off-Ramp/ Aileen Street/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	11.5	B
			SAT	Nov. 10, 2012	10.7	B
2	SR 24 Westbound On-Ramp/ 56th Street/ Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	20.4	C
			SAT	Nov. 10, 2012	12.9	B
3	Broadway Terrace/Broadway	Signal	AM	N/A	N/A	N/A
			PM	May 12, 2010	9.2	A
			SAT	Oct. 27, 2012	12.2	B
4	College Avenue/Broadway	Signal	AM	N/A	N/A	N/A
			PM	May 12, 2010	11.6	B
			SAT	Oct. 27, 2012	9.9	A
5	Claremont Avenue/52nd Street/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	13.7	B
			SAT	Nov. 10, 2012	14.1	B
6	51st Street/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	42.0	D
			SAT	Oct. 27, 2012	36.7	D
7	51st Street/Pleasant Valley Avenue/ Broadway	Signal	AM	Nov. 16, 2008	34.4	C
			PM	May 12, 2010	49.6	D
			SAT	Oct. 27, 2012	47.3	D
8	40th Street/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	31.9	C
			SAT	Nov. 10, 2012	22.5	C
9	40th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	22.9	C
			SAT	Oct. 27, 2012	14.1	B
10*	West MacArthur Boulevard/ Market Street	Signal	AM	May 19, 2009	15.9	B
			PM	May 19, 2009	15.2	B
			SAT	Dec. 1, 2012	12.4	B
11	West MacArthur Boulevard/ Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	12.5	B
			SAT	Nov. 10, 2012	12.8	B
12	MacArthur Boulevard /Broadway	Signal	AM	N/A	N/A	N/A
			PM	Nov. 11, 2008	38.8	D
			SAT	Oct. 27, 2012	44.0	D
13*	MacArthur Boulevard/Piedmont Avenue	Signal	AM	Nov. 11, 2008	31.1	C
			PM	Nov. 11, 2008	37.4	D
			SAT	Dec. 1, 2012	28.2	C
14	Santa Clara Avenue /Harrison Street	Signal	AM	Nov. 11, 2008	13.1	B
			PM	Nov. 11, 2008	22.0	C
			SAT	Nov. 10, 2012	13.8	B
15	Perry Place/I-580 Eastbound Ramps/Oakland Avenue	Signal	AM	Nov. 11, 2008	20.1	C
			PM	Nov. 11, 2008	73.2	E
			SAT	Nov. 10, 2012	21.1	C
16	Grand Avenue/Lake Park Avenue/ Santa Clara Avenue	Signal	AM	N/A	N/A	N/A
			PM	Oct. 14, 2010	23.4	C
			SAT	Nov. 10, 2012	29.1	C

TABLE 4.13-6 (Continued)
EXISTING INTERSECTION LOS SUMMARY

	Intersection	Traffic Control ^a	Peak Hour	Count Date	Delay ^b	LOS ^c
17	Lake Park Avenue/Lakeshore Avenue	Signal	AM	N/A	N/A	N/A
			PM	Oct. 14, 2010	55.6	E
			SAT	Nov. 10, 2012	46.7	D
18	Grand Avenue/MacArthur Boulevard	Signal	AM	N/A	N/A	N/A
			PM	Nov. 6, 2008	22.9	C
			SAT	Nov. 10, 2012	48.2	D
19	MacArthur Boulevard/I-580 Eastbound On-ramp/Lakeshore Avenue	Signal	AM	Nov. 12, 2008	29.3	C
			PM	Nov. 6, 2008	20.2	C
			SAT	Nov. 10, 2012	18.5	B
20 & 21	Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway	Signal	AM	Mar. 19, 2009	17.2	B
			PM	Mar. 19, 2009	16.9	B
			SAT	Nov. 10, 2012	16.3	B
22	Hawthorne Avenue/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 13, 2008	11.3	B
			SAT	Nov. 10, 2012	4.4	A
23	30th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Mar. 19, 2009	13.1	B
			SAT	Dec. 1, 2012	7.9	A
24	29th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Mar. 19, 2009	13.3	B
			SAT	Nov. 10, 2012	12.1	B
25	27th Street/San Pablo Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 8, 2012	8.7	A
			SAT	Nov. 10, 2012	9.6	A
26	27th Street/Martin Luther King Way	Signal	AM	N/A	N/A	N/A
			PM	Nov. 8, 2012	15.7	B
			SAT	Nov. 10, 2012	10.9	B
27	27th Street/I-980 Westbound Off-Ramp/Northgate Avenue	Signal	AM	Nov. 6, 2008	13.0	B
			PM	Nov. 6, 2008	17.8	B
			SAT	Nov. 10, 2012	11.3	B
28	27th Street/I-980 Eastbound On-Ramp/Northgate Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 6, 2008	21.9	C
			SAT	Nov. 10, 2012	14.9	B
29	27th Street/Telegraph Avenue	Signal	AM	Nov. 6, 2008	22.0	C
			PM	Nov. 6, 2008	22.9	C
			SAT	Nov. 10, 2012	16.7	B
30	27th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Mar. 19, 2009	18.5	B
			SAT	Nov. 10, 2012	17.6	B
31*	26th Street/27th Street/Valdez Street	Signal	AM	N/A	N/A	N/A
			PM	Mar. 19, 2009	18.2	B
			SAT	Nov. 10, 2012	14.2	B
32	26th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Mar. 19, 2009	11.4	B
			SAT	Nov. 10, 2012	12.8	B
33	25th Street/Telegraph Avenue	SSSC	AM	N/A	-N/A	N/A
			PM	Nov. 8, 2012	0.8 (15.7)	A (C)
			SAT	Nov. 10, 2012	0.9 (13.9)	A (B)
34	25th Street/Webster Street/Broadway	Signal	AM	Nov. 8, 2012	12.7	B
			PM	Nov. 8, 2012	11.2	B
			SAT	Nov. 10, 2012	8.3	A

TABLE 4.13-6 (Continued)
EXISTING INTERSECTION LOS SUMMARY

Intersection		Traffic Control ^a	Peak Hour	Count Date	Delay ^b	LOS ^c
35	24th Street/Telegraph Avenue	SSSC	AM	N/A	N/A	N/A
			PM	June 5, 2012	1.4 (18.8)	A (C)
			SAT	Nov. 10, 2012	1.7 (14.4)	A (B)
36	24th Street/Broadway	SSSC	AM	N/A	N/A	N/A
			PM	June 5, 2012	2.6 (31.3)	A (D)
			SAT	Nov. 10, 2012	2.0 (19.2)	A (C)
37	27th Street/24th Street/ Bay Place/Harrison Street	Signal	AM	Aug. 7, 2008	56.1	E
			PM	Nov. 20, 2008	60.3	E
			SAT	Nov. 10, 2012	52.8	D
38	23rd Street/Telegraph Avenue	SSSC	AM	N/A	N/A	N/A
			PM	June 5, 2012	3.1 (35.0)	A (D)
			SAT	Nov. 10, 2012	1.4 (20.8)	A (C)
39	23rd Street/Broadway	SSSC	AM	N/A	N/A	N/A
			PM	June 5, 2012	4.4 (52.9)	A (F)
			SAT	Nov. 10, 2012	1.2 (13.3)	A (B)
40	23rd Street/Harrison Street	SSSC	AM	N/A	N/A	N/A
			PM	Nov. 8, 2012	0.9 (11.6)	A (B)
			SAT	Nov. 10, 2012	0.6 (10.8)	A (B)
41	West Grand Avenue/Mandela Parkway	Signal	AM	N/A	N/A	N/A
			PM	2002	11.3	B
			SAT	Nov. 10, 2012	14.2	B
42	West Grand Avenue/Adeline Street	Signal	AM	N/A	N/A	N/A
			PM	Nov. 15, 2012	12.6	B
			SAT	Nov. 10, 2012	11.0	B
43	West Grand Avenue/Market Street	Signal	AM	Nov. 15, 2012	14.5	B
			PM	Nov. 15, 2012	19.9	B
			SAT	Nov. 10, 2012	25.3	C
44	West Grand Avenue/Brush Street	SSSC	AM	N/A	N/A	N/A
			PM	Mar. 10, 2009	26.8 (256.4)	D (F)
			SAT	Nov. 10, 2012	8.5 (50.2)	A (F)
45	West Grand Avenue/San Pablo Avenue	Signal	AM	N/A	N/A	N/A
			PM	Mar. 10, 2009	15.0	B
			SAT	Nov. 10, 2012	11.6	B
46	West Grand Avenue/ Martin Luther King Way	Signal	AM	N/A	N/A	N/A
			PM	Mar. 10, 2009	20.2	B
			SAT	Nov. 10, 2012	9.5	A
47	West Grand Avenue/Northgate Avenue	Signal	AM	N/A	N/A	N/A
			PM	Apr. 23, 2009	44.4	D
			SAT	Nov. 10, 2012	15.9	B
48	West Grand Avenue/Telegraph Avenue	Signal	AM	N/A	N/A	N/A
			PM	Nov. 6, 2008	19.6	B
			SAT	Nov. 10, 2012	16.6	B
49	Grand Avenue/Broadway	Signal	AM	Nov. 6, 2008	18.1	B
			PM	Nov. 6, 2008	18.5	B
			SAT	Nov. 10, 2012	13.4	B
50	Grand Avenue/Webster Street	Signal	AM	N/A	N/A	N/A
			PM	Aug. 6, 2008	18.8	B
			SAT	Nov. 10, 2012	20.5	C

TABLE 4.13-6 (Continued)
EXISTING INTERSECTION LOS SUMMARY

	Intersection	Traffic Control ^a	Peak Hour	Count Date	Delay ^b	LOS ^c
51	Grand Avenue/Valdez Street	Signal	AM	N/A	N/A	N/A
			PM	June 5, 2012	10.0	A
			SAT	Nov. 10, 2012	3.3	A
52	Grand Avenue/Harrison Street	Signal	AM	May 22, 2008	26.3	C
			PM	May 22, 2008	30.9	C
			SAT	Nov. 10, 2012	25.2	C
53	20th Street/Broadway	Signal	AM	N/A	N/A	N/A
			PM	May 22, 2008	12.1	B
			SAT	Nov. 10, 2012	11.3	B
54	18th Street/I-980 Westbound Off-Ramp/Brush Street	Signal	AM	N/A	N/A	N/A
			PM	Nov. 6, 2008	9.4	A
			SAT	Nov. 10, 2012	8.1	A
55	17th Street/I-980 Eastbound On-Ramp/Castro Street	Signal	AM	N/A	N/A	N/A
			PM	Nov. 6, 2008	28.7	C
			SAT	Nov. 10, 2012	23.4	C
56	6th Street/I-880 Northbound Off-Ramp/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Oct. 6, 2010	7.9	A
			SAT	Nov. 10, 2012	10.4	B
57	5th Street/I-880 Southbound On-Ramp/Broadway	Signal	AM	N/A	N/A	N/A
			PM	Oct. 6, 2010	33.6	C
			SAT	Nov. 10, 2012	23.4	C

- ^a Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;
^b For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)
^c Intersections operating at unacceptable levels are shown in **bold**.
- * Denotes an intersection not located in Downtown or that does not provide direct access to Downtown where LOS E (not LOS D) is the LOS standard.

SOURCE: Fehr & Peers, 2013.

Three of these segments operated at LOS F during the initial ACTC data collection effort in 1991, and are therefore “grandfathered,” meaning that they are exempt from LOS standards. The other segments are not exempt meaning that they operate at unacceptable conditions based on ACTC standards. The evaluation of the Project impacts on the ACTC freeway and roadway segments are presented starting on page 4.13-88.

Planned Transportation Network Changes

A review of the available information indicates that several changes are planned for the various transportation modes in the Plan Area and vicinity, as described below. However, not all of these changes have finalized design plans, full approvals, and/or funding. Changes lacking final design, full approval, and/or full funding are not considered reasonably foreseeable, are not available to mitigate any deficient conditions in the No Project conditions, and therefore are not assumed in the analysis.

Planned Roadway Changes

The planned roadway changes identified in the study area include:

- As part of the mitigation measure in the *Alta Bates Summit Medical Center Summit Campus Seismic Upgrade and Master Plan Project Draft EIR* (December 2009), the following improvements at the Grand Avenue/Brush Street intersection (Intersection #44) are currently fully funded, under design and expected to be implemented in 2013:
 - Signalize intersection and coordinate timing with existing signal at Grand Avenue/San Pablo Avenue intersection.
 - Provide a left-turn lane on westbound Grand Avenue
 - Convert the segment of Brush Street between San Pablo and Grand Avenue to one-way southbound operations and prohibit the eastbound left-turn and westbound right-turn movements at the intersection.

This improvement is expected to be completed prior to approval of the Specific Plan. Therefore it is assumed in the Existing Plus Project analysis and also in the analyses of 2020 and 2035 conditions.

- City of Oakland is currently planning the following improvements at the Grand Avenue/San Pablo Avenue intersection (Intersection #45) which are currently fully funded, approved, under design, and expected to be implemented in 2014:
 - Provide a left-turn lane on eastbound Grand Avenue
 - Remove the channelized eastbound right-turn lane on Grand Avenue
 - Upgrade signal equipment to provide protected left-turn phasing on all intersection approaches.

This improvement is expected to be completed prior to approval of the Specific Plan. Therefore it is assumed in the Existing Plus Project analysis and also in the analyses of 2020 and 2035 conditions.

- As part of the mitigation measures recommended in the *Kaiser Oakland Medical Center Master Plan Draft EIR* (February 2006), the following improvements are currently fully funded, under design and expected to be implemented in 2014; therefore, they are assumed in the 2020 and 2035 analyses:
 - West MacArthur Boulevard/Broadway intersection (Intersection #12):
 - Modify westbound approach from the current configuration which provides one right-turn lane, two through lanes, and one left-turn lane to provide one shared through/right lane, two through lanes, and one left-turn lane.
 - Modify northbound approach from the current configuration which provides one shared through/right lane, one through lane, and one left-turn lane to provide one right-turn lane, two through lanes, and one left-turn lane.
 - Optimize signal timing at this intersection, and coordinate signal timing changes with the adjacent intersections that are in the same signal coordination group.
 - MacArthur Boulevard/Piedmont Avenue intersection (Intersection #13):

- Provide an additional through lane on the eastbound MacArthur Boulevard approach (temporary closed for construction).
- Modify northbound approach from the current configuration which provides one right-turn lane and one shared through/left lane to provide one right-turn lane, one through lane, and one left-turn lane.
- Upgrade intersection signal equipment, optimize signal timing at this intersection, and coordinate signal timing changes with the adjacent intersections that are in the same signal coordination group.

In addition, the following planned major improvements do not have finalized design plans, approvals, or full funding; thus, this EIR does not include these roadway changes as part of the analysis:

- The City of Alameda is planning improvements to the I-880/Broadway-Jackson Interchange to improve direct access to I-880 from the Posey/Webster Tubes. The design of this project has not been finalized.
- The proposed Safeway Redevelopment Project Broadway at Pleasant Valley Avenue (Draft EIR published in January 2013) proposes the following modifications at the Broadway / 51st Street / Pleasant Valley Avenue (Intersection #7)
 - Modify southbound approach to provide two left-turn lanes, one through lane, and one shared through/right lane.
 - Modify northbound approach to provide one left-turn lane, one through lane, and one shared through/right lane.
 - Upgrade signal equipment to replace the existing split phasing in the north/south direction with protected left turns.
 - Eliminate the existing northbound and southbound slip right-turn lanes and “pork chop” islands.

The Safeway Redevelopment Project has not been approved. Because there is no guarantee that these improvements would occur, this EIR does not assume these improvements in the analysis of future conditions.

- The City of Oakland finalized the Harrison Street/Oakland Avenue Community-Based Transportation Plan (CBTP) in 2010. The Plan recommended improvements on the Harrison Street/Oakland Avenue couplet between Grand Avenue and Monte Vista Avenue to improve access for all modes. The recommended improvements include the following at the 27th Street/24th Street/Bay Place/Harrison Street intersection:
 - Partial closure of the 24th Street approach to allow only right-turning traffic from southbound 27th Street to enter.
 - Removal of the existing “pork chop” island and the slip right-turn lane from southbound Harrison Street to 27th Street
 - Realignment of pedestrian crosswalks and shortening of pedestrian walking distances, which allows more efficient operations of the traffic signal at the intersection.

The recommendations in the Harrison Street/Oakland Avenue CBTP do not have funding; therefore, this EIR does not assume these improvements in the analysis of future conditions.

Planned Transit Changes

AC Transit is currently planning the Route 51 Transit Performance Initiative which will consist of improvements along Broadway to increase bus travel speeds. These improvements may include traffic signal coordination, transit priority at traffic signals, relocation of bus stops, providing bus bulbouts, left or right turn lanes, and/or queue jump lanes. The project has full funding and is expected to be completed in 2014. However, the specific improvements and the exact locations are not known at this time. Therefore, these improvements are not included in the analysis of 2020 and 2035 No Project conditions. However, some of these improvements are included as part of roadway modification proposed by the Broadway Valdez Specific Plan and are included in the project analysis for this EIR (See page 4.13-37 for more detail).

In 2012, AC Transit certified the *Environmental Impact Statement/Environmental Impact Report* for the implementation of Bus Rapid Transit (BRT) on Telegraph Avenue and International Boulevard connecting Berkeley, Oakland, and San Leandro. The proposed system would have dedicated one travel lane in each direction to bus operations only, allowing buses to provide a quicker and more reliable service than regular bus service today. AC Transit is proceeding with the segment of the project between Downtown Oakland and San Leandro. Currently, there are no plans to implement BRT along Telegraph Avenue. This EIR assumes that the BRT Project will be implemented; however, the BRT Project would not modify any of the study intersections.

The City of Oakland is currently investigating options for enhancing transit service along the Broadway corridor. One option under consideration is a streetcar operating on fixed rail in a shared lane with automobiles, buses and bicycles on Broadway between Jack London Square and 40th Street. The proposed Broadway cross-section in the Plan Area may need to be modified to accommodate streetcar tracks as part of a “complete street”. This project is currently in early planning stages. It has not been approved and does not have full funding. In addition, the specific street modifications are not known at this time. Therefore, this EIR assumes that this project would not be implemented in the study area.

Planned Bicycle/Pedestrian Changes

Planned bicycle facilities in the study area include:

- City of Oakland is currently designing Class 2 bicycle lanes on Broadway between 38th Street and SR 24. The project would accommodate the bicycle lanes by generally eliminating one travel lane in each direction of Broadway. The project is funded, the segment between 38th Street and Broadway Terrace has been approved, and it is expected to be implemented in 2013. Therefore, the improvement is assumed in the 2020 and 2035 analyses. The proposed improvement would result in the following street modification at the project study intersections:
 - College Avenue/Broadway intersection (Intersection #4) – Eliminate one through lane on the southbound Broadway approach.
 - 40th Street/Broadway intersection (Intersection #9) - Eliminate one through lane on the southbound Broadway approach.

- City of Oakland has completed the design for Class 2 bicycle lanes on Piedmont Avenue between Broadway and Pleasant Valley Avenue. This improvement is approved, fully funded, and scheduled to be completed in 2013. Therefore, it is assumed in the analysis of future conditions. However, this project would not modify the existing travel lane configurations or controls at any of the study intersections; it would not affect the intersection operations analysis.

The City of Oakland *Bicycle Master Plan Update*, as adopted in December 2007, proposes the following improvements to the bicycle facilities in the Plan Area and vicinity:

- Provide Class 2 bicycle lanes along Telegraph Avenue. Telegraph Avenue (Aileen Street to 20th Street) is provisionally designated as part of the proposed bikeway network. The provisional designation will only be lifted, and this segment automatically incorporated into the proposed bikeway network, if further environmental review is performed, and appropriate CEQA findings are adopted by the City.
- Provide a combination of Class 2 bicycle lanes and Class 3A arterial bike routes along Harrison Street.

Because these improvements are not currently planned for implementation, do not have finalized design plans, and are not fully funded; this EIR assumes that these changes will not be provided in the study area.

The Caldecott Tunnel Improvement Project Settlement Agreement

The Caldecott Tunnel Improvement Project Settlement Agreement provided funds to the Fourth Bore Coalition, and Cities of Oakland and Berkeley to ameliorate the impacts of adding a fourth bore to the Caldecott Tunnel in the greater community surrounding the SR 24 corridor between I-580 and Caldecott Tunnel, and improve pedestrian, bicycle, transit, and local circulation.

City of Oakland finalized and approved a list of 37 improvement projects in March 2011 based on public input and preliminary conceptual designs and cost estimates. The cost of all improvement projects in the City of Oakland's final project list exceeds the funding provided by the Settlement Agreement. Thus, the project list has been prioritized with 21 improvement projects expected to be funded. This EIR assumes that improvement projects expected to be funded that do not require approvals by other jurisdictions would be completed regardless of the Specific Plan and are included in the future conditions analyses. Out of the 37 improvement project approved in March 2011, three are located in the study area. Their current status are described below:

- SR 24 Westbound On-Ramp/56th Street/Telegraph Avenue intersection (intersection #2) – Reduce the westbound on-ramp approach to one lane with installation of a bulbout and upgrade traffic signal equipment at the intersection. This improvement is not currently one of the 21 improvement projects expected to be funded. Therefore, it is not included in the analysis of future conditions.
- Claremont Avenue /52nd Street/Telegraph Avenue intersection (Intersection #5) – Eliminate the slip right-turn lane from northbound Telegraph Avenue to Claremont Avenue, upgrade traffic signal control equipment to allow countdown pedestrian signal heads. This improvement is not currently one of the 21 improvement projects expected to be funded. Therefore, it is not included in the analysis of future conditions.

- Upgrade traffic signal equipment along Broadway between 40th Street and College Avenue to provide transit priority for AC Transit Route 51A buses. This improvement is not currently one of the 21 improvement projects expected to be funded at this time. Therefore, it is not included in the analysis of future conditions.

Local Plans and Policies

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

- General Plan LUTE
- City of Oakland Pedestrian Master Plan
- City of Oakland Bicycle Master Plan
- City of Oakland Public Transit and Alternative Modes Policy

City of Oakland General Plan LUTE

The City of Oakland, through various policy documents, states a strong preference for encouraging use of pedestrian, bicycle, and transit travel modes. The following policies are included in the LUTE:

LUTE Policy Framework: Encouraging Alternative Means of Transportation. “A key challenge for Oakland is to encourage commuters to carpool or use alternative modes of transportation, including bicycling or walking. The Policy Framework proposes that congestion be lessened by promoting alternative means of transportation, such as transit, biking, and walking, providing facilities that support alternative modes, and implementing street improvements. The City will continue to work closely with local and regional transit providers to increase accessibility to transit and improve intermodal transportation connections and facilities. Additionally, policies support the introduction of light rail and trolley buses along appropriate arterials in heavily traveled corridors, and expanded use of ferries in the bay and estuary.”

- **Policy T3.5, Including Bikeways and Pedestrian Walks:** The City should include bikeways and pedestrian walks in the planning of new, reconstructed, or realized streets, wherever possible.
- **Policy T3.6, Encouraging Transit.** The City should encourage and promote use of public transit in Oakland by expediting the movement of and access to transit vehicles on designated “transit streets” as shown on the Transportation Plan. (Policies T3.6 and T3.7 are based on the City Council’s passage of “Transit First” policy in October 1996.)
- **Policy T3.7, Resolving Transportation Conflicts.** The City, in constructing and maintaining its transportation infrastructure, should resolve any conflicts between public transit and single occupant vehicles in favor of the transportation mode that has the potential to provide the greatest mobility and access for people, rather than

vehicles, giving due consideration to the environmental, public safety, economic development, health and social equity impacts.

- ***Policy T4.1, Incorporating Design Features for Alternative Travel.*** The City will require new development, rebuilding, or retrofit to incorporate design features in their projects that encourage use of alternative modes of transportation such as transit, bicycling, and walking.

City of Oakland Pedestrian Master Plan

In November 2002, the *Pedestrian Master Plan* (PMP) was adopted by the City Council and incorporated into the adopted General Plan. The PMP identifies policies and implementation measures that promote a walkable City. In the study area, the PMP designates a Pedestrian Route Network throughout Oakland and identifies a “City Route” on Broadway, and Telegraph and Grand Avenues, a “District Route” on 27th Street and Piedmont Avenue, and a “Neighborhood Route” on Webster and 29th Streets.

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

- ***Policy 1.1. Crossing Safety:*** Improve pedestrian crossings in area of high pedestrian activity where safety is an issue.
 - Action 1.1.1.* Consider the full range of design elements – including bulbouts and refuge islands – to improve pedestrian safety.
- ***Policy 1.2: Traffic Signals:*** Use traffic signals and their associated features to improve pedestrian safety at dangerous intersections.
 - Action 1.2.7.* Consider using crossing enhancement technologies like countdown pedestrian signals at the highest pedestrian volume locations.
- ***Policy 1.3. Sidewalk Safety:*** Strive to maintain a complete sidewalk network free of broken or missing sidewalks or curb ramps.
 - Action 1.3.7.* Conduct a survey of all street intersections to identify corners with missing, damaged, or non-compliant curb ramps and create a plan for completing their installation.
- ***Policy 2.1: Route Network:*** Create and maintain a pedestrian route network that provides direct connections between activity centers.
 - Action 2.1.8.* To the maximum extent possible, make walkway accessible to people with physical disabilities.
- ***Policy 2.3: Safe Routes to Transit:*** Implement pedestrian improvements along major AC Transit lines and at BART stations to strengthen connections to transit.
 - Action 2.3.1:* Develop and implement street designs (like bus bulbouts) that improve pedestrian/bus connections.
 - Action 2.3.3:* Prioritize the implementation of street furniture (including bus shelters) at the most heavily used transit stops.

Action 2.3.4: Improve pedestrian wayfinding by providing local area maps and directional signage at major AC Transit stops and BART stations.

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

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

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

Action 3.2.4: Require contractors to provide safe, convenient, and accessible pedestrian rights-of-way along construction sites that require sidewalk closure.

Action 3.2.8: Discourage motor vehicle parking facilities that create blank walls, unscreened edges along sidewalks, and/or gaps between sidewalks and building entrances.

City of Oakland Bicycle Master Plan

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

- **Policy 1A: Bikeway Network:** Develop and improve Oakland’s bikeway network.

Action 1A.1 – Bicycle Lanes (Class 2): Install bicycle lanes where feasible as the preferred bikeway type for all streets on the proposed bikeway network (except for the bicycle boulevards proposed for local streets with low traffic volumes and speeds).

Action 1A.3 – Bicycle Boulevards (Class 3B): Enhance bicycle routes on local streets by developing bicycle boulevards with signage, striping, and intersection modifications to prioritize bicycle travel.

Action 1A.6 – Dedicated Right Turn Lanes and “Slip Turns”: Where feasible, avoid the use of dedicated right turn lanes on streets included in the bikeway network. Where infeasible, consider a bicycle through lane to the left of the turn lane or a combined bicycle lane/right turn lane.

- **Policy 1B: Routine Accommodation:** Address bicycle safety and access in the design and maintenance of all streets.

Action 1B.2 – Traffic Signals: Include bicycle-sensitive detectors, bicycle detector pavement markings, and adequate yellow time for cyclists with all new traffic signals and in the modernization of all existing signals.

- **Policy 1C – Safe Routes to Transit:** Improve bicycle access to transit, bicycle parking at transit facilities, and bicycle access on transit vehicles.

Action 1C.1 – Bikeways to Transit Stations: Prioritize bicycle access to major transit facilities from four directions, integrating bicycle access into the station design and connecting the station to the surrounding neighborhoods.

- **Policy 1D – Parking and Support Facilities:** Promote secure and conveniently located bicycle parking at destinations throughout Oakland.

Action 1D.6 – Bicycle Parking Ordinance: Adopt an ordinance as part of the City’s Planning Code that would require new development to include short and long-term bicycle parking.

Action 1D.7 – Development Incentives: Consider reduced automobile parking requirements in exchange for bicycle facilities as part of transportation demand management strategies in new development.

City of Oakland Public Transit and Alternative Modes Policy

The City of Oakland adopted the Public Transit and Alternative Modes Policy, also known as the “Transit-First Policy,” in October 2006 (City Council Resolution 73036 C.M.S.). This resolution supports public transit and other alternatives to single occupant vehicles, and directs the LUTE to incorporate “various methods of expediting transit services on designated streets, and encouraging greater transit use.” The resolution also directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment, public safety, economic development, health, and social equity impacts.

City of Oakland Complete Streets Policy

The City of Oakland adopted the Complete Street Policy to Further Ensure that Oakland Streets Provide Safe and Convenient Travel Options for all Users in January 2013 (City Council Resolution 84204 C.M.S.). This resolution, consistent with the California Complete Streets Act of 2008, directs the City of Oakland to plan, design, construct, operate, and maintain the street network in the City to accommodate safe, convenient, comfortable travel for all modes, including pedestrians, bicyclists, transit users, motorists, trucks, and emergency vehicles.

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

The City’s Standard Conditions of Approval (SCA) that directly pertain to transportation and circulation and that apply to the development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs will be adopted as conditions of approval and required, as applicable, of the development under the Specific Plan to help ensure no significant impacts. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

- **SCA 20: Improvements in the Public Right-of-Way (General)**

Approved prior to the issuance of a P-job or building permit

- a. The project applicant shall submit Public Improvement Plans to Building Services Division for adjacent public rights-of-way (ROW) showing all proposed improvements and compliance with the conditions and/or mitigations and City requirements including but not limited to curbs, gutters, sewer laterals, storm drains, street trees, paving details,

locations of transformers and other above ground utility structures, the design specifications and locations of facilities required by the East Bay Municipal Utility District (EBMUD), street lighting, on-street parking and accessibility improvements compliant with applicable standards and any other improvements or requirements for the project as provided for in this Approval. Encroachment permits shall be obtained as necessary for any applicable improvements- located within the public ROW.

- b. Review and confirmation of the street trees by the City's Tree Services Division is required as part of this condition and/or mitigations.
- c. The Planning and Zoning Division and the Public Works Agency will review and approve designs and specifications for the improvements. Improvements shall be completed prior to the issuance of the final building permit.
- d. The Fire Services Division will review and approve fire crew and apparatus access, water supply availability and distribution to current codes and standards.

- **SCA 21: Improvements in the Public Right-of-Way (Specific)**

Approved prior to the issuance of a grading or building permit. Final building and public improvement plans submitted to the Building Services Division shall include the following components:

- a. Install additional standard City of Oakland streetlights.
- b. Remove and replace any existing driveway that will not be used for access to the property with new concrete sidewalk, curb and gutter.
- c. Reconstruct drainage facility to current City standard.
- d. Provide separation between sanitary sewer and water lines to comply with current City of Oakland and Alameda Health Department standards.
- e. Construct wheelchair ramps that comply with Americans with Disabilities Act requirements and current City Standards.
- f. Remove and replace deficient concrete sidewalk, curb and gutter within property frontage.
- g. Provide adequate fire department access and water supply, including, but not limited to currently adopted fire codes and standards.

- **SCA 25: Parking and Transportation Demand Management**

This SCA would apply to development projects under the Specific Plan generating 50 or more net new AM or PM peak hour vehicle trips.

Prior to issuance of a final inspection of the building permit. The project applicant shall submit a Transportation and Parking Demand Management (TDM) for review and approval by the City. The intent of the TDM plan shall be to reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable consistent with the potential traffic and parking impacts of the project.

The goal of the TDM shall be to achieve the following project vehicle trip reductions (VTR):

- Projects generating 50 – 99 net new AM or PM peak hour vehicle trips: 10 percent VTR

- Projects generating 100 or more net new AM or PM peak hour vehicle trips:
20 percent VTR

The TDM plan shall include strategies to increase pedestrian, bicycle, transit, and carpool use, and reduce parking demand. All four modes of travel shall be considered, as appropriate. VTR strategies to consider include, but are not limited to, the following:

- a. Inclusion of additional long term and short term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan, and Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
- b. Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority Bikeway Projects, on-site signage and bike lane striping.
- c. Installation of safety elements per the Pedestrian Master Plan (such as cross walk striping, curb ramps, count-down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.
- d. Installation of amenities such as lighting, street trees, trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
- e. Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.
- f. Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).
- g. Provision of a transit subsidy to employees or residents, determined by the project sponsor and subject to review by the City, if the employees or residents use transit or commute by other alternative modes.
- h. Provision of an ongoing contribution to AC Transit service to the area between the development and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle or streetcar service; and 3) Establishment of new shuttle or streetcar service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario3).
- i. Guaranteed ride home program for employees, either through 511.org or through separate program.
- j. Pre-tax commuter benefits (commuter checks) for employees.
- k. Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.
- l. Onsite carpooling and/or vanpooling program that includes preferential (discounted or free) parking for carpools and vanpools.
- m. Distribution of information concerning alternative transportation options.

- n. Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
- o. Parking management strategies; including attendant/valet parking and shared parking spaces.
- p. Requiring tenants to provide opportunities and the ability to work off-site.
- q. Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).
- r. Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy proposed based on published research or guidelines. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

The project applicant shall implement the approved TDM Plan on an ongoing basis. For projects that generate 100 or more net new a.m. or p.m. peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

- **SCA 33: Construction Traffic and Parking**

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

- a. A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.

- b. Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.
- c. Location of construction staging areas for materials, equipment, and vehicles at an approved location.
- d. A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager. The manager shall determine the cause of the complaints and shall take prompt action to correct the problem. Planning and Zoning shall be informed who the Manager is prior to the issuance of the first permit issued by Building Services.
- e. Provision for accommodation of pedestrian flow.
- f. Provision for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces.
- g. Any damage to the street caused by heavy equipment, or as a result of this construction, shall be repaired, at the project sponsor's expense, within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to issuance of a final inspection of the building permit. All damage that is a threat to public health or safety shall be repaired immediately. The street shall be restored to its condition prior to the new construction as established by the City Building Inspector and/or photo documentation, at the project sponsor's expense, before the issuance of a Certificate of Occupancy.
- h. Any heavy equipment brought to the construction site shall be transported by truck, where feasible.
- i. No materials or equipment shall be stored on the traveled roadway at any time.
- j. Prior to construction, a portable toilet facility and a debris box shall be installed on the site, and properly maintained through project completion.
- k. All equipment shall be equipped with mufflers.
- l. Prior to the end of each work day during construction, the contractor or contractors shall pick up and properly dispose of all litter resulting from or related to the project, whether located on the property, within the public rights-of-way, or properties of adjacent or nearby neighbors.

4.13.2 Project Transportation Characteristics

Various characteristics of the Broadway Valdez District Specific Plan Project are described below.

Broadway Valdez Development Program

The Specific Plan is designed to encourage residential, retail, office, and mixed-use developments within the 96-acre Specific Plan Area in Oakland. The Broadway Valdez Development Program represents the *reasonable foreseeable maximum development* that the City has projected can reasonably be expected to occur in the Plan Area over the next 25 years, and is thus the level of development envisioned by the Specific Plan and analyzed in this EIR. In total, approximately 3.7 million square feet of development is envisioned, including 1,800 residential units, a new

180-room hotel, and 5,000 new jobs. It is difficult to project the exact location, amount, and type of development; however, the traffic impact analysis presented in this EIR requires assumptions about the location, amount and type of development. Thus, the Broadway Valdez Development Program does not assign land uses to individual parcels; rather, land uses are distributed to Subdistricts within the Plan Area. **Figure 4.13-5** shows the Subdistricts within the Plan Area and **Table 4.13-7** presents the likely developments expected in the Subdistricts for the years 2020 and 2035 for the purposes of this analysis.

**TABLE 4.13-7
BROADWAY VALDEZ DEVELOPMENT PROGRAM BY SUBDISTRICT**

Year/Subdistrict	Multi-Family Residential (DU)	Retail (KSF)	General. Office (KSF)	Medical Office (KSF)	Hotel (Rooms)
Year 2020					
Subdistrict 1	414	141.4	0	0	0
Subdistrict 2	236	255.5	0	0	0
Subdistrict 3	0	0	0	0	0
Subdistrict 4	0	0	0	0	0
Subdistrict 5	341	205.0	179.4	358.9	0
Year 2020 Total	991	601.9	179.4	358.9	0
Year 2035 (Buildout)					
Subdistrict 1	438	153.9	0	0	180
Subdistrict 2	487	388.2	0	0	0
Subdistrict 3	40	251.4	116.1	0	0
Subdistrict 4	387	111.1	40.5	0	0
Subdistrict 5	445	209.5	179.4	358.9	0
Year 2035 Total	1,797	1,114.1	336.0	358.9	180

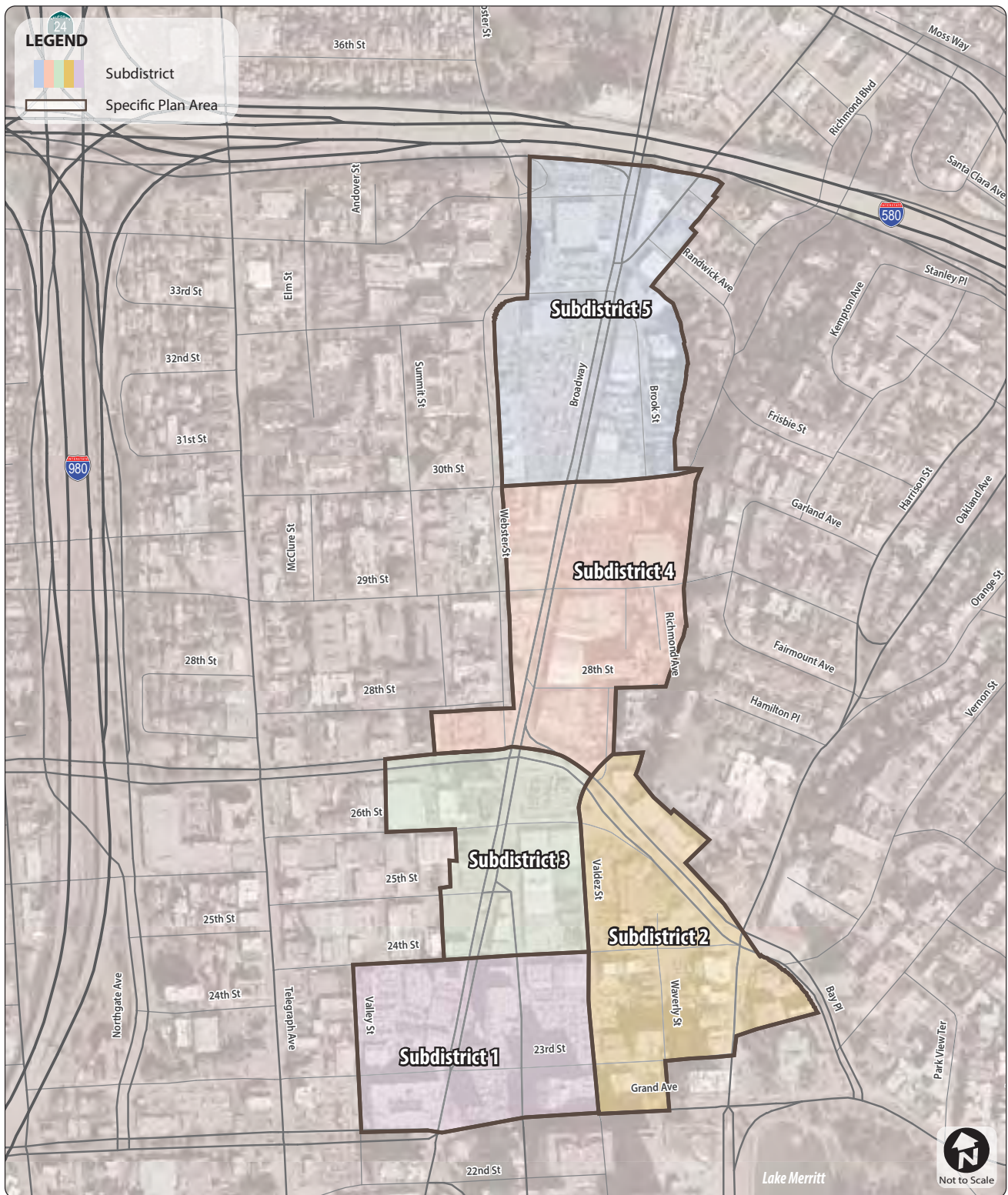
DU = Dwelling units, KSF = 1,000 square feet

SOURCE: City of Oakland and WRT, 2012.

Project Modifications to Transportation Network

The Broadway Valdez District Specific Plan proposes a number of modifications to the street network in the Plan Area to improve access and circulation for all travel modes. This EIR analyzes the following street modifications as part of the Project:

- Widen sidewalks along segments of 24th and Valdez Streets.
- Enhance the existing mid-block pedestrian crossing on Broadway between 30th Street and Hawthorne Avenue with bulbouts, enhanced crosswalk treatment, and installations of Rectangular Rapid Flash Beacons (RRFB).
- Implement bicycle improvements, such as bicycle signal actuations, at key intersections such as Broadway/Webster Street, Broadway/27th Street, and Harrison Street/27th Street.



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-5
Specific Plan Area Subdistricts

- Collaborate with AC Transit to improve bus service along Broadway by incorporating the following recommendations in AC Transit's Transit Performance Initiative:
 - Move bus stop locations to provide optimum spacing (about 900 to 1,000 feet between stops) that effectively serves the local uses and maintains bus operating speeds.
 - Locate bus stops on far-side of intersections to improve service times and reduce bus/auto conflicts at intersections.
 - Create curb extensions to accommodate in-lane stops that enhance bus service times and provide adequate space for bus stop amenities
 - Improve bus stop facilities (shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles, etc.) to enhance user experience.
 - Increase the length of bus stops to 60 feet to meet AC Transit standards.
 - Install Transit Signal Priority (TSP) at signalized intersections along Broadway to improve bus travel times by prioritizing signal green times for approaching buses.
- Remove the channelized right-turn lane from westbound 27th Street to Broadway at the 27th Street/Broadway intersection (Intersection #30).
- Remove the channelized right-turn lane from eastbound 27th Street to Valdez Street and from northbound Valdez Street to 27th Street at the 27th Street/Valdez Street intersection (Intersection #31).
- Square the Broadway/Webster Street/25th Street intersection (Intersection #34) by:
 - Removing the channelized island on the Webster Street approach.
 - Aligning the westbound Webster Street approach with the eastbound 25th Street approach to allow the through movement from Webster Street to 25th Street.
 - Extending the existing southbound left-turn lane on Broadway.
 - Providing a crosswalk on the north approach of Broadway.
- Remove the channelized right-turn lane from southbound Harrison Street to 27th Street at the 27th Street/24th Street/Bay Place/Harrison Street intersection (Intersection #37). This improvement is consistent with the recommendation in the Harrison Street/Oakland Avenue CBTP (see page 4.13-27 for more detail).
- Potential temporary or full closure of following streets to through traffic:
 - Waverly Street between 23 and 24th Streets
 - 26th Street between Broadway and Valdez Street
 - 34th Street between I-580 Off-Ramp and Broadway

Project Trip Generation

Buildout of the Broadway Valdez Development Program would result in a net increase of about 1,800 residential units, over 1 million square feet of retail, and about 700 thousand square feet of office at buildout. This development would occur within one of the denser urban environments in the East Bay where travel mode opportunities (i.e., auto, bike, pedestrian and transit) are substantial.

If vehicle trip reduction in mixed-use dense urban developments such as this is understated, the result can be excessive traffic impacts and related mitigation that can discourage development of otherwise desirable projects or transportation infrastructure that is not sized to the urban setting of the development. The Project trip generation estimated in this analysis accounts for the mix of uses provided in the development under the Specific Plan, the urban setting, and transit service provided in the area.

Current accepted methodologies, such as the Institute of Transportation Engineers (ITE) *Trip Generation* methodology, are primarily based on data collected at suburban, single-use, freestanding sites (ITE, 2008). These defining characteristics limit their applicability to mixed-use or multi-use development projects, such as the Specific Plan, which is in a high-density walkable urban setting with frequent and nearby local and regional transit service. The land use mix, design features, and setting of the Specific Plan would include characteristics that influence travel behavior differently from typical single-use suburban developments. Thus, traditional data and methodologies, such as ITE, would not accurately estimate the project vehicle trip generation. In response to the limitations in the ITE methodology, and to provide a straightforward and empirically validated method of estimating vehicle trip generation at mixed-use developments, the US Environmental Protection Agency (EPA) sponsored a national study of the trip generation characteristics of multi-use sites. Based on travel survey data gathered from 239 mixed-use developments (MXDs) in six major metropolitan regions and correlated with the characteristics of the sites and their surroundings, the MXD methodology estimates the amount of external traffic that a mixed use development would generate by reducing the ITE-based estimates to account for internal trips and external non-auto trips. Appendix G.F describes the MXD methodology and its applicability to the development under the Specific Plan in more detail.

The Broadway Valdez Development Program includes a large retail component, which typically generates more traffic on weekends than on weekdays. Thus, in addition to analyzing traffic impacts during weekday AM and PM peak hours, this document also analyzes traffic impacts during the Saturday peak hour. This analysis conservatively assumes that trip generation for all Broadway Valdez Development Program land uses would peak at the same time on Saturdays. Because the MXD methodology is only applicable to weekday trips, the relationship between weekday and weekend trips as documented in the 2000 Bay Area Travel Surveys (2000 BATS) was used to estimate the reduction for Saturday peak-hour trip generation.

Tables 4.13-8 and 4.13-9 summarize the weekday daily, weekday AM, weekday PM and Saturday peak-hour Project trip generation in 2020 and 2035, respectively. Based on the MXD Model, the ITE-based trip generation for 2020 was reduced by about 28 percent for weekdays and 18 percent for Saturdays. The ITE-based 2035 trip generation was reduced by about 34 percent for weekdays and 25 percent for Saturdays. The MXD model forecasts a larger reduction in 2035 than in 2020 because it accounts for the local and regional growth in land use which encourages additional pedestrian, bike, and transit trips.

**TABLE 4.13-8
BROADWAY VALDEZ DEVELOPMENT PROGRAM
2020 TRIP GENERATION SUMMARY**

Land Use	Units ^a	ITE Code	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Net New Uses												
Multi-Family Residential	991 DU	220 ^b	6,129	98	391	489	366	197	563	278	237	515
Retail	601.9 KSF	820 ^c	21,809	271	173	444	1,038	1,080	2,118	1,431	1,321	2,752
General Office	179.4 KSF	710 ^d	2,093	263	36	299	48	232	280	32	27	59
Medical Office	358.9 KSF	720 ^e	12,966	652	173	825	235	634	869	108	81	189
Total			42,996	1,284	773	2,057	1,687	2,143	3,830	1,849	1,666	3,515
Reduction^f												
Internal Capture (Non-Auto)			-3,326	-75	-45	-120	-124	-158	-282			
External Walk, Bike and Transit			-8,930	-280	-168	-448	-338	-429	-767			
<i>Total</i>			-12,256	-355	-213	-568	-462	-587	-1,049	-333	-300	-633
Net New Project Trips			30,740	929	560	1,489	1,225	1,556	2,781	1,516	1,366	2,882

^a DU = dwelling unit. KSF = 1,000 square feet.

^b ITE *Trip Generation (8th Edition)* land use category 220 (Apartments):

Daily: $T = 6.06(X) + 123.56$

AM Peak Hour: $T = 0.49(X) + 3.73$ (20% in, 80% out)

PM Peak Hour: $T = 0.55(X) + 17.65$ (65% in, 35% out)

Saturday: $T = 0.52(X)$ (54% in, 46% out)

^c ITE *Trip Generation (8th Edition)* land use category 820 (Shopping Center):

Daily: $\ln(T) = 0.65 \cdot \ln(X) + 5.83$

AM Peak Hour: $\ln(T) = 0.59 \cdot \ln(X) + 2.32$ (61% in, 39% out)

PM Peak Hour: $\ln(T) = 0.67 \cdot \ln(X) + 3.37$ (49% in, 51% out)

Saturday: $\ln(T) = 0.65 \cdot \ln(X) + 3.76$ (52% in, 48% out)

^d ITE *Trip Generation (8th Edition)* land use category 710 (General Office):

Daily: $\ln(T) = 0.77 \cdot \ln(X) + 3.65$

AM Peak Hour: $\ln(T) = 0.80 \cdot \ln(X) + 1.55$ (88% in, 12% out)

PM Peak Hour: $T = 1.12 \cdot (X) + 78.81$ (17% in, 83% out)

Saturday: $\ln(T) = 0.81 \cdot \ln(X) - 0.12$ (54% in, 46% out)

^e ITE *Trip Generation (8th Edition)* land use category 720 (Medical-Dental Office):

Daily: $T = 36.13(X)$

AM Peak Hour: $T = 2.3(X)$ (79% in, 21% out)

PM Peak Hour: $\ln(T) = 0.88 \cdot \ln(X) + 1.59$ (27% in, 73% out)

Saturday: Based on the ratio of weekday PM and Saturday peak-hour trips for general office, $T = 0.53(X)$ (57% in, 43% out)

^f For weekdays, reductions based on application of MXD model: Daily = 29%, AM Peak Hour = 28%, PM Peak Hour = 27%

Internal Capture (Non-Auto): Daily = 8%, AM Peak Hour = 6%, PM Peak Hour = 7% (Internal auto trips are estimated to be about one-third of all internal trips and included in the net new project trips)

External Walk/Bike/Transit: Daily = 21%, AM Peak Hour = 22%, PM Peak Hour = 20%

For Saturday peak hour, reduction based on comparison of BATS 2000 data weekday and weekend data. Total Saturday Reduction = 18%

SOURCE: Fehr & Peers, 2013.

**TABLE 4.13-9
BROADWAY VALDEZ DEVELOPMENT PROGRAM
2035 TRIP GENERATION SUMMARY**

Land Use	Units ^a	ITE Code	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total
Net New Uses												
Multi-Family Residential	1,797 DU	220 ^b	11,007	177	707	884	654	352	1,005	504	430	934
Retail	1,114.1 KSF	820 ^c	32,541	390	249	639	1,567	1,631	3,199	2,135	1,971	4,106
General Office	336.0 KSF	710 ^d	3,392	435	59	495	77	378	455	53	46	99
Medical Office	358.9 KSF	720 ^e	12,966	652	173	825	235	634	869	108	81	189
Hotel	180 rooms	310 ^f	1,615	65	47	111	53	55	109	88	69	157
Total			61,520	1,719	1,235	2,954	2,586	3,050	5,637	2,888	2,597	5,485
Reduction ^g												
Internal Capture (Non-Auto)			-5,862	-118	-84	-202	-248	-292	-540			
External Walk, Bike and Transit			-15,357	-450	-322	-772	-637	-751	-1,388			
Total			-21,219	-568	-406	-974	-885	-1,043	-1,928	-722	-649	-1,371
Net New Project Trips			40,301	1,151	829	1,980	1,701	2,007	3,709	2,166	1,948	4,114

^a DU = dwelling unit. KSF = 1,000 square feet.

^b ITE *Trip Generation (8th Edition)* land use category 220 (Apartments):

Daily: $T = 6.06(X) + 123.56$

AM Peak Hour: $T = 0.49(X) + 3.73$ (20% in, 80% out)

PM Peak Hour: $T = 0.55(X) + 17.65$ (65% in, 35% out)

Saturday: $T = 0.52(X)$ (54% in, 46% out)

^c ITE *Trip Generation (8th Edition)* land use category 820 (Shopping Center):

Daily: $\ln(T) = 0.65 \ln(X) + 5.83$

AM Peak Hour: $\ln(T) = 0.59 \ln(X) + 2.32$ (61% in, 39% out)

PM Peak Hour: $\ln(T) = 0.67 \ln(X) + 3.37$ (49% in, 51% out)

Saturday: $\ln(T) = 0.65 \ln(X) + 3.76$ (52% in, 48% out)

^d ITE *Trip Generation (8th Edition)* land use category 710 (General Office):

Daily: $\ln(T) = 0.77 \ln(X) + 3.65$

AM Peak Hour: $\ln(T) = 0.80 \ln(X) + 1.55$ (88% in, 12% out)

PM Peak Hour: $T = 1.12(X) + 78.81$ (17% in, 83% out)

Saturday: $\ln(T) = 0.81 \ln(X) - 0.12$ (54% in, 46% out)

^e ITE *Trip Generation (8th Edition)* land use category 720 (Medical-Dental Office):

Daily: $T = 36.13(X)$

AM Peak Hour: $T = 2.3(X)$ (79% in, 21% out)

PM Peak Hour: $\ln(T) = 0.88 \ln(X) + 1.59$ (27% in, 73% out)

Saturday: Based on the ratio of weekday PM and Saturday peak-hour trips for general office, $T = 0.53(X)$ (57% in, 43% out)

^f ITE *Trip Generation (8th Edition)* land use category 310 (Hotel):

Daily: $T = 8.92(X)$

AM Peak Hour: $T = 0.78(X) - 29.8$ (58% in, 42% out)

PM Peak Hour: $\ln(T) = 1.2 \ln(X) - 1.55$ (49% in, 51% out)

Saturday: $T = 0.87(X)$ (56% in, 44% out)

^g For weekdays, reductions based on application of MXD model: Daily = 34%, AM Peak Hour = 33%, PM Peak Hour = 34%

Internal Capture (Non-Auto): Daily = 10%, AM Peak Hour = 7%, PM Peak Hour = 10% (Internal auto trips are estimated to be about one-third of all internal trips and included in the net new project trips)

External Walk/Bike/transit: Daily = 25%, AM Peak Hour = 26%, PM Peak Hour = 25%

For Saturday peak hour, reduction based on comparison of BATS 2000 data weekday and weekend data. Total Saturday Reduction = 25%

SOURCE: Fehr & Peers, 2013.

The Broadway Valdez Development Program is estimated to generate about 30,700 daily, 1,490 AM peak-hour, 2,780 PM peak-hour trips, and 2,880 Saturday peak-hour trips in the year 2020, and about 40,300 daily, 1,980 AM peak-hour, 3,710 PM peak-hour, and 4,110 Saturday peak-hour trips in the year 2035.

Table 4.13-10 presents the net new Project trips allocated to the Subdistricts proportionate with the expected land uses in each Subdistrict.

**TABLE 4.13-10
BROADWAY VALDEZ DEVELOPMENT PROGRAM TRIP GENERATION SUMMARY BY SUBDISTRICT**

Year / Subdistrict	Weekday AM Peak Hour			Weekday PM Peak Hour			Saturday Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Year 2020									
Subdistrict 1	87	148	237	277	224	499	371	335	706
Subdistrict 2	122	130	253	366	336	700	552	506	1,058
Subdistrict 3	0	0	0	0	0	0	0	0	0
Subdistrict 4	0	0	0	0	0	0	0	0	0
Subdistrict 5	719	282	998	582	996	1,582	593	525	1,118
Total	928	560	1,488	1,225	1,556	2,781	1,516	1,366	2,882
Year 2035									
Subdistrict 1	118	165	283	273	233	506	364	322	686
Subdistrict 2	161	200	361	475	435	910	668	610	1,278
Subdistrict 3	178	77	255	265	325	590	398	365	763
Subdistrict 4	92	119	211	194	178	372	241	217	458
Subdistrict 5	603	268	871	495	836	1,331	495	434	929
Total	1,152	829	1,981	1,702	2,007	3,709	2,166	1,948	4,114

SOURCE: Fehr & Peers, 2013.

The Specific Plan includes policies and strategies, such as implementation of a robust TDM program in the Plan Area, to provide incentives and infrastructure improvements that encourage walking, biking and transit and reduce single-occupant automobile trips and parking. However, the trip generation assumptions used in this analysis do not account for the effectiveness of the TDM program and similar policies in order to present a more conservative analysis.

Traffic Forecasting Methodology

A project of the size, density, and mix of the Broadway Valdez Development Program in urban Alameda County is expected to change local and regional travel patterns. Therefore, the traditional methodology of applying isolated project trip generation, distribution, and assignment procedures would not accurately reflect such a project's impact on the surrounding transportation system.

The traffic volume forecasts were developed using the ACTC Model and existing traffic volumes. The main inputs to the 2020 and 2035 forecasting process are the existing traffic counts and year

2020 and 2035 outputs from a modified version of the ACTC Model. Thus, the following basic steps were used in developing traffic forecasts for this analysis:

- **Step 1: Develop Future No Project traffic forecasts.**

The ACTC Model released in June 2011, which uses land use and socio-economic data consistent with Association of Bay Area Government (ABAG) *Projection 2009*, was used for this analysis. The land use database was modified to reflect more accurate land use projections in the City of Oakland, including the changes in land use proposed by the Lake Merritt Station Area Specific Plan and other major developments on the City's Active Major Project list. These modifications assure that the ACTC Model correctly accounts for traffic growth from past, present, and reasonably foreseeable development (i.e., pending, planned, proposed, and recently completed residential and non-residential developments) in the study area. The 2020 and 2035 No Project scenario assumes the existing land uses in the Plan Area. Appendix G.H presents the ACTC Model output plots for the different scenarios used in this analysis.

The AM and PM peak-hour roadway segment volumes forecasted by the constrained ACTC Model for years 2020 and 2035 were used to develop 2020 and 2035 turning movement forecasts at the study intersections using the "Furness" process, which "grows" existing turning movement volumes to reflect increases in roadway segment volumes forecasted by the ACTC Model.¹ Because the ACTC model does not include non-weekday time periods, the ratio between the weekday PM peak-hour existing volumes and the forecasted 2020 and 2035 No Project volumes were applied to the existing Saturday peak-hour volumes to estimate Saturday peak-hour volumes under the 2020 and 2035 No Project conditions, respectively.

- **Step 2: Estimate Project auto trip generation.**

As summarized in Tables 4.13-8 and 4.13-9, the MXD methodology was used to estimate the automobile trip generation for the Broadway Valdez Development Program in 2020 and 2035. The net new auto trips were then assigned to the Subdistricts based on estimated growth in each Subdistrict as shown in Table 4.13-10.

- **Step 3: Develop 2020 and 2035 Plus Project traffic forecasts.**

The 2020 and 2035 No Project ACTC Model land use database was adjusted to account for the Broadway Valdez Development Program as shown in Table 4.13-7, and the ACTC Model was run through the final distribution step. The number of vehicle trips generated by the Specific Plan in the ACTC Model after final distribution were adjusted to match the number of project vehicle trips estimated in Step 2 using MXD and shown in Table 4.13-10. The ACTC Model was then run through final assignment. Similar to Step 1, the AM and PM peak-hour roadway segment volumes forecasted by the ACTC Model were used to develop turning movement forecasts at the study intersections using the Furness method. In addition, this analysis assumes that pedestrian and bicycle volumes under future scenarios at the study intersections would increase proportionally to the projected growth in land uses in the study area.

¹ Outlined in NCHRP-255, the industry-standard Furness technique is used to estimate projected (future) intersection turning movement volumes based on comparing existing traffic volume counts and the Model results. It uses mathematical formulae to balance roadway segment volumes approaching, and departing from, the intersection and thus balances turning volumes that make sense compared to the existing counts and Model results. This process improves the level of confidence in the forecasted future turning movement volumes.

As a result, the 2020 and 2035 Project traffic assigned to the street network are consistent with the trip generation estimates presented in Table 4.13-10, and the 2020 and 2035 Plus Project forecasts reflect the potential changes in traffic patterns caused by the mix and size of the Broadway Valdez Development Program. **Figure 4.13-6** shows the approximate number of PM peak-hour auto trips the Project would add to roadway segments in the Plan Area vicinity.

- **Step 4: Develop Existing Plus Project traffic forecasts.**

Intersection turning volumes for Existing Plus Project conditions were estimated by adding the incremental difference between 2035 Plus Project and 2035 No Project conditions to the Existing intersection volumes.

4.13.3 Impacts and Mitigation Measures

Significance Criteria/Thresholds

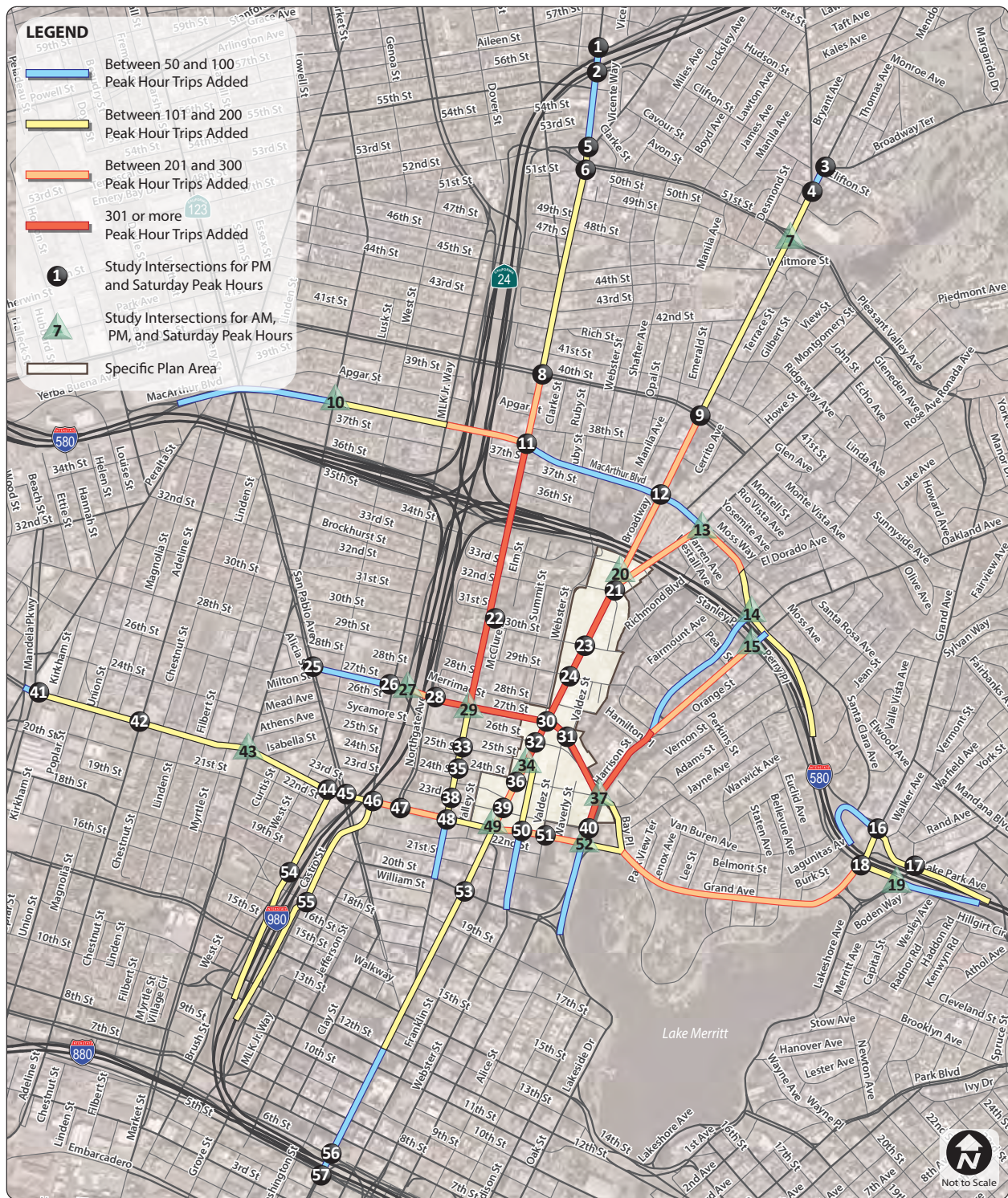
Development under the Specific Plan would have a significant impact on the environment if it were to:

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

Traffic Load and Capacity Thresholds

1. At a study, signalized intersection which is located **outside the Downtown² area and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
2. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds;
3. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds;
4. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more;

² The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south, and I-980/Brush Street to the west. Intersections that provide direct access to downtown are generally defined as principal arterials within two (2) miles of Downtown and minor arterials within one (1) mile of Downtown, provided that the street connects directly to Downtown.



SOURCE: Fehr & Peers

Broadway Valdez District Specific Plan . 208522

Figure 4.13-6
Weekday PM Peak Hour Trip Assignment and Study Intersections

5. At a study, signalized intersection for all areas where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity (“V/C”) ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more;
6. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement, and after project completion, satisfy the California Manual on Uniform Traffic Control Devices (MUTCD) peak-hour volume traffic signal warrant;
7. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project;³
8. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP;⁴
9. Result in substantially increased travel times for AC Transit buses;

Traffic Safety Thresholds

10. Directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses;
11. Directly or indirectly result in a permanent substantial decrease in pedestrian safety;
12. Directly or indirectly result in a permanent substantial decrease in bicyclist safety;
13. Directly or indirectly result in a permanent substantial decrease in bus rider safety;
14. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard.⁵

Other Thresholds

15. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment;
16. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project; or

³ Refer to the ACTC *Congestion Management Program* for a description of the CMP Network. In Oakland, the CMP Network includes all state highways plus the following streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road.

⁴ Refer to ACTC’s *Congestion Management Program* for a description of the MTS and the Land Use Analysis Program. The ACTC identified the roadway segments of the MTS that require evaluation in its letter commenting on the Notice of Preparation (NOP) issued by the City for the project (See page 4.13-119 for list of these roadway segments). Note that the City is required to send NOPs and notices of proposed general plan amendments to ACTC under the Land Use Analysis Program regardless of how many project-related trips are expected to be generated.

⁵ Refer to the City’s Standard Conditions of Approval for conditions related to at-grade railroad crossings.

17. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Cumulative Impacts

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

Planning-Related Non-CEQA Issues

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

Parking-Related Impacts

The Court of Appeal has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.⁶ Similarly, the December 2009 amendments to the State CEQA Guidelines (which became effective March 18, 2010) removed parking from the State's Environmental Checklist (Appendix G of the State CEQA Guidelines) as an environmental factor to be considered under CEQA. Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, the City of Oakland, in its review of the proposed project, wants to ensure that the project's provision of parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document as a non-CEQA topic for informational purposes.

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

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area.

⁶ San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco (2002) 102 Cal.App.4th 656.

Hence, any secondary environmental impacts that might result from a shortfall in parking in the vicinity of the proposed project are considered less than significant.

This document evaluates if the project's estimated parking demand (both project-generated and project-displaced) would be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the Plan Area.⁷ Project-displaced parking results from the project's removal of standard on-street parking, City or Redevelopment Agency owned/controlled parking, and/or legally required off-street parking (non-open-to-the-public parking which is legally required).

Transit Ridership

Transit load is not part of the permanent physical environment; transit service changes over time as people change their travel patterns. Therefore, the effect of the proposed project on transit ridership need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects, such as causing the construction of new permanent transit facilities which in turn causes physical effects on the environment. Furthermore, an increase in transit ridership is an environmental benefit, not an adverse impact. One of the goals of the *Land Use and Transportation Element* of the Oakland General Plan is to promote transit ridership. The City of Oakland, however, in its review of the proposed project, wants to understand the project's potential effect on transit ridership. As such, although not required by CEQA, transit ridership is evaluated in this document as a non-CEQA topic for informational purposes.

This document evaluates whether the Specific Plan would exceed any of the following:

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

Queuing

This document evaluates whether development under the Specific Plan would

- Cause an increase in 95th percentile queue length of 25 feet or more at a study, signalized intersection under the Existing Plus Project condition or the Near-Term Future Baseline Plus Project condition.

⁷ The analysis must compare the proposed parking supply with both the estimated demand **and** the Oakland Planning Code requirements.

Traffic Control Devices

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

Collision History

This document evaluates three years of vehicle, pedestrian, and bicycle collision data for intersections and roadway segments within three blocks of the Plan Area to determine if the development under the Specific Plan would contribute to an existing problem or if any improvements are recommended in order to alleviate potential effects of the project.

Analysis of the Development under the Specific Plan

As stated on page 4.13-1, the analysis that follows evaluates the traffic-related impacts of the development under the Specific Plan during weekday PM and Saturday peak hours at all study intersections and during the weekday AM peak hour at select intersections. The analysis was conducted in compliance with City of Oakland and ACTC guidelines.

Traffic conditions in the study area assessed under the following six scenarios:

- ***Existing*** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- ***Existing Plus Project Buildout*** – Existing conditions plus project-related traffic resulting from the buildout of the Broadway Valdez Development Program.
- ***2020 No Project*** – Future conditions with planned population and employment growth and planned transportation system improvements for the year 2020. This scenario assumes no traffic growth in the Specific Plan Area. Traffic projections were developed using the most recent version of the Alameda Countywide Travel Demand Model provided by the ACTC (ACTC Model).
- ***2020 Plus Project Phase 1*** – Future forecasted conditions for the year 2020. This scenario assumes completion of developments within the Specific Plan Area expected by year 2020. Traffic projections were developed using the ACTC Model.
- ***2035 No Project*** – Future conditions with planned population and employment growth and planned transportation system improvements for the year 2035. This scenario assumes no traffic growth in the Specific Plan Area. Traffic projections were developed using the ACTC Model.
- ***2035 Plus Project Buildout*** – Future forecasted conditions for the year 2035. This scenario assumes buildout of the Broadway Valdez Development Program. Traffic projections were developed using the ACTC Model.

Following the intersection analysis, the Specific Plan's potential effects on: regional roadways; construction; vehicle, pedestrian and bicycle safety; and consistency with local plans is presented. An assessment of non-CEQA issues, such as parking and transit ridership, is also provided.

Existing Plus Project Intersection Analysis

This section analyzes the transportation system with trips generated by the buildout of the Broadway Valdez Development Program added to the existing traffic volumes. This analysis presents the extent of impacts relative to existing conditions.

Traffic Volumes

Figure C-4 in Appendix G.D shows the traffic volumes under Existing Plus Project conditions. They include existing traffic volumes plus net change in traffic patterns caused by the Project. The Traffic Forecasting Methodology discussion starting on page 4.13-43 describes the process used to develop Existing Plus Project traffic volumes.

Existing Plus Project Roadway Network

As previously described, the signalization of the Grand Avenue/Brush Street intersection (Intersection #44) and improvements at Grand Avenue/San Pablo Avenue intersection (Intersection #45) are currently under design and expected to be constructed and operative in 2013. Therefore, this analysis assumes both improvements in the Existing Plus Project analysis. In addition, this analysis assumes that the improvements listed starting on page 4.13-37 would also be implemented as part of the Specific Plan. No other modifications to the roadway network, including signal timing optimization, are assumed for the Existing Plus Project analysis. Figure D-5 in Appendix G.D shows the intersection lane configurations and controls under Existing Plus Project conditions.

Existing Plus Project Intersection Operations

Intersection LOS calculations were completed with the traffic volumes and roadway network described above. In consideration of conciseness, **Table 4.13-11** shows only those eight study intersections projected to operate at an unacceptable LOS under Existing Plus Project scenario, or where the Project would cause a significant impact. Appendix G.G presents a full summary table for LOS at all 57 study intersections. Appendix G.I presents the detailed intersection LOS calculation worksheets.

As shown in Table 4.13-11, the following intersections would operate at an unacceptable LOS under Existing Plus Project conditions (all intersections, except one, are located in Downtown Oakland or provide direct access to Downtown Oakland where LOS E is the LOS standard.):

13. The signalized MacArthur Boulevard/Piedmont Avenue intersection (which is not located in Downtown Oakland and would not provide direct access to Downtown Oakland where LOS D is the LOS standard) would degrade from LOS D under Existing conditions to LOS E during the weekday PM peak hour.

**TABLE 4.13-11
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY^a**

Intersection		Traffic Control ^b	Peak Hour	Existing		Existing Plus Project		Significant Impact? ^e	Existing Plus Project Mitigated		Significance After Mitigation
				Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
13*	MacArthur Boulevard/Piedmont Avenue	Signal	AM	31.1	C	40.0	D	No	41.0	D	Less Than Significant
			PM	37.4	D	70.1	E	Yes (1)	43.2	D	
			SAT	28.2	C	38	D	No	33.8	C	
15	Perry Place/I-580 Eastbound Ramps/Oakland Avenue	Signal	AM	20.1	C	20.1	C	No	20.1	C	Significant and Unavoidable
			PM	73.2	E	120.9 (v/c=0.93)	F	Yes (2)	68.0	E	
			SAT	21.1	C	45.6	D	No	45.6	D	
17	Lake Park Avenue/Lakeshore Avenue	Signal	AM	-	-	-	-	-	-	-	Less than Significant
			PM	55.6	E	86.7 (v/c=0.87)	F	Yes (2)	51.4	D	
			SAT	46.7	D	77.1	F	No	77.1	E	
35	24th Street/Telegraph Avenue	SSSC	AM	-	-	-	-	-	-	-	
			PM	1.4 (18.8)	A (C)	5.2 (56.7)	A (F)	No ^f	5.2 (56.7)	A (F)	
			SAT	1.7 (14.4)	A (B)	3.7 (29.3)	A (D)	No	3.7 (29.3)	A (D)	
36	24th Street/Broadway	SSSC/Signal	AM	-	-	-	-	-	-	-	Less Than Significant
			PM	2.6 (31.3)	A (D)	** (**)	F (F)	Yes (6)	13.4	B	
			SAT	2.0 (19.2)	A (C)	** (**)	F (F)	No ^f	13.8	B	
38	23rd Street/Telegraph Avenue	SSSC	AM	-	-	-	-	-	-	-	
			PM	3.1 (34.9)	A (E)	16.9 (170.8)	C (F)	No ^f	16.9 (170.8)	C (F)	
			SAT	1.4 (20.8)	A (C)	3.5 (36.5)	A (E)	No ^f	3.5 (36.5)	A (E)	
39	23rd Street/Broadway	SSSC/Signal	AM	-	-	-	-	-	-	-	Less Than Significant
			PM	4.4 (52.9)	A (F)	** (**)	F (F)	Yes (6)	12.0	B	
			SAT	1.2 (13.3)	A (B)	** (**)	F (F)	No ^f	13.4	B	

TABLE 4.13-11 (Continued)
EXISTING PLUS PROJECT INTERSECTION LOS SUMMARY^a

Intersection		Traffic Control ^b	Peak Hour	Existing		Existing Plus Project		Significant Impact? ^e	Existing Plus Project Mitigated		Significance After Mitigation
				Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
40	23rd Street/Harrison Street	SSSC/Signal	AM	-	-	-	-	Yes (6)	-	-	Conservatively Significant and Unavoidable
			PM	0.9 (11.6)	A (B)	1.3 (15.0)	A (C)		5.8	A	
			SAT	0.6 (10.8)	A (B)	1.5 (14.5)	A (B)	No	4.4	A	

^a See Appendix G.G for LOS summary of all study intersections.

^b Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;

^c For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)

^d Intersections operating at unacceptable levels are shown in **bold**.

^e Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-45.

^f The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.

^g The intersection is currently side-street stop-controlled. The intersection is expected to be signalized in 2013. Therefore, this analysis assumes that the intersections would be signalized under Existing Plus Project conditions.

* Denotes an intersection not located in Downtown or that does not provide direct access to Downtown where LOS E (not LOS D) is the threshold.

** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

SOURCE: Fehr & Peers, 2013.

15. The signalized Perry Place/I-580 Eastbound Ramps/Oakland Avenue intersection would continue to operate at LOS F during the weekday PM peak hour.
17. The signalized Lake Park Avenue/Lakeshore Avenue intersection would degrade from LOS E under Existing conditions to LOS F under Existing Plus Project conditions during the weekday PM peak hour.
35. The unsignalized 24th Street/Telegraph Avenue intersection would degrade from LOS C under Existing conditions to LOS F under Existing Plus Project conditions during the weekday PM peak hour on the eastbound side-street stop-controlled approach. This intersection would not meet the peak-hour volume signal warrant under Existing Plus Project conditions.
36. The unsignalized 24th Street/Broadway intersection would degrade from LOS D during the weekday PM peak hour and LOS C during the Saturday peak hour under Existing conditions to LOS F under Existing Plus Project conditions on the westbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under Existing Plus Project conditions.
38. The unsignalized 23rd Street/Telegraph Avenue intersection would degrade from LOS D during the weekday PM peak hour under Existing conditions to LOS F under Existing Plus Project conditions, on the eastbound side-street stop-controlled approach. This intersection would not meet the peak-hour volume signal warrant.
39. The unsignalized 23rd Street/Broadway intersection would continue to operate at LOS F during the weekday PM peak hour and degrade from LOS B under Existing conditions to LOS F under Existing Plus Project conditions during the Saturday peak hour on the eastbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under Existing Plus Project conditions.
40. The unsignalized 23rd Street/Harrison Street intersection would continue to operate at LOS C or better during the weekday PM and Saturday peak hours under Existing Plus Project conditions. However, this intersection would meet the peak-hour volume signal warrant under Existing Plus Project conditions.

Existing Plus Project Impacts and Mitigations

Impact TRANS-1: The development under the Specific Plan would degrade the *MacArthur Boulevard/Piedmont Avenue* intersection (Intersection #13) from LOS D to LOS E (Significant Threshold #1) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)

The following mitigation measure is currently under design and will be implemented in 2014 as part of the mitigation measures recommended in the *Kaiser Oakland Medical Center Master Plan Draft EIR*.

Mitigation Measure TRANS-1: Implement the following measures at the MacArthur Boulevard/Piedmont Avenue intersection:

- Provide an additional through lane on the eastbound MacArthur Boulevard approach (currently temporarily closed for construction of Kaiser Hospital; expected to open in 2014 after completion of that construction).

- Modify northbound approach from the current configuration which provides one right-turn lane and one shared through/left lane to provide one right-turn lane, one through lane, and one left-turn lane.
- Upgrade intersection signal equipment, optimize signal timing at this intersection, and coordinate signal timing changes with the adjacent intersections that are in the same signal coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 55 percent of the Development Program is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would operate at LOS D during the weekday AM and PM peak hours and LOS C during the Saturday peak hour. No secondary impacts would result from the implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-2: The development under the Specific Plan would degrade the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (Intersection #15) from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour under Existing Plus Project conditions. (Significant and Unavoidable)

The impact and mitigation measure at this intersection are consistent with the ones identified in the *Alta Bates Summit Medical Center Summit Campus Seismic Upgrade and Master Plan Project Draft EIR* (December 2009) and *Kaiser Center Office Project Draft EIR* (August 2010).

Mitigation Measure TRANS-2: Implement the following measures at the Perry Place / I-580 Eastbound Ramps/Oakland Avenue intersection:

- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection) for the PM peak hour
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group. This intersection is under the jurisdiction of Caltrans so any equipment or facility upgrades must be approved by Caltrans prior to installation.

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

- Plans, Specifications, and Estimates (PS&E) to modify intersection. All elements shall be designed to City and Caltrans standards in effect at the time of construction and all new or upgraded signals should include these enhancements. All other facilities supporting vehicle travel and alternative modes through the intersection should be brought up to both City standards and Americans with Disabilities Act (ADA) standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for the elements listed below:
 - 2070L Type Controller with cabinet assembly
 - GPS communications (clock)
 - Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile)
 - Countdown pedestrian head module switch out
 - City standard ADA wheelchair ramps
 - Video detection on existing (or new, if required)
 - Mast arm poles, full actuation (where applicable)
 - Polara push buttons (full actuation)
 - Bicycle detection (full actuation)
 - Pull boxes
 - Signal interconnect and communication with trenching (where applicable), or through (E) conduit (where applicable)- 600 feet maximum
 - Conduit replacement contingency
 - Fiber Switch
 - PTZ Camera (where applicable)
 - Transit Signal Priority (TSP) equipment consistent with other signals along corridor
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 15 percent of the Development Program is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue improve to LOS E during the weekday PM peak hour and reduce the impact to a less than significant level. It is

not certain that this mitigation measure could be implemented because the intersection is under the jurisdiction of Caltrans. City of Oakland, as lead agency, does not have jurisdiction at this intersection and the mitigation would need to be approved and implemented by Caltrans. Therefore, the impact is considered significant and unavoidable. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-3: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the Lake Park Avenue/Lakeshore Avenue intersection (Intersection #17) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)

Mitigation Measure TRANS-3: Implement the following measures at the Lake Park Avenue/Lakeshore Avenue intersection:

- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- Plans, Specifications, and Estimates (PS&E) to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 80 percent of the Development Program is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would improve to LOS D during the weekday PM peak hour and reduce the impact to a less than significant level. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-4: The development under the Specific Plan Project would add more than 10 peak-hour trips to 24th Street/Broadway intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)

Mitigation Measure TRANS-4: Implement the following measures at the 24th Street/Broadway intersection.

- Signalize the intersection providing actuated operations, with permitted left turns on all movements,
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 75 percent of the Development Program in Subdistrict 1, 2, and 3 are developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-5: The development under the Specific Plan Project would add more than 10 peak-hour trips to 23rd Street/Broadway intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)

Mitigation Measure TRANS-5: Implement the following measures at the 23rd Street/Broadway intersection.

- Signalize the intersection providing actuated operations, with permitted left turns on all movements,
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 65 percent of the Development Program in Subdistrict 1, 2, and 3 are developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-6: The development under the Specific Plan Project would add more than 10 peak-hour trips to 23rd Street/Harrison Street intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-6: This impact can be mitigated to less than significant level by signalizing the intersection. Signalizing the 23rd Street/Harrison Street intersection would also improve pedestrian and bicyclist access and circulation by providing a protected crossing of Harrison Street. However, the signalization may result in secondary impacts.

This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations and pedestrian and bicycle circulation at the Grand Avenue/Harrison Street intersection (As shown in Table 4.13-24, Queuing Summary, later in this chapter, signalization of 23rd Street/Harrison Street intersection would result in queues on northbound Harrison Street at 23rd Street to spill back to Grand Avenue during the weekday PM peak hour).

Thus, installing a signal at this intersection may not be desirable. Depending on the specific location, type, and amount of development that would have vehicular and pedestrian access at this intersection and timing of other mitigation measures in the area (such as Mitigation Measure TRANS-5 at the 23rd Street/Broadway intersection and Mitigation Measure TRANS-10 at the 27th Street/24th Street/Bay Place/Harrison Street intersection), other improvements, such as prohibiting turns at this intersection, may mitigate the impact without degrading overall access in the area.

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

- A Traffic Study Report providing detailed analysis of signalizing the intersection and potential impacts on traffic operations and pedestrian and bicycle circulation at the Grand Avenue/Harrison Street intersection. The report shall study various design options such as turn prohibitions, various signal timing and phasing, signal cycle lengths, and signal coordination to determine the feasibility of signalizing the intersection. In addition to traffic operations, the report shall also address safety, access, and circulation for motorists, bicyclists, and pedestrians under different options explored.

If the Traffic Study Report recommends signalization of the study, the project sponsor shall submit the following to City of Oakland's Transportation Services Division for review and approval:

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.
- Design plans for other intersection improvements, if recommended by the Traffic Study Report.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and Existing Plus Project conditions indicates that mitigation at this intersection may be required when about 85 percent of the Development Program in Subdistrict 2 is developed. Investigation of the need for this mitigation shall be studied at the time when this threshold is reached

and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

Depending on the specific improvements implemented under this measure, the intersection may improve to LOS A during both weekday PM and Saturday peak hours. Because the specific improvements to be implemented, according to City standards, must be finalized after a detailed intersection/signalization engineering design study is performed and a preferred, detailed design selected by the City and because the improvement may result in potential secondary impacts at Grand Avenue/Harrison Street intersection, this EIR conservatively identifies the impact as significant and unavoidable.

Significance after Mitigation: Conservatively Significant and Unavoidable

Existing Plus Project Mitigated Conditions

Table 4.13-11 summarizes intersection operations after implementation of the recommended mitigation measures at the above-described six intersections where significant impacts would occur. Mitigation measures would reduce the impacts at four of those six intersections to a less than significant level. However, the impact at two of the intersections would remain significant and unavoidable.

As previously stated, the Specific Plan would include implementation of a robust TDM program as well as other policies and strategies that encourage walking, biking and transit. These policies and strategies are intended to reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of the impacts described above. The effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated at this time. Therefore, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate or reduce the magnitude of the identified impacts.

2020 Plus Project Phase 1 Intersection Analysis

This section addresses the intersection impacts that would occur in 2020 with the anticipated buildout of the Broadway Valdez Development Program in 2020 (referred to as “Phase 1”). As summarized in Table 4.13-7, by 2020, the Broadway Valdez Development Program is expected to consist of about 990 residential units, 600,000 square feet of retail, and 540,000 square feet of office. Items discussed in this section include the development of traffic volume forecasts for the 2020 No Project and 2020 Plus Project Phase 1 scenarios, intersection operations results, and Project impacts and mitigations at intersections.

2020 Intersection Traffic Forecasts

Figure D-6 and D-8 in Appendix G.D shows intersection traffic volumes under 2020 No Project and 2020 Plus Project Phase 1 scenarios, respectively. The Traffic Forecasting Methodology discussion starting on page 4.13-43 describes the process used to develop traffic volumes under 2020 No Project and 2020 Plus Project Phase 1 conditions.

2020 Roadway Network

As previously described starting on page 4.13-24, this analysis assumes the following roadway modifications for the 2020 No Project conditions:

- Installation of Class 2 bicycle lanes on Broadway between 38th Street and SR 24 which would eliminate of one southbound through lane on Broadway at the College Avenue/ Broadway (Intersection #4) and 40th Street/Broadway (Intersection #9) intersections.
- Reconfiguration and optimization of signal timing parameters at the West MacArthur Boulevard/ Broadway intersection (Intersection #12)
- Reconfiguration and optimization of signal timing parameters at the MacArthur Boulevard/ Piedmont Avenue intersection (Intersection #13)
- Signalization and reconfiguration of the Grand Avenue/Brush Street intersection (Intersection #44)
- Reconfiguration and optimization of signal timing parameters at the Grand Avenue/San Pablo Avenue intersection (Intersection #45)

Figure D-7 in Appendix G.D shows the intersection lane configurations and controls under 2020 No Project conditions.

In addition to the roadway modifications listed above, the improvements listed starting on page 4.13-37 would also be implemented as part of the Specific Plan and are assumed for the 2020 Plus Project Phase 1 conditions. No other modifications to the roadway network are assumed for the 2020 No Project or 2020 Plus Project Phase 1 analyses.

This analysis assumes that signal timing parameters that do not require upgrades to the signal equipment, such as amount of green time assigned to each intersection approach, would be optimized at the signalized study intersections under 2020 No Project and 2020 Plus Project Phase 1 conditions. This assumption reflects current City of Oakland practice that incorporates basic signal timing changes into routine maintenance of the traffic signal system. It is expected that retiming of signals in areas with the greatest need (e.g., major streets, areas with rapidly shifting traffic patterns) would be prioritized as part of the regular ongoing maintenance of signal equipment.

2020 Intersection Operations

Intersection LOS calculations for 2020 No Project and 2020 Plus Project Phase 1 scenarios were completed with the traffic volumes and roadway network described above. **Table 4.13-12** summarizes the results for study intersections projected to operate at an unacceptable LOS under 2020 No Project or 2020 Plus Project Phase 1 scenarios, or where the Project Phase 1 would cause a significant impact. Appendix G.G presents a full summary table for LOS at all 57 study intersections. Appendix G.J and Appendix G.K present the detailed intersection LOS calculation worksheets under 2020 No Project conditions and 2020 Plus Project Phase 1 conditions, respectively.

TABLE 4.13-12
2020 CONDITIONS INTERSECTION LOS SUMMARY^a

Intersection	Traffic Control ^b	Peak Hour	2020 No Project		2020 Plus Project		Significant Impact? ^e	2020 Plus Project Mitigated		Significance After Mitigation
			Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
15	Signal	AM	21.4	C	21.5	C	No	21.5	C	Significant and Unavoidable
		PM	65.5	E	86.7 (v/c=0.98)	F	Yes (2)	86.7 (v/c=0.98)	F	
		SAT	24.4	C	43.2	D	No	43.2	D	
17	Signal	AM	-	-	-	-	-	-	-	Significant and Unavoidable
		PM	80.3 (v/c=1.06)	F	115.2 (v/c=1.15)	F	Yes (5)	115.2 (v/c=1.15)	F	
		SAT	54.1	D	65.3	E	No	65.3	E	
35	SSSC	AM	-	-	-	-	-	-	-	
		PM	2.1 (30.3)	A (D)	12.3 (151.9)	B (F)	No ^f	12.3 (151.9)	B (F)	
		SAT	2.1 (19.0)	A (C)	4.1 (36.9)	A (E)	No ^f	4.1 (36.9)	A (E)	
36	SSSC/ Signal	AM	-	-	-	-	-	-	-	Less Than Significant
		PM	4.4 (50.8)	A (F)	** (**)	F (F)	Yes (6)	12.2	B	
		SAT	2.6 (26.3)	A (D)	** (**)	F (F)	No ^f	10.4	B	
37	Signal	AM	90.8 (v/c=0.91)	F	108.0 (v/c=1.00)	F	Yes (5)	59.4	E	Significant and Unavoidable
		PM	141.4 (v/c=1.13)	F	202.8 (v/c=1.38)	F	Yes (5)	115.1 (v/c=1.02)	F	
		SAT	58.3	E	77.9	E	No	41.2	D	
38	SSSC	AM	-	-	-	-	-	-	-	
		PM	6.6 (87.9)	A (F)	80.8 (**)	F (F)	No ^f	80.8 (**)	F (F)	
		SAT	2.4 (33.2)	A (D)	5.0 (58.7)	A (F)	No ^f	5.0 (58.7)	A (F)	
39	SSSC/ Signal	AM	-	-	-	-	-	-	-	Less Than Significant
		PM	8.7 (109.2)	A (F)	** (**)	F (F)	Yes (6)	11.0	B	
		SAT	1.7 (16.8)	A (C)	112.3 (**)	F (F)	No ^f	12.8	B	
40	SSSC/ Signal	AM	-	-	-	-	-	-	-	Conservatively Significant and Unavoidable
		PM	0.7 (11.9)	A (B)	1.2 (15.7)	A (C)	Yes (6)	7.3	A	
		SAT	0.6 (12.5)	A (B)	1.4 (16.7)	A (C)	No ^f	4.3	A	

TABLE 4.13-12 (Continued)
2020 CONDITIONS INTERSECTION LOS SUMMARY^a

Intersection		Traffic Control ^b	Peak Hour	2020 No Project		2020 Plus Project		Significant Impact? ^e	2020 Plus Project Mitigated		Significance After Mitigation
				Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
47	West Grand Avenue/Northgate Avenue	Signal	AM	-	-	-	-	Yes (5)	-	-	Significant and Unavoidable
			PM	86.8 (v/c=0.91)	F	119.3 (v/c=1.00)	F		119.3 (v/c=1.00)	F	
			SAT	17.4	B	17.5	B	No	17.5	B	

^a See Appendix G.G for LOS summary of all study intersections.

^b Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;

^c For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)

^d Intersections operating at unacceptable levels are shown in **bold**. All intersection summarized in the table located in Downtown or provide direct access to Downtown where LOS E (not LOS D) is the threshold.

^e Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-45.

^f The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.

** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

SOURCE: Fehr & Peers, 2013.

The following nine intersections, which are all located in Downtown Oakland or provide direct access to Downtown Oakland where LOS E is the LOS standard, are projected to operate at a deficient level in 2020 with or without the development under the Specific Plan:

15. The signalized Perry Place/I-580 Eastbound Ramps/Oakland Avenue intersection would degrade from LOS E under 2020 No Project conditions to LOS F under 2020 Plus Project conditions during the weekday PM peak hour in 2020 regardless of the Project.
17. The signalized Lake Park Avenue/Lakeshore Avenue intersection would operate at LOS F during the weekday PM in 2020 regardless of the Project.
35. The unsignalized 24th Street/Telegraph Avenue intersection would degrade from LOS D under 2020 No Project conditions to LOS F under 2020 Plus Project conditions during the weekday PM peak. This intersection would not meet the peak-hour volume signal warrant under the 2020 scenarios.
36. The unsignalized 24th Street/Broadway intersection would operate at LOS F during the weekday PM peak hour in 2020 regardless of the Project and degrade from LOS D to LOS F during the Saturday peak hour on the westbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under 2020 Plus Project conditions.
37. The signalized 27th Street/24th Street/Bay Place/Harrison Street intersection would operate at LOS F during the weekday AM and PM peak hours in 2020 regardless of the Project.
38. The unsignalized 23rd Street/Telegraph Avenue intersection would operate at LOS F during the weekday PM peak hour in 2020 regardless of the Project and degrade from LOS D to LOS F during the Saturday peak hour on the eastbound side-street stop-controlled approach. This intersection would not meet the peak-hour volume signal warrant under the 2020 scenarios.
39. The unsignalized 23rd Street/Broadway intersection would operate at LOS F during the weekday PM peak hour in 2020 regardless of the Project and degrade from LOS C to LOS F during the Saturday peak hour on the eastbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under 2020 Plus Project conditions.
40. The unsignalized 23rd Street/Harrison Street intersection would continue to operate at LOS C or better during the weekday PM and Saturday peak hours under 2020 Plus Project conditions. However, this intersection would meet the peak-hour volume signal warrant under Existing Plus Project conditions.
47. The signalized West Grand Avenue/Northgate Avenue intersection would operate at LOS F during the PM peak hour in 2020 regardless of the Project.

2020 Plus Project Impacts and Mitigations

Impact TRANS-7: The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (Intersection #15) which would operate at LOS F during the weekday PM peak hour under 2020 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-7: No feasible mitigation measures are available that would mitigate the Project impacts at the Perry Place/I-580 Eastbound Ramps/Oakland Avenue (Intersection #15) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on the Eastbound I-580 Off-Ramp, a third through lane on northbound Oakland Avenue, or a second lane on the Eastbound I-580 On-Ramp and conversion of the existing northbound through lane to a shared through/right-turn lane. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-8: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the *Lake Park Avenue/Lakeshore Avenue* intersection (Intersection #17). (Significant and Unavoidable)

Mitigation Measure TRANS-8: No feasible mitigation measures are available that would mitigate the Project impacts at the Lake Park Avenue/Lakeshore Avenue (Intersection #17) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on eastbound Lake Park Avenue, or a third left-turn lane on northbound Lakeshore Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-9: The development under the Specific Plan Project would add more than 10 peak-hour trips to *24th Street/Broadway* intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)

Mitigation Measure TRANS-9: Implement Mitigation Measure TRANS-4.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-10: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours at the 27th Street/24th Street/Bay Place/Harrison Street intersection (Intersection #37) under 2020 conditions. (Significant and Unavoidable)

This mitigation measure is consistent with the recommendations of the Harrison Street/ Oakland Avenue Community-Based Transportation Plan (CBTP) completed in 2010 (see page 4.13-27 for more detail).

Mitigation Measure TRANS-10: Implement the following measures at the 27th Street/24th Street/Bay Place/Harrison Street intersection:

- Reconfigure the 24th Street approach at the intersection to restrict access to 24th Street to right turns only from 27th Street and create a pedestrian plaza at the intersection approach.
- Convert 24th Street between Valdez and Harrison Streets to two-way circulation and allow right turns from 24th Street to southbound Harrison Street south of the intersection, which would require acquisition of private property in the southwest corner of the intersection.
- Modify eastbound 27th Street approach from the current configuration (one right-turn lane, two through lanes, and one left-turn lane) to provide one right-turn lane, one through lane, and two left-turn lanes.
- Realign pedestrian crosswalks to shorten pedestrian crossing distances.
- Reduce signal cycle length from 160 to 120 seconds, and optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2020 Plus Project conditions indicates that mitigation at this intersection may be required by 2017. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would improve to LOS E during the weekday AM peak hour and LOS D during the Saturday peak hour and continue to operate at LOS F during the weekday PM peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour, it would not reduce the v/c ratio for critical movements to 0.05 or less. Therefore, the impact would remain significant and unavoidable.

No other feasible mitigation measures are available that would mitigate the Project impacts at the 27th Street/24th Street/Bay Place/Harrison Street (Intersection #37) intersection. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a third lane on northbound or southbound Harrison Street, or a second through lane on eastbound 27th Street. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of existing bicycle lanes, medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.

This mitigation measure would also reduce pedestrian delays at the intersection and improve pedestrian safety by realigning the crosswalks at the intersection and reducing pedestrian crossing distances. No other secondary impacts would result from implementation of this measure.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-11: The development under the Specific Plan Project would add more than 10 peak-hour trips to 23rd Street/Broadway intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)

Mitigation Measure TRANS-11: Implement Mitigation Measure TRANS-5.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-12: The development under the Specific Plan Project would add more than 10 peak-hour trips to 23rd Street/Harrison Street intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-12: Implement Mitigation Measure TRANS-6.

After implementation of this measure, the intersection would improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour. This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations at the Grand Avenue/Harrison Street intersection. Because the improvement may result in potential secondary impacts, this EIR conservatively identifies the impact as significant and unavoidable.

Significance after Mitigation: Conservatively Significant and Unavoidable

Impact TRANS-13: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West Grand Avenue/Northgate Avenue intersection (Intersection #47) which would operate at LOS F during the PM peak hour in 2020. (Significant and Unavoidable)

Mitigation Measure TRANS-13: No feasible mitigation measures are available that would mitigate the Project impacts at the West Grand Avenue/Northgate Avenue intersection (Intersection #47). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on westbound Grand Avenue or a second left-turn lane on eastbound Grand Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians, bicycle lanes, and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

2020 Plus Project Mitigated Conditions

Table 4.13-12 summarizes intersection operations after implementation of the mitigation measures described above. Mitigation measures would reduce two of the seven identified significant impacts to less than significant levels.

2035 Intersection Impacts

This section addresses the intersection impacts that would occur in 2035 with the full buildout of the Broadway Valdez Development Program in 2035. As summarized in Table 4.13-7, the Broadway Valdez Development Program would consist of a net increase of about 1,800 residential units, 1,114,000 square feet of retail, 695,000 square feet of office, and a 180-room hotel in the Plan Area. Items addressed in this section include the development of traffic volume forecasts for the 2035 No Project and 2035 Plus Project scenarios, intersection operations results, and project impacts and mitigations at intersections.

2035 Intersection Traffic Forecasts

Figure D-9 and D-10 in Appendix G.D shows intersection traffic volumes under 2035 No Project and 2035 Plus Project scenarios, respectively. The Traffic Forecasting Methodology discussion starting on page 4.13-43 describes the process used to develop traffic volumes under 2035 No Project and 2035 Plus Project conditions.

2035 Roadway Network

Similar to the 2020 analysis and as previously described starting on page 4.13-24, this analysis assumes the following roadway modifications for the 2035 No Project conditions:

- Installation of Class 2 bicycle lanes on Broadway between 38th Street and SR 24, which would eliminate one southbound through lane on Broadway at the College Avenue/Broadway (Intersection #4) and 40th Street/Broadway (Intersection #9) intersections.
- Reconfiguration and optimization of signal timing parameters at the West MacArthur Boulevard/Broadway intersection (Intersection #12)
- Reconfiguration and optimization of signal timing parameters at the MacArthur Boulevard/Piedmont Avenue intersection (Intersection #13)
- Signalization and reconfiguration of the Grand Avenue/Brush Street intersection (Intersection #44)
- Reconfiguration and optimization of signal timing parameters at the Grand Avenue/San Pablo Avenue intersection (Intersection #45)

In addition to the roadway modifications listed above, the improvements listed starting on page 4.13-37 would also be implemented as part of the Specific Plan and are assumed for the 2035 Plus Project conditions. No other modifications to the roadway network are assumed for the 2035 No Project or 2035 Plus Project analyses.

This analysis assumes that signal timing parameters that do not require upgrades to the signal equipment, such as amount of green time assigned to each intersection approach, would be optimized at the signalized study intersections under 2035 No Project and 2035 Plus Project conditions. This assumption reflects current City of Oakland practice that incorporates basic signal timing changes into routine maintenance of the traffic signal system. It is expected that retiming of

signals in areas with the greatest need (e.g., major streets, areas with rapidly shifting traffic patterns) would be prioritized as part of the regular ongoing maintenance of signal equipment.

2035 Intersection Operations

Intersection LOS calculations for 2035 No Project and 2035 Plus Project scenarios were completed with the traffic volumes and roadway network described above. **Table 4.13-13** summarizes the results for study intersections projected to operate at an unacceptable LOS under 2035 No Project or 2035 Plus Project scenarios, or where the Project would cause a significant impact. Appendix G.G presents a full summary table for LOS at all 57 study intersections. Appendix G.L and Appendix G.M present the detailed intersection LOS calculation worksheets under 2035 No Project conditions and 2035 Plus Project conditions, respectively.

The following 19 intersections, which are all, except one, located in Downtown Oakland or provide direct access to Downtown Oakland where LOS E is the LOS standard, are projected to operate at a deficient level in 2035 with or without the development under the Specific Plan:

7. The signalized 51st Street/Pleasant Valley Avenue/Broadway intersection would operate at LOS F during the weekday PM and Saturday peak hours in 2035 regardless of the Project.
8. The signalized 40th Street/Telegraph Avenue intersection would operate at LOS F during the weekday PM peak hour, in 2035 regardless of the Project.
11. The signalized West MacArthur Boulevard/Telegraph Avenue intersection would operate at LOS F during the weekday PM peak hour in 2035 regardless of the Project.
15. The signalized Perry Place/I-580 Eastbound Ramps/Oakland Avenue intersection would operate at LOS F during the weekday PM peak hour in 2035 regardless of the Project.
16. The signalized Grand Avenue/Lake Park Avenue/Santa Clara Avenue intersection would operate at LOS F during the Saturday peak hour in 2035 regardless of the Project.
17. The signalized Lake Park Avenue/Lakeshore Avenue intersection would operate at LOS F during the weekday PM and Saturday peak hours in 2035 regardless of the Project.
- 20/21. The signalized Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Avenue/Broadway intersections (which operate as one signal) would operate at LOS D under 2035 No Project conditions and LOS F under 2035 Plus Project conditions during the weekday PM peak hour.
29. The signalized 27th Street/Telegraph Avenue intersection would operate at LOS F during the weekday PM peak hour in 2035 regardless of the Project.
30. The signalized 27th Street/Broadway intersection would operate at LOS D under 2035 No Project conditions, and at LOS F under 2035 Plus Project conditions during the weekday PM peak hour.

TABLE 4.13-13
2035 CONDITIONS INTERSECTION LOS SUMMARY^a

Intersection	Traffic Control ^b	Peak Hour	2035 No Project		2035 Plus Project		Significant Impact? ^e	2035 Plus Project Mitigated		Significance After Mitigation
			Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
7	Signal	AM	47.8	D	51.2	D	No	44.4	D	Significant and Unavoidable
		PM	105.5 (v/c=1.12)	F	118.5 (v/c=1.14)	F	Yes (5)	125.7 (v/c=1.17)	F	
		SAT	99.9 (v/c=1.11)	F	108.3 (v/c=1.14)	F	Yes (5)	85.6 (v/c=1.10)	F	
8	Signal	AM	-	-	-	-		-	-	Less Than Significant
		PM	123.0 (v/c=1.75)	F	135.0 (v/c=1.80)	F	Yes (5)	147.2 (v/c=1.29)	F	
		SAT	55.0	D	56.3	E	Yes (4)	51.2	D	
11	Signal	AM	-	-	-	-		-	-	Less Than Significant
		PM	80.7 (v/c=1.82)	F	126.5 (v/c=2.23)	F	Yes (5)	85.7 (v/c=1.06)	F	
		SAT	17.1	B	39.7	D	No	35.7	D	
15	Signal	AM	24.9	C	25.3	C	No	25.3	C	Significant and Unavoidable
		PM	95.5 (v/c=1.02)	F	127.0 (v/c=1.12)	F	Yes (5)	127.0 (v/c=1.12)	F	
		SAT	32.3	C	68.6	E	No	68.6	E	
16	Signal	AM	-	-	-	-		-	-	Significant and Unavoidable
		PM	65.1	E	73.8	E	No	73.8	E	
		SAT	90.8 (v/c=1.21)	F	98.0 (v/c=1.25)	F	Yes (5)	98.0 (v/c=1.25)	F	
17	Signal	AM	-	-	-	-		-	-	Significant and Unavoidable
		PM	216.3 (v/c=1.50)	F	256.0 (v/c=1.63)	F	Yes (5)	256.0 (v/c=1.63)	F	
		SAT	96.6 (v/c=1.13)	F	141.3 (v/c=1.32)	F	Yes (5)	141.3 (v/c=1.32)	F	
20 & 21	Signal	AM	18.7	B	24.8	C	No	24.8	C	Significant and Unavoidable
		PM	52.0	D	88.3 (v/c=1.32)	F	Yes (3,4)	88.1 (v/c=1.32)	F	
		SAT	16.5	B	30.4	C	No	30.6	C	

TABLE 4.13-13 (Continued)
2035 CONDITIONS INTERSECTION LOS SUMMARY^a

Intersection		Traffic Control ^b	Peak Hour	2035 No Project		2035 Plus Project		Significant Impact? ^e	2035 Plus Project Mitigated		Significance After Mitigation
				Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
29	27th Street/Telegraph Avenue	Signal	AM	27.1	C	29.3	C	No	40.7	D	Significant and Unavoidable
			PM	103.7 (v/c=1.77)	F	142.6 (v/c=2.04)	F	Yes (5)	105.5 (v/c=1.21)	F	
			SAT	23.1	C	41.7	D	No	36.2	D	
30	27th Street/Broadway	Signal	AM	-	-	-	-	-	-	-	Significant and Unavoidable
			PM	53.9	D	172.8 (v/c=2.58)	F	Yes (3,4)	150.9 (v/c=1.77)	F	
			SAT	19.9	B	40.7	D	No	35.3	D	
31*	26th Street/27th Street/Valdez Street	Signal	AM	-	-	-	-	-	-	-	
			PM	141.2 (v/c=0.68)	F	19.6	B	No	33.0	C	
			SAT	15.1	B	13.0	B	No	14.3	B	
35	24th Street/Telegraph Avenue	SSSC	AM	-	-	-	-	-	-	-	
			PM	2.9 (57.5)	A (F)	34.7 (**)	D (F)	No ^f	34.7 (**)	D (F)	
			SAT	2.7 (26.4)	A (D)	17.0 (175.5)	C (F)	No ^f	17.0 (175.5)	C (F)	
36	24th Street/Broadway	SSSC /Signal	AM	-	-	-	-	-	-	-	Less Than Significant
			PM	6.2 (85.2)	A (F)	** (**)	F (F)	Yes (6)	19.1	B	
			SAT	3.8 (45.0)	A (E)	** (**)	F (F)	Yes (6)	14.1	B	
37	27th Street/24th Street/Bay Place/Harrison Street	Signal	AM	164.6 (v/c=1.22)	F	213.0 (v/c=1.38)	F	Yes (5)	92.1 (v/c=1.04)	F	Significant and Unavoidable
			PM	299.3 (v/c=1.69)	F	402.8 (v/c=2.01)	F	Yes (5)	189.3 (v/c=1.39)	F	
			SAT	68.2	E	127.9 (v/c=1.08)	F	Yes (3,4)	51.3	D	
38	23rd Street/Telegraph Avenue	SSSC	AM	-	-	-	-	-	-	-	
			PM	44.5 (**)	E (F)	** (**)	F (F)	No ^f	** (**)	F (F)	
			SAT	3.0 (51.7)	A (F)	18.6 (**)	C (F)	No ^f	18.6 (**)	C (F)	
39	23rd Street/Broadway	SSSC /Signal	AM	-	-	-	-	-	-	-	Less Than Significant
			PM	26.2 (414.0)	D (F)	** (**)	F (F)	Yes (6)	16.2	B	
			SAT	1.9 (20.3)	A (C)	** (**)	F (F)	Yes (6)	15.3	B	
40	23rd Street/Harrison Street	SSSC /Signal	AM	-	-	-	-	-	-	-	Conservatively Significant and Unavoidable
			PM	1.3 (28.4)	A (D)	6.4 (125.0)	A (F)	Yes (6)	10.9	B	
			SAT	0.8 (14.9)	A (C)	2.2 (27.5)	A (D)	Yes (6)	5.4	A	

TABLE 4.13-13 (Continued)
2035 CONDITIONS INTERSECTION LOS SUMMARY^a

Intersection	Traffic Control ^b	Peak Hour	2035 No Project		2035 Plus Project		Significant Impact? ^e	2035 Plus Project Mitigated		Significance After Mitigation
			Delay ^c	LOS ^d	Delay ^c	LOS ^d		Delay ^c	LOS ^d	
47	West Grand Avenue/Northgate Avenue	Signal	AM	-	-	-	-	-	-	Significant and Unavoidable
			PM	170.9 (v/c=1.16)	F	198.2 (v/c=1.24)	F	Yes (5)	198.2 (v/c=1.24)	
			SAT	17.6	B	19.0	B	No	19.0	
49	Grand Avenue/Broadway	Signal	AM	49.4	D	61.6	E	No	75.6	Significant and Unavoidable
			PM	52.0	D	98.9 (v/c=1.74)	F	Yes (2,4)	84.8 (v/c=1.53)	
			SAT	17.4	B	21.3	C	No	21.3	
57	5th Street/I-880 Southbound On-Ramp/Broadway	Signal	AM	-	-	-	-	-	-	
			PM	92.4 (v/c=1.19)	F	92.3 (v/c=1.20)	F	No	92.3 (v/c=1.20)	
			SAT	43.4	D	45.1	D	No	45.1	

^a See Appendix G.G for LOS summary of all study intersections.

^b Signal = intersection is controlled by a traffic signal; SSSC = Intersection is controlled by a stop-sign on the side-street approach;

^c For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst movement and average intersection delay are shown: intersection average (worst movement)

^d Intersections operating at unacceptable levels are shown in **bold**.

^e Number in parenthesis refers to the significance criteria triggering the impact, as listed on page 4.13-45.

^f The Project would not cause an impact at this unsignalized intersection because the intersection would not meet the peak-hour signal warrant, although it would operate at LOS F.

* Denotes an intersection not located in Downtown or that does not provide direct access to Downtown where LOS E (not LOS D) is the threshold.

** Denotes intersections where delay cannot be calculated accurately due to high amount of delay.

SOURCE: Fehr & Peers, 2013.

31. The signalized 26th Street/27th Street/Valdez Street intersection (which is not located in Downtown Oakland and would not provide direct access to Downtown Oakland where LOS D is the LOS standard) would operate at LOS F during the 2035 No Project conditions. The intersection would improve to LOS C under 2035 Plus Project conditions.
35. The unsignalized 24th Street/Telegraph Avenue intersection would operate at LOS F during the weekday PM peak hour under 2035 No Project and 2035 Plus Project conditions and degrade from LOS D under 2035 No Project conditions to LOS F under 2035 Plus Project conditions during the Saturday peak hour on the eastbound side-street stop-controlled approach. This intersection would not meet the peak-hour volume signal warrant under the 2035 scenarios.
36. The unsignalized 24th Street/Broadway intersection would operate at LOS F during the weekday PM regardless of the Project and degrade from LOS E under 2035 No Project conditions to LOS F under 2035 Plus Project conditions during the Saturday peak hour on the westbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under 2035 Plus Project conditions.
37. The signalized 27th Street/24th Street/Bay Place/Harrison Street intersection would operate at LOS F during the weekday AM and PM peak hours in 2035 regardless of the Project and operate at LOS E under 2035 No Project conditions and LOS F under 2035 Plus Project conditions during the Saturday peak hour.
38. The unsignalized 23rd Street/Telegraph Avenue intersection would operate at LOS F during the weekday PM and Saturday peak hours in 2035 regardless of the Project on the eastbound side-street stop-controlled approach. This intersection would not meet the peak-hour volume signal warrant under 2035 scenarios.
39. The unsignalized 23rd Street/Broadway intersection would operate at LOS F during the weekday PM peak hour in 2035 regardless of the Project and degrade from LOS C to LOS F during the Saturday peak hour on the eastbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under 2035 Plus Project conditions.
40. The unsignalized 23rd Street/Harrison Street intersection would degrade from LOS D to LOS F during the weekday PM peak hour on the eastbound side-street stop-controlled approach. This intersection would meet the peak-hour volume signal warrant under 2035 Plus Project conditions.
47. The signalized West Grand Avenue/Northgate Avenue intersection would operate at LOS F during the weekday PM peak hour in 2035 regardless of the Project.
49. The signalized Grand Avenue/Broadway intersection would operate at LOS D under 2035 No Project conditions and LOS F under 2035 Plus Project conditions during the weekday PM peak hour.
57. The signalized 5th Street/I-880 Southbound On-Ramp/Broadway intersection would operate at LOS F during the weekday AM and PM peak hours in 2035 regardless of the Project.

2035 Plus Project Impacts and Mitigations

Impact TRANS-14: The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM and Saturday peak hours at the 51st Street/Pleasant Valley Avenue/Broadway intersection (Intersection #7) under 2035 conditions. (Significant and Unavoidable)

This mitigation measure is consistent with the modifications proposed at this intersection as part of the Safeway Redevelopment Project and documented in the *Safeway Redevelopment Project Broadway at Pleasant Valley Avenue Draft EIR* (January 2013).

Mitigation Measure TRANS-14: Implement the following measures at the 51st Street / Pleasanton Valley Avenue/Broadway intersection:

- Modify southbound approach to provide two left-turn lanes, one through lane, and one shared through/right lane.
- Modify northbound approach to provide one left-turn lane, one through lane, and one shared through/right lane.
- Upgrade signal equipment to replace the existing split phasing in the north/south direction with protected left turns.
- Eliminate the existing northbound and southbound slip right-turn lanes and “pork chop” islands.
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2031. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM and Saturday peak hours. The mitigation measure would not reduce the increase in v/c ratio for a critical movement to 0.05 or less.

No other feasible mitigation measures are available that would mitigate the Project impacts at the 51st Street/Pleasanton Valley Avenue/Broadway intersection (Intersection #7). Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a second left-turn lane on either the westbound Pleasant Valley Avenue or the eastbound 51st Street, or a third lane on northbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking, and are considered to be infeasible.

In addition, introduction of an additional vehicle lane would increase the pedestrian crossing distance and would require increasing the signal cycle length to accommodate the increased pedestrian crossing distance, which would conflict with City policy concerning pedestrian safety and comfort. Therefore, the impact is considered significant and unavoidable. No other secondary impacts would result from implementation of this measure.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-15: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour at the 40th Street/Telegraph Avenue intersection (Intersection #8) under 2035 conditions. (Significant)

The impact and mitigation measure at this intersection are consistent with the one identified in the *MacArthur Transit Village Project Draft EIR* (January 2008).

Mitigation Measure TRANS-15: Implement the following measures at the 40th Street / Telegraph Avenue intersection:

- Provide permitted-protected operations on the eastbound and westbound approaches
- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2034. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. However, the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour to less than 2035 No Project conditions and the increase in v/c ratio for a critical movement to 0.03 or less. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than Significant.

Impact TRANS-16: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the *West MacArthur Boulevard/Telegraph Avenue* intersection (Intersection #11) under 2035 conditions. (Significant)

The impact and mitigation measure at this intersection are consistent with the one identified in the *Alta Bates Summit Medical Center Summit Campus Seismic Upgrade and Master Plan Project Draft EIR* (December 2009).

Mitigation Measure TRANS-16: Implement the following measures at the West MacArthur Boulevard/Telegraph Avenue intersection:

- Provide protected left-turn phase(s) for the northbound and southbound approaches.
- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of

this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall mitigate the impact to less than significant.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2030. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. However, the mitigation measure would reduce the total intersection v/c ratio to less than under 2035 No Project conditions and the increase in v/c ratio for a critical movement to 0.03 or less. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than Significant.

Impact TRANS-17: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (Intersection #15) under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-17: No feasible mitigation measures are available that would mitigate the Project impacts at the Perry Place/I-580 Eastbound Ramps/Oakland Avenue (Intersection #15) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on the Eastbound I-580 Off-Ramp, a third through lane on northbound Oakland Avenue, or a second lane on the Eastbound I-580 On-Ramp and conversion of the existing northbound through lane to a shared through/right-turn lane. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-18: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more (Significant Threshold #5) at an intersection operating at LOS F during the Saturday peak hour at the *Grand Avenue/Lake Park Avenue/Santa Clara Avenue* intersection (Intersection #16) under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-18: No feasible mitigation measures are available that would mitigate the Project impacts at the Grand Avenue/Lake Park Avenue/Santa Clara Avenue intersection (Intersection #16). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Grand Avenue. However, these modifications cannot be accommodated within

the existing automobile right-of-way and would require additional right-of-way, and/or loss of on-street parking sidewalks, and/or bulbouts, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-19: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the *Lake Park Avenue/Lakeshore Avenue* intersection (Intersection #17) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-19: No feasible mitigation measures are available that would mitigate the Project impacts at the Lake Park Avenue/Lakeshore Avenue (Intersection #17) intersection. Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third lane on eastbound Lake Park Avenue, or a third left-turn lane on northbound Lakeshore Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-20: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the *Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway* intersection (Intersections #20 and #21) under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-20: No feasible mitigation measures are available that would mitigate the Project impacts at the Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway intersection (Intersections #20 and #21). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians, and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-21: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the 27th Street/Telegraph Avenue intersection (Intersection #29) which would operate at LOS F during the weekday PM peak hour under 2035 conditions. (Significant and Unavoidable)

The impact and mitigation measure are consistent with the ones identified in the *Alta Bates Summit Medical Center Summit Campus Seismic Upgrade and Master Plan Project Draft EIR* (December 2009).

Mitigation Measure TRANS-21: Implement the following measures at the 27th Street/Telegraph Avenue intersection:

- Provide protected left-turn phases for the northbound and southbound approaches.
- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2.
- Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2029. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday PM peak hour, it would not reduce the increase in v/c ratio for critical movements to 0.05 or less. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-22: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour and at the 27th Street/ Broadway intersection (Intersection #30) under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-22: Implement the following measures at the 27th Street / Broadway intersection:

- Upgrade traffic signal operations at the intersection to actuated-coordinated operations
- Reconfigure westbound 27th Street approach to provide a 150-foot left-turn pocket, one through lane, and one shared through/right-turn lane.
- Provide protected left-turn phase(s) for the northbound and southbound approaches.
- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2024. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as a third through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians, and/or on-street parking, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable. No other secondary impacts would result from implementation of this measure.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-23: The development under the Specific Plan Project would add more than 10 peak-hour trips to *24th Street/Broadway* intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)

Mitigation Measure TRANS-23: Implement Mitigation Measure TRANS-4.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-24: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the Saturday peak hour at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (Intersection #37) under 2035 conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-24: Implement Mitigation Measure TRANS-10.

After implementation of this measure, the intersection would continue to operate at LOS F during the AM and PM peak hours and improve to LOS D during the Saturday peak hour. Although the mitigation measure would reduce the total intersection v/c ratio during the weekday AM and PM peak hours, it would not reduce the v/c ratio for critical movements to 0.02 or less. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-25: The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Broadway* intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)

Mitigation Measure TRANS-25: Implement Mitigation Measure TRANS-5.

After implementation of this measure, the intersection would improve to LOS B during both weekday PM and Saturday peak hours. No secondary impacts would result from implementation of this measure.

Significance after Mitigation: Less than significant.

Impact TRANS-26: The development under the Specific Plan Project would add more than 10 peak-hour trips to 23rd Street/Harrison Street intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant and Unavoidable)

Mitigation Measure TRANS-26: Implement Mitigation Measure TRANS-6.

After implementation of this measure, the intersection would improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour. This intersection is about 150 feet north of the Grand Avenue/Harrison Street intersection (Intersection #52). Considering the proximity of the two intersections, signalization of the 23rd Street/Harrison Street intersection may adversely affect traffic operations at the Grand Avenue/Harrison Street intersection. Because the improvement may result in potential secondary impacts, this EIR conservatively identifies the impact as significant and unavoidable.

Significance after Mitigation: Conservatively Significant and Unavoidable.

Impact TRANS-27: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West Grand Avenue/Northgate Avenue intersection (Intersection #47) which would operate at LOS F during the weekday PM peak hour in 2035. (Significant and Unavoidable)

Mitigation Measure TRANS-27: No feasible mitigation measures are available that would mitigate the Project impacts at the West Grand Avenue/Northgate Avenue intersection (Intersection #47). Traffic operations at the intersection can be improved by providing additional automobile travel lanes, such as a third through lane on westbound Grand Avenue or a second left-turn lane on eastbound Grand Avenue. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of medians, bicycle lanes, and/or on-street parking, and are considered to be infeasible. Therefore, the impact is considered significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Impact TRANS-28: The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the Grand Avenue/Broadway intersection (Intersection #49) in 2035. (Significant and Unavoidable)

Mitigation Measure TRANS-28: Implement the following measures at the Grand Avenue/Broadway intersection:

- Provide permitted-protected left-turn phasing for the northbound and southbound approaches.
- Optimize signal timing (i.e., changing the amount of green time assigned to each lane of traffic approaching the intersection).
- Coordinate the signal timing changes at this intersection with the adjacent intersections that are in the same signal coordination group.

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

- PS&E to modify intersection as detailed in Mitigation Measure TRANS-2. Signal timing plans for the signals in the coordination group.

The project sponsor shall fund the cost of preparing and implementing these plans. However, if the City adopts a transportation impact fee program prior to implementation of this mitigation measure, the project sponsor shall have the option to pay the applicable fee in lieu of implementing this mitigation measure and payment of the fee shall be considered the equivalent of implementing the mitigation measure, which would still result in significant unavoidable impacts.

A straight line interpolation of intersection traffic volume between Existing and 2035 Plus Project conditions indicates that mitigation at this intersection may be required by 2031. Investigation of the need for this mitigation shall be studied at that time and every three years thereafter until 2035 or until the mitigation measure is implemented, whichever occurs first.

After implementation of this measure, the intersection would continue to operate at LOS F during the weekday PM peak hour. Therefore, the impact would remain significant and unavoidable.

Traffic operations at the intersection can be further improved by providing additional automobile travel lanes, such as an exclusive left-turn lane on westbound Grand Avenue or an additional through lane on northbound or southbound Broadway. However, these modifications cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of on-street parking, and are considered to be infeasible. No other secondary impacts would result from implementation of this measure.

Significance after Mitigation: Significant and Unavoidable.

2035 Plus Project Mitigated Conditions

Table 4.13-13 summarizes intersection operations after implementation of the mitigation measures described above. Mitigation measures would reduce seven of the identified significant impacts to less than significant levels, while 21 of the identified impacts would remain significant and unavoidable.

Freeway Impacts

Table 4.13-14, Table 4.13-15, and Table 4.13-16 show mainline traffic volumes and LOS based on freeway mainline density under Existing, 2015, and 2035 conditions, respectively. The existing freeway volumes are based on Caltrans Performance Measurement System (PeMS) data collected in Fall 2012, and the 2015 and 2035 freeway volumes were developed based on the results of the ACTC Model. As shown, traffic generated by the development under the Specific Plan would not cause any mainline segments to worsen to an unacceptable LOS F. Therefore, the Project would not cause a significant impact on freeway segment operations.

**TABLE 4.13-14
EXISTING FREEWAY MAINLINE LEVELS OF SERVICE**

Mainline Segment, Direction, & Location	Peak Hour	Existing			Existing Plus Project		
		Volume ^a	Density ^b	LOS	Volume	Density ^b	LOS
SR 24 Eastbound from 52nd St to Telegraph Ave	AM	3,370	13.1	B	3,380	13.2	B
	PM	5,770	22.5	C	5,810	22.6	C
SR 24 Westbound from Telegraph Ave to 52nd St	AM	6,570	25.7	C	6,600	25.8	C
	PM	3,300	12.9	B	3,330	13.0	B
I-580 Eastbound from MacArthur Blvd to SR24/I-980 Junction	AM	5,640	18.9	C	5,780	19.4	C
	PM	6,840	22.9	C	6,940	23.2	C
I-580 Westbound from SR24/I-980 to Jct. MacArthur Blvd	AM	6,760	22.6	C	6,780	22.7	C
	PM	5,480	18.4	C	5,510	18.5	C
I-580 Eastbound from Grand Ave to Oakland Ave	AM	4,250	16.4	B	4,370	16.9	B
	PM	6,410	24.8	C	6,690	26.0	D
I-580 Westbound from Oakland Ave to Grand Ave	AM	7,790	31.5	D	7,940	32.4	D
	PM	5,260	20.3	C	5,490	21.2	C
I-880 Southbound from Oak Street to 5th Avenue	AM	6,980	33.5	D	7,020	33.7	D
	PM	7,480	36.2	E	7,560	36.7	E
I-880 Northbound from 5th Avenue to Oak St	AM	7,060	33.9	D	7,100	34.1	D
	PM	7,050	33.8	D	7,100	34.1	D
I-980 Eastbound from 14th Street to I-580	AM	2,610	13.7	B	2,640	13.8	B
	PM	4,470	23.4	C	4,540	23.8	C
I-980 Westbound from I-580 to 14th Street	AM	4,830	25.4	C	5,000	26.4	D
	PM	2,970	15.6	B	3,100	16.3	B

^a Existing volumes based on Caltrans PeMS data, fall 2012.

^b Density is presented in passenger cars per mile per lane (pc/mi/ln) and calculated based on the 2000 HCM methodology.

SOURCE: Fehr & Peers and Caltrans, 2013.

**TABLE 4.13-15
2020 MAINLINE LEVELS OF SERVICE**

Mainline Segment, Direction, & Location	Peak Hour	2020 No Project			2020 Plus Project		
		Volume	Density ^a	LOS	Volume	Density ^a	LOS
SR 24 Eastbound from 52nd St to Telegraph Ave	AM	3,600	14.0	B	3,610	14.1	B
	PM	6,360	24.8	C	6,400	25.0	C
SR 24 Westbound from Telegraph Ave to 52nd St	AM	6,890	27.1	D	6,920	27.3	D
	PM	3,840	15.0	B	3,870	15.1	B
I-580 Eastbound from MacArthur Blvd to SR24/I-980 Junction	AM	6,180	20.7	C	6,290	21.1	C
	PM	7,280	24.4	C	7,350	24.6	C
I-580 Westbound from SR24/I-980 to Jct. MacArthur Blvd	AM	7,340	24.6	C	7,360	24.7	C
	PM	6,030	20.2	C	6,060	20.3	C
I-580 Eastbound from Grand Ave to Oakland Ave	AM	6,000	23.2	C	6,100	23.6	C
	PM	6,550	25.4	C	6,760	26.3	D
I-580 Westbound from Oakland Ave to Grand Ave	AM	7,930	32.4	D	8,040	33.1	D
	PM	6,110	23.6	C	6,280	24.3	C
I-880 Southbound from Oak Street to 5th Avenue	AM	7,350	35.4	E	7,380	35.6	E
	PM	7,630	37.2	E	7,700	37.6	E
I-880 Northbound from 5th Avenue to Oak St	AM	6,650	31.8	D	6,690	32.0	D
	PM	6,910	33.1	D	6,960	33.4	D
I-980 Eastbound from 14th Street to I-580	AM	2,940	15.4	B	2,970	15.6	B
	PM	4,790	25.2	C	4,860	25.6	C
I-980 Westbound from I-580 to 14th Street	AM	5,180	27.5	D	5,320	28.4	D
	PM	3,600	18.9	C	3,700	19.4	C

^a Density is presented in passenger cars per mile per lane (pc/mi/ln) and calculated based on the 2000 HCM methodology.

SOURCE: Fehr & Peers and Caltrans, 2013.

**TABLE 4.13-16
2035 CONDITIONS MAINLINE LEVELS OF SERVICE**

Mainline Segment, Direction, & Location	Peak Hour	2035 No Project			2035 Plus Project		
		Volume	Density ^a	LOS	Volume	Density ^a	LOS
SR 24 Eastbound from 52nd St to Telegraph Ave	AM	4,230	16.5	B	4,240	16.5	B
	PM	6,640	26.0	D	6,680	26.2	D
SR 24 Westbound from Telegraph Ave to 52nd St	AM	7,270	29.0	D	7,300	29.1	D
	PM	4,850	18.9	C	4,880	19.0	C
I-580 Eastbound from MacArthur Blvd to SR24/I-980 Junction	AM	6,790	22.7	C	6,930	23.2	C
	PM	7,550	25.3	C	7,650	25.6	C

TABLE 4.13-16 (Continued)
2035 CONDITIONS MAINLINE LEVELS OF SERVICE

Mainline Segment, Direction, & Location	Peak Hour	2035 No Project			2035 Plus Project		
		Volume	Density ^a	LOS	Volume	Density ^a	LOS
I-580 Westbound from SR24/I-980 to Jct. MacArthur Blvd	AM	7,710	25.8	C	7,730	25.9	C
	PM	6,720	22.5	C	6,750	22.6	C
I-580 Eastbound from Grand Ave to Oakland Ave	AM	6,630	25.8	C	6,750	26.3	D
	PM	6,890	26.9	D	7,170	28.2	D
I-580 Westbound from Oakland Ave to Grand Ave	AM	8,050	33.1	D	8,200	34.1	D
	PM	6,500	25.2	C	6,730	26.2	D
I-880 Southbound from Oak Street to 5th Avenue	AM	7,630	37.2	E	7,670	37.4	E
	PM	8,060	40.3	E	8,140	41.0	E
I-880 Northbound from 5th Avenue to Oak St	AM	6,920	33.2	D	6,960	33.4	D
	PM	7,740	37.9	E	7,790	38.2	E
I-980 Eastbound from 14th Street to I-580	AM	3,220	16.9	B	3,250	17.0	B
	PM	4,660	24.5	C	4,730	24.9	C
I-980 Westbound from I-580 to 14th Street	AM	5,460	29.4	D	5,630	30.6	D
	PM	4,080	21.4	C	4,210	22.1	C

^a Density is presented in passenger cars per mile per lane (pc/mi/ln) and calculated based on the 2000 HCM methodology.

SOURCE: Fehr & Peers and Caltrans, 2013.

Required Congestion Management Program (CMP) Evaluation

The CMP evaluation is based on application of Significance Thresholds #7 and #8. The Alameda County Congestion Management Program (CMP) requires the assessment of development-driven impacts to regional roadways. Because the development under the Specific Plan would generate more than 100 “net new” PM peak-hour trips, ACTC requires the use of the Countywide Travel Demand Forecasting Model to assess the impacts on regional roadways in the Plan Area vicinity. The CMP and Metropolitan Transportation System (MTS) roadways in the Plan Area vicinity identified in the NOP comments by ACTC (June 14, 2012 letter) include:

I-580, I-880, I-980, SR 24, Broadway, Harrison Street, Telegraph Avenue, Martin Luther King Jr. Way, San Pablo Avenue, Webster Street, Castro Street, Brush Street, Grand Avenue, MacArthur Boulevard, 14th Street, and 12th Street.⁹

The ACTC Model used in this study is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes and transit ridership using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. This process takes into account changes in travel patterns due to future growth

⁹ The roadway segments included in this evaluation are not based on an assessment of the project trip distribution or application of screening criteria to determine if the project would contribute enough new trips to warrant analysis.

and balances trip productions and attractions. This version of the Countywide Model is based on Association of Bay Area Governments (ABAG) *Projections 2009* land uses for 2020 and 2035.

For the purposes of this CMP and MTS analysis, the Broadway Valdez Development Program is assumed to not be included in the ACTC Model in order to present a more conservative analysis. The “constrained” traffic forecasts for the 2020 and 2035 scenarios were extracted from the ACTC Model for the CMP and MTS roadway segments from that model and used as the “No Project” forecasts. Vehicle trips generated by the Broadway Valdez Development Program were added to the “No Project” forecasts to estimate the “Plus Project” forecasts.¹⁰

The CMP and MTS segments were assessed using a v/c ratio methodology (TRB, 1985). For freeway segments, a per-lane capacity of 2,000 vehicles per hour (vph) was used, consistent with the latest CMP documents. For surface streets, a per-lane capacity of 800 vph was used. Roadway segments with a v/c ratio greater than 1.00 signify LOS F.

The “Plus Project” results were compared to the baseline results for the 2020 and 2035 horizon years. Appendix G.O provides the 2020 and 2035 peak-hour volumes, v/c ratios and the corresponding levels of service for No Project and Plus Project conditions.

Impact TRANS-29: The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments:

- **MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035.**
- **Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035.**
- **Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035.**
- **Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035.**
- **San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035.**

¹⁰ Due to differences in the land use assumptions and differences in analysis methodologies, the forecasted traffic volumes on the roadway links can be different from the intersection volumes, particularly at the local level. The first area of difference is the land use data sets employed for the intersection forecasts and the MTS forecasts. The intersection forecasts, which are used to assess project traffic impacts on City of Oakland intersections, are based on land use data adjusted to reflect all past, present, existing, approved, pending and reasonably foreseeable projects in the City of Oakland, which differs from the data in the ACTC Model. The second area of difference is the use of the Furness process. The intersection forecasts use the output of the ACTC Model as an input to develop intersection volumes in conjunction with existing traffic counts. The CMP and MTS roadway analysis is based on the outputs of the ACTC Model directly on a roadway segment level. It is not unusual to have discrepancies given that the two analyses measure impacts at a different scale. For local streets, intersections are typically a more accurate measure of operating conditions because the capacity of an urban street, defined as the number of vehicles that can pass through its intersections, is controlled by the capacity at its intersections.

- **Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035. (Significant and Unavoidable)**

Mitigation Measure TRANS-29: Implement Mitigation Measures TRANS-1, TRANS-10, TRANS-13, TRANS-14, TRANS-15, TRANS-16, TRANS-20, TRANS 22, TRANS-24, TRANS-27, and TRANS-28.

Traffic operations along the adversely affected roadway segments would improve, but would continue to operate at LOS F after implementation of the mitigation measures.

In addition, as previously described, the Broadway Valdez Specific Plan includes policies and strategies that encourage walking, biking and transit, including a TDM program. These policies and strategies would reduce the Project vehicle trip generation, which would either eliminate or reduce the magnitude of this impact. Because the effectiveness of these policies and strategies on reducing the Project vehicle trip generation cannot be accurately estimated, this EIR conservatively does not account for them in estimating Project trip generation and does not rely on them to mitigate this impact.

No other feasible mitigation measures are available that would mitigate the Project impacts at the adversely affected roadway segments. The LOS at these roadway segments can be improved by providing additional automobile travel lanes on the affected roadway segments. However, additional travel lanes cannot be accommodated within the existing automobile right-of-way and would require additional right-of-way, and/or loss of bicycle lanes, medians and/or on-street parking or narrowing of existing sidewalks, and are considered to be infeasible. Therefore, the impact would remain significant and unavoidable.

Significance after Mitigation: Significant and Unavoidable.

Transit Travel Time

The discussion of transit travel time is based on application of Significance Threshold #9. In general, the City of Oakland has no basis to establish a numerical threshold for “substantially increased travel times” due to several factors:

- First, bus service, in general, is extremely transitory, and can change quite frequently, as is the case with AC Transit’s bus network. Existing routes may be eliminated, or new routes may be put in service by the time the Broadway Valdez Development Program is built out. Similar to parking, transit service is not part of the physical environment, and can change over time in response to external factors. In fact, AC Transit has generally reduced its bus service over the past few years in response to budget issues.
- Second, any numerical threshold to determine the significance of increased travel times needs to consider additional characteristics of the bus service, including its headway (the amount of time between scheduled trips) and total travel time. Considering the transitory nature of bus service, establishing such thresholds is not reasonable, as service can be rerouted, eliminated, or created at any time. Consideration would also have to be given to

different types of transit service (e.g., trunk service, Transbay service, local service, and community service), as they generally operate with different characteristics.

- Third, unlike the situation for intersections or roadway facilities, there are no well-established methodologies for characterizing the operations of transit service in relation to travel times. For intersections, clear distinctions are made between intersections that operate at acceptable conditions (e.g., LOS D or better) and those that operate at unacceptable conditions (e.g., LOS E or LOS F), and separate impact thresholds are provided. For bus service, however, there is no well-established LOS equivalent for characterizing transit service in relation to travel times.

The three factors described above would make establishing numerical thresholds for AC Transit travel times difficult and impractical, as the City would have little background or experience on which to base such thresholds. However to the extent feasible, this section provides an analysis of how development under the Specific Plan would affect transit travel times for local bus routes.

The analysis of bus travel times along a corridor requires the analysis of traffic operations at all or most of the intersections along the corridor. As previously shown on Figure 4.13-1, buses currently operate along a number of corridors in the Plan Area and vicinity. Route 51A, which operates along Broadway, directly serves the Plan Area. In addition, the intersection impact assessment discussed in previous sections, only analyzed all intersection along Broadway within the Plan Area (Between Grand and Piedmont Avenues) during the weekday PM and Saturday peak hours. Because intersections along other corridors were not analyzed in as much detail, impacts of the development under the Specific Plan on bus travel times along these corridors cannot be assessed accurately.

Table 4.13-17 shows peak-hour travel times along Broadway between Grand and Piedmont Avenues. Existing average travel speeds along this corridor range between 14 and 17 mph during the peak hours.

**TABLE 4.13-17
TRAVEL TIMES ALONG BROADWAY**

Direction	Peak Hour	Existing		Existing Plus Project		Existing Plus Project (Mitigated)	
		Travel Time (min:sec) ^a	Average Speed (mph)	Travel Time (min:sec) ^a	Average Speed (mph)	Travel Time (min:sec) ^a	Average Speed (mph)
Northbound between Grand Avenue and Piedmont Avenue	PM	2:10	14	2:30	13	2:30	13
	Saturday	2:10	15	2:20	14	2:20	14
Southbound between Piedmont Avenue and Grand Avenue	PM	1:40	17	1:50	16	2:10	14
	Saturday	1:50	15	1:50	15	2:20	13

^a Corridor travel times were calculated using intersection delay and free-flow segment speeds from Synchro 7.0.

SOURCE: Fehr & Peers, 2013.

The traffic generated by the development under the Specific Plan would result in increased congestion along the Broadway corridor. In addition, the Project and the mitigations included in this EIR would also include a number of roadway modifications, such as new traffic signal on Broadway at 23rd and 24th Streets and retiming of signals at various intersections that would affect travel time along the corridor. As shown in Table 4.13-17, average speeds on Broadway in both northbound and southbound directions would decrease under Existing Plus Project conditions.

Overall, it is estimated that the congestion caused by the Project-generated traffic in combination with the roadway modifications proposed by the Specific Plan and mitigation measures presented in this EIR would increase travel times for most buses on this segment of Broadway by as much as 30 seconds.

Although not reflected in the quantitative travel time analysis presented above, Policy C.5.1 of the Specific Plan includes the following modifications that would improve bus travel times along Broadway:

- Move bus stops from the near-side (before the intersection) to the far-side (after the intersection) of the intersection. In general, moving a bus stop from the near-side to the far-side of the intersection would reduce the delay experienced by buses as they would experience less delay waiting for signals.
- Provide bulbouts at bus stops, which would eliminate the need for buses to pull out of the travel lane before the stop and then merge back into the traffic flow. Bus bulbouts would also allow for quicker passenger loading and unloading, reducing the time buses dwell at a bus stop. It is estimated that this strategy combined with the previous one would reduce bus travel times by as much as 15 to 20 seconds at each bus stop. In addition, bus bulbouts would result in automobiles temporarily queuing behind buses when buses are stopped at the bulbouts. However, these queues clear when buses leave the bus stop.
- Install TSP at signalized intersections along Broadway to improve bus travel times by prioritizing signal green times for approaching buses. The effectiveness of the third strategy, TSP, on bus travel times and automobile traffic cannot be determined at this time because adequate detail about its implementation is not known at this time.

While the Project may increase some bus travel times, the resulting increases would have a minor effect on transit service within the Plan Area as most of the travel time increase would be offset by implementation of the improvements discussed above. The estimated increase in travel time is within the variability in travel time experienced by each bus on these corridors. This impact is less than significant.

Vehicle, Pedestrian and Bicycle Safety

The discussion of vehicle, pedestrian, and bicycle safety is based on application of Significance Thresholds #10 through #14. The development under the Specific Plan would result in increased vehicular traffic and pedestrian and bicycle activity in and around the Plan Area. In addition, the Specific plan would also modify some of the streets in the Plan Area. Access and circulation for different travel modes are discussed below.

Transportation Hazards

The discussion of transportation hazards is based on application of Significance Threshold #10. The Specific Plan would include developments and changes in the public right-of-way that could affect transportation safety.

The location or design elements of individual future developments under the Specific Plan are not known at this time. Thus, it is beyond the scope of this EIR to determine if individual developments would adversely affect traffic safety.

In addition, the Specific Plan includes the following policies that would ensure that developments would not adversely affect safety for all street users:

- Policy C.2.1 would eliminate existing and minimize future driveways and curb-cuts along key pedestrian streets including Broadway, Webster Street, and segments of 24th Street and Valdez Street. This Policy would minimize potential conflicts between vehicles entering and exiting driveways and automobiles, bicycles, and pedestrians traveling along these streets.
- Policy C.2.2 would widen sidewalks along Broadway, 24th Street and Valdez Street, which would provide a larger buffer between pedestrians on sidewalks and vehicles on the streets.
- Policy C.2.3 would install bulb-outs and crosswalk markings at intersections on key pedestrian streets which would reduce street crossing distances and increase pedestrian visibility.
- Policy C.2.4 would improve landscaping along streets in the Plan Area and widen the existing median on 27th Street. Both measures would improve pedestrian safety by improving the buffer between pedestrians on sidewalks and vehicles in the street and providing a wider median refuge for pedestrians crossings 27th Street.
- Policy C.2.7 would remove unnecessary channelized right turns which would shorten pedestrian crossings, reduce vehicle speeds, and minimize potential conflicts between turning automobiles and pedestrians and bicyclists.
- Policy C.3.2 would enhance bicycle facilities at key intersections with high bicycle and automobile traffic.
- Policy C.4.1 would locate vehicular parking and service access away from primary pedestrian streets which would minimize potential conflicts between automobiles/trucks turning into and out of driveways with other vehicles, bicycles, and pedestrians
- Policy C.4.4 would minimize cut-through traffic on residential streets by implementing traffic calming.
- Policy C.5.1 would include improvements at bus stops including locating bus stops on the far side of the intersection which would reduce potential bus/auto conflicts.

In addition, the design for each individual development project under the Specific Plan would be required to be consistent with appropriate regulations and design standards in effect at the time. Furthermore, SCA 20, *Improvements in the Public Right-of-Way (General)*, and SCA 21,

Improvements in the Public Right-of-Way (Specific), require that public improvement plans and building plans for individual development projects incorporate design requirements such as curbs, gutters, disabled access, adequate emergency access, and other measures to improve vehicle, bicycle, and pedestrian safety.

In addition, potential impacts of the Project on pedestrian, bicyclist, and bus rider safety are discussed in the subsequent sections. This EIR also includes the following mitigation measures that would improve transportation safety, but are not required to mitigate impacts on transportation safety:

- Mitigation Measure TRANS-5 would modify the 27th Street/24th Street/Bay Place/Harrison Street (Intersection #37) to reduce pedestrian crossing distances and improve visibility for all users
- A number of mitigations measures, such as Mitigation Measure TRANS-16 at 27th Street/Telegraph Avenue (Intersection #29), TRANS-28 at West MacArthur Boulevard/Telegraph Avenue (Intersection #11), TRANS-22 at 27th Street/Broadway (Intersection #30) and other locations would provide for protected left turns at signalized intersections which would reduce potential conflicts between left-turning vehicles and vehicles traveling in the opposite direction and pedestrians in the crosswalk.

Overall, the Broadway Valdez Specific Plan would not have a significant impact on transportation hazards. This is a less than significant impact, and no mitigation measures are required.

Pedestrian Safety

The discussion of pedestrian safety is based on application of Significance Threshold #11. One of the goals of the Specific Plan is to increase pedestrian activity in the Plan Area. In order to accommodate the increased pedestrian activity, the Specific Plan also includes policies and physical changes that would improve pedestrian safety in the Plan Area. They include:

- Policy C.2.1 would eliminate existing and minimize future driveways and curb-cuts along key pedestrian streets including Broadway and segments of 24th Street and Valdez Street. This Policy would minimize potential conflicts between vehicles entering and exiting driveways and pedestrians traveling along these streets.
- Policy C.2.2 would widen sidewalks along Broadway 24th Street and Valdez Street, which would minimize overcrowding on sidewalks and provide a larger buffer between pedestrians on sidewalks and vehicles on the streets.
- Policy C.2.3 would install bulb-outs and crosswalk markings at intersections on key pedestrian streets which would reduce pedestrian street crossing distances and increase pedestrian visibility.
- Policy C.2.4 would improve landscaping along streets in the Plan Area and widen the existing median on 27th Street. Both measures would improve pedestrian safety by improving the buffer between pedestrians on sidewalks and vehicles in the street and providing a wider median refuge for pedestrians crossings 27th Street.

- Policy C.2.5 would provide pedestrian-scale street lighting which would improve pedestrian visibility.
- Policy C.2.6 would ensure that sidewalks have a minimum 5.5 feet clear of any obstacles for pedestrian circulation.
- Policy C.2.7 would remove unnecessary channelized right turns which would shorten pedestrian crossings, reduce vehicle speeds, and minimize potential conflicts between vehicles and pedestrians.
- Policy C.2.8 would improve uncontrolled pedestrian crossings. For example, it would improve the current midblock crossing on Broadway between 30th Street and Hawthorne Avenue through installation of bulbouts and RRFB.
- Policy C.4.1 would locate vehicular parking and service access away from primary pedestrian streets which would minimize potential conflicts between automobiles/trucks turning into and out of driveways with pedestrians.
- Policy C.4.4 would minimize cut-through traffic on residential streets by implementing traffic calming.

Other policies and infrastructure improvements included in the Specific Plan would not result in permanent substantial decrease in pedestrian safety, such as removing existing bulbouts, increasing street crossing distances, or adding new vehicular travel lanes. This EIR also includes the following mitigation measures that are not required to mitigate impacts on pedestrian safety; however, if implemented, they would improve pedestrian safety:

- Mitigation Measures TRANS-4, TRANS-5, and TRANS-6, would signalize the 24th Street/Broadway (Intersection #36), 23rd Street/Broadway (Intersection #39), and 23rd Street/Harrison Street (Intersection #40) intersections which would provide a protected pedestrian crossing across Broadway and Harrison Street.
- Mitigation Measure TRANS-10 would modify the 27th Street/24th Street/Bay Place/Harrison Street (Intersection #37) to reduce pedestrian crossing distances.
- A number of mitigations measures, such as Mitigation Measure TRANS-16 at West MacArthur Boulevard/ Telegraph Avenue (Intersection #11), TRANS-21 at 27th Street/ Telegraph Avenue (Intersection #29), TRANS-22 at 27th Street/Broadway (Intersection #30) and other locations would provide for protected left turns at signalized intersections which would reduce potential conflicts between left-turning vehicles and pedestrians in the opposing crosswalk.
- Other mitigation measures described in previous sections that require additional upgrades to the traffic signal equipment would also include improvements to pedestrian environment, such as providing count-down pedestrian signal heads, in order to comply with the local, state, and federal requirements, which would improve pedestrian safety.

The Broadway Valdez Specific Plan would not result in permanent substantial decrease in pedestrian safety. This is a less than significant impact, and no mitigation measures are required,

Bicyclist Safety

The discussion of bicyclist safety is based on application of Significance Threshold #12. One of the goals of the Specific Plan is to increase bicycling in the Plan Area. In order to accommodate the increased bicycling activity, the Specific Plan also includes policies and physical changes that would improve bicyclist safety in the Plan Area. They include:

- Policy C.2.1 would eliminate existing and minimize future driveways and curb-cuts along key pedestrian streets including Broadway and segments of 24th Street and Valdez Street. This Policy would minimize potential conflicts between vehicles entering and exiting driveways and bicycles traveling along these streets.
- Policy C.2.3 would install bulb-outs at intersections on key pedestrian streets which would reduce pedestrian street crossing distances and improve visibility between pedestrians and conflicting motorists and bicyclists. These bulbouts would be designed to not encroach on bicycle lanes or interfere with bicyclists.
- Policy C.2.7 would remove unnecessary channelized right turns which would reduce vehicle speeds and reduce potential conflicts between turning automobiles and bicyclists.
- Policy C.3.1 would complete the planned bicycle network as envisioned in the *2007 Bicycle Master Plan Update* in the Plan Area and surroundings. Completing the Class 2 bicycle lanes on Piedmont Avenue north of Broadway and on Broadway north of I-580, and on segments of Harrison Street would improve bicyclist safety by providing a dedicated facility for bicyclists.
- Policy C.3.2 would enhance bicycle facilities at key intersections with high bicycle and automobile traffic in order to improve bicycle safety.
- Policy C.3.3 would minimize activities, such as valet parking, that may block bicycle lanes.
- Policy C.4.1 would locate vehicular parking and service access away from primary pedestrian streets which would minimize potential conflicts between automobiles/trucks turning into and out of driveways with other bicycles.
- Policy C.4.4 would minimize cut-through traffic on residential streets by implementing traffic calming which would reduce potential conflicts between automobiles and bicyclists on residential streets.

Other policies and infrastructure improvements included in the Specific Plan would not result in permanent substantial decrease in bicyclist safety, such as removing existing bikeways or adding new vehicular travel lanes. This EIR also includes the following mitigation measures that are not required to mitigate impacts on bicyclist safety; however, if implemented, they would improve bicyclist safety:

- Mitigation Measures TRANS-4, TRANS-5, and TRANS-6 would signalize the 24th Street/Broadway (Intersection #36), 23rd Street/Broadway (Intersection #39), and 23rd Street/Harrison Street (Intersection #40) intersections which would provide crossing of Broadway and Harrison Street by bicyclists.
- A number of mitigations measures, such as Mitigation Measure TRANS-16 at West MacArthur Boulevard/ Telegraph Avenue (Intersection #11), TRANS-21 at 27th Street/

Telegraph Avenue (Intersection #29), TRANS-22 at 27th Street/Broadway (Intersection #30) and other locations would provide for protected left turns at signalized intersections which would reduce potential conflicts between left-turning vehicles and bicyclists traveling in the opposite direction.

- Other mitigation measures described in previous sections that require additional upgrades to the traffic signal equipment would also include improvements to bicycle environment, such as bicycle actuation, in order to comply with the local, state, and federal requirements, which would improve bicyclist safety.

The Broadway Valdez Specific Plan would not result in permanent substantial decrease in Bicyclist safety. This is a less than significant impact, and no mitigation measures are required,

Bus Rider Safety

The discussion of bus rider safety is based on application of Significance Threshold #13. Bus riders use pedestrian facilities to travel between the bus stops and their destinations. Thus, changes to the pedestrian environment described above would also benefit bus rider safety. In addition, the Specific Plan includes the following that would improve safety for bus riders:

- Policy C.5.1 includes a number of improvements, such as bulbouts at bus stops which minimize overcrowding at bus stops, and shelters at bus stops, which would improve bus rider safety.
- Mitigation Measure TRANS-4 which would signalize the 24th Street/Broadway intersection would provide a protected pedestrian crossing to access the proposed relocated bus stops on the far side of the intersection.

The Broadway Valdez Specific Plan does not propose to change the lane widths on Broadway. Broadway would continue to provide 11-foot wide lanes in both directions within the Plan Area, which is the minimum lane width for AC Transit bus operations.

Other policies and infrastructure improvements included in the Specific Plan, as well as mitigation measures identified in this EIR, would not result in permanent substantial decrease in bus rider safety, such as removing existing bus stop facilities or citing new bus stops in locations with insufficient sidewalks. The Specific Plan would have a less than significant impact on bus rider safety, and no mitigation measures are required.

The Broadway Valdez Specific Plan would not result in permanent substantial decrease in bus rider safety. This is a less than significant impact, and no mitigation measures are required.

At-Grade Railroad Crossings

The discussion of at-grade railroad crossing safety is based on application of Significance Threshold #14. The Specific Plan Project is not located near any at-grade railroad crossings. Therefore, it would not generate substantial traffic of any travel mode travelling across at-grade railroad crossings. This is a less than significant impact, and no mitigation measures are required.

Consistency with Adopted Policies, Plans or Programs Supporting Alternative Transportation

The discussion of consistency with adopted policies, plans or programs supporting is based on application of Significance Threshold #15. A discussion of applicable policies and plans is provided below. The Specific Plan, and the associated mitigation measures presented in this EIR, are consistent with these policies, plans and programs, and would not cause a significant impact by conflicting with adopted policies, plans, or programs supporting public transit, bicycle, or pedestrian transportation.

The City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode Policy, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking and directs the City, in constructing and maintaining its transportation infrastructure, to resolve any conflicts between public transit and single occupant vehicles on City streets in favor of the transportation mode that provides the greatest mobility for people rather than vehicles giving due consideration to the environment public safety economic development health and social equity impacts. The Specific Plan would provide for high-density development in a compact area with excellent pedestrian and bicycle infrastructure and transit service. As previously documented in the trip generation section (page 4.13-40), the Broadway Valdez Development Program is estimated to generate about 34 percent fewer automobile trips than same uses in a more suburban setting.

The high usage of non-auto modes is due to the Broadway Valdez Development Program locating a variety of uses in proximity to Downtown Oakland, residential neighborhoods, AC Transit's Routes 51A and 1/1R (two of the busiest AC Transit bus routes), the "Free B" Shuttle, and 19th Street and MacArthur BART Stations. By providing a mix of uses in a dense walkable urban environment with quality pedestrian, bicycle, and transit infrastructure and a limited parking supply, the Specific Plan encourages the use of non-automobile transportation modes. Policies and infrastructure improvements, as outlined in the previous section, would also provide for safer and more attractive pedestrian, bicycle, and transit infrastructure and further encourage these activities.

The Specific Plan includes the following TDM strategies, which are consistent with the City of Oakland's SCA 25, *Parking and Transportation Demand Management*, and would encourage more residents, employees and visitors to shift from driving alone to other modes of travel:

- Policy C.6.1 would explore forming an areawide Transportation and Parking Management Agency (TPMA) and requiring all commercial and residential developments in the Plan Area to participate. The TPMA would coordinate all TDM efforts, including:
 - Providing residents, employers, employees, and visitors with information regarding available transportation alternatives
 - Implementing and coordinating trip reduction strategies
 - Maintaining a website to include transportation-related data
 - Establishing and monitoring parking demand management strategies
 - Managing the parking supply

- Monitoring the effectiveness of various strategies, identifying new strategies and revising them when necessary
- Contributing to existing transit/shuttle services and/or managing the shuttle program

If an areawide TPMA is not formed, then each development in the Plan Area would be responsible for implementing TDM strategies as required by the City's SCA 25.

- Policy C.6.2 would implement a comprehensive wayfinding signage program in the District with an emphasis on pedestrian, bicycle and parking facilities.
- Policy C.6.3 would provide bicycle support facilities such as attendant bicycle parking/bike station, and/or bike sharing/rental program.
- Policy C.6.4 would consider providing Plan Area residents with a transit pass and/or transit subsidies.
- Policy C.6.5 would explore providing transit validation for shoppers in order to encourage them to use transit
- Policy C.6.6 would provide dedicated car-sharing spaces throughout the Plan Area.
- Policy C.6.7 would encourage all employers in the Plan Area to participate in TDM programs.

As previously described, the Specific Plan includes a number of modifications to the public right-of-way. These street modifications, along with the Specific Plan policies, would encourage pedestrian activity by creating a safer and more attractive pedestrian environment. The Specific Plan includes previously discussed policies, such as minimizing driveways on major pedestrian thoroughfares, widening sidewalks, and providing pedestrian scale lighting, that further encourage pedestrian activity. Therefore, the Specific Plan is consistent with the City's *Pedestrian Master Plan* by including infrastructure improvements, policies, and facilitating developments that would improve pedestrian safety and encourage and promote pedestrian activity.

Policy C.4.3 of the Broadway Valdez Specific allows the potential permanent or temporary closure to through traffic of Waverly Street south of 24th Street, 26th Street between Broadway and Valdez Street, and 34th Street between I-580 Off-Ramp and Broadway. Temporary or permanent closure of these streets would enhance the pedestrian orientation of the streets and surrounding areas and encourage pedestrian activity on these streets. Furthermore, these streets only serve the fronting parcels and carry very little through traffic. Thus, their closure would not result in noticeable traffic increase on other streets.

As previously discussed, most of the bicycle network in the Plan Area and surroundings envisioned in the City of Oakland *Bicycle Master Plan* has been completed. Policy C.3.1 of the Specific Plan encourages the completion of the bicycle network in the Plan Area and surroundings. In addition, Policy C.3.2 would enhance bicycle facilities at intersections with high bicycle and automobile traffic to reduce potential conflicts between bicycles and automobiles. Furthermore, other infrastructure modification proposed by the Specific Plan or mitigation measures in this EIR would not interfere with the completion of the bicycle network or conflict with existing bicycle facilities in the Plan Area.

Developments in the Plan Area are required to provide short-term and long-term bicycle parking consistent with the City of Oakland Bicycle Parking Ordinance (addressed in more detail in a subsequent section). Policy C.3.4 of the Specific Plan would provide for additional bicycle parking in the public right-of-way where feasible. Therefore, the Specific Plan is consistent with the City's *Bicycle Master Plan* by including infrastructure improvements, policies, and facilitating developments that would improve bicycle safety and encourage and promote bicycle use.

The Broad Valdez Specific Plan includes the following policies that encourage and promote transit use in the Plan Area and surroundings and are therefore consistent with the City's Public Transit and Alternative Mode Policy (i.e., "Transit First" Policy):

- Policy C.5.1 includes a number of improvements along Broadway as described in the Transit Travel Time subsection that would improve bus travel times along Broadway.
- Policy C.5.1 also includes improvements at bus stops such as shelters, benches, real-time transit arrival displays, route maps/schedules, trash receptacles that enhance the user experience and make bus travel more attractive.
- Policy C.5.2 promotes work with local shuttle operators to explore expanding the geographic area, extending the hours of operations, and funding shuttle service in the Plan Area.
- Policy C.5.3 encourages enhancements to Broadway between the Plan Area and the 19th Street BART Station in order to provide a more welcoming pedestrian connection between the Plan Area and 19th Street BART Station.
- Policy C.5.4 ensures that modifications on Broadway would not preclude the possibility for future streetcar service along the corridor.

The Specific Plan would not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This is a less than significant impact, and no mitigation measures are required.

Construction-Period Impacts

The discussion of construction-period impacts is based on application of Significance Threshold #16. During the construction of each of the development projects under the Specific Plan, temporary and intermittent transportation impacts may result from truck movements as well as construction worker vehicles to and from the construction site. The construction-related traffic may temporarily reduce capacities of roadways in the vicinity because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles.

Truck traffic that occurs during the peak commute hours (weekdays, 7:00 to 9:00 AM and 4:00 to 6:00 PM) may result in worse LOS and higher delays at study intersections during the construction period. Also, if parking of construction workers' vehicles cannot be accommodated within the construction site, it would temporarily increase parking occupancy levels in the area.

In addition, temporary closure of sidewalks during construction of adjacent parcels may affect pedestrian safety and circulation; similarly, potential closure of bicycle lanes may affect bicycle safety and circulation. It is likely that construction of potential developments along Broadway may require temporary closure of sidewalks, parking lanes, bicycle lanes, and/or one lane of travel. Any such closures may impact access or operations of AC Transit Route 51A buses along Broadway.

The City of Oakland SCA 33, *Construction Traffic and Parking*, as described on page 4.13-35, requires that a Construction Traffic Management Plan be developed as part of a larger Construction Management Plan to address potentially significant impacts during a project's construction. To further implement SCA 33, the Construction Traffic Management Plan developed for a project shall include the following:

- m) A set of comprehensive traffic control measures for motor vehicles, transit, bicycle, and pedestrian access and circulation during each phase of construction.
- n) A construction period parking management plan to ensure that parking demands for construction workers, site employees, and customers are accommodated during each phase of construction.

Thus, with the implementation of SCA 33 as part of each development project, the Specific Plan would result in less-than-significant impact. Although no mitigation measures are required, There may be temporary, adverse affect on the circulation system during construction of each development, roadway modification, or infrastructure improvement project.

Changes in Air Traffic Patterns

The discussion of changes in air traffic patterns is based on application of Significance Threshold #17. The Oakland International Airport is located about eight miles south of the Plan Area. The development under the Specific Plan Project would increase density and increase building heights in the Plan Area. However, building heights would not interfere with current flight patterns of Oakland International Airport or other nearby airports. Therefore, the development under the Specific Plan would result in a less-than-significant impact on air traffic patterns.

4.13.4 Planning-Related Non-CEQA Issues Discussion

The items discussed in this section include:

- Parking Considerations for Bicycles and Automobiles
- Transit Ridership
- Intersection Queuing Analysis
- Collisions Characteristics

While these subjects do not relate to environmental impacts that are required to be evaluated under CEQA, they are discussed for informational purposes to aid the public and decision makers in evaluating and considering the merits of the Specific Plan.

Parking for Bicycles and Automobiles

Bicycle Parking

City of Oakland Bicycle Parking Ordinance (Municipal Code Chapter 17.117) provides requirements for quantity, type, location, and layout of bicycle parking for new facilities and additions to existing facilities. Although the specific uses, size, or location of each individual development project anticipated under the Specific Plan are not known, all developments would be required to meet the City of Oakland Bicycle Parking Ordinance requirements.

Furthermore, Specific Plan Policy C.3.4 would increase parking supply in the public realm by providing bicycle parking in pedestrian plazas, intersection bulb-outs, or in on-street bike corrals.

Automobile Parking

This transportation analysis assesses parking as a non-CEQA impact. Parking impacts are assessed according to the language previously discussed on page 4.13-33.

As previously described, the specific uses, exact size, or the proposed parking supply of each future project under Specific Plan are not known. In addition, the Plan Area currently contains a number of surface parking lots that may be replaced by development; thus, potential development projects may also modify the existing parking supply. This EIR provides a broad overview of the existing parking supply that would be displaced, the estimated parking supply that would be provided by the Specific Plan Development Program, the parking management policies provided in the Specific Plan, and the estimated parking demand generated by the Specific Plan Development Program.

Current Parking Supply that would be Eliminated

Figure 4.13-4B shows the location of existing surface parking lots in the Specific Plan area. These parking lots are open to the general public on an hourly, daily, and/or monthly basis, and are used by area residents, employees, and visitors throughout the day. The parking lots in the southern portions of the Specific Plan area are likely also used by employees who work in Downtown Oakland as these parking lots charge less for parking than most Downtown parking facilities.

The existing surface parking lots in the Specific Plan area provide about 1,100 spaces and are likely to be developed in the early phases of the plan's buildout; and so would not be available to current users or parking demand generated by the development replacing the surface parking. Motorists currently parking in these surface lots would either shift to other travel modes or continue to drive and park in other parking facilities in the Specific Plan area, Downtown, Uptown, or other surrounding areas.

The following existing parking supplies are expected to remain in and around the Specific Plan area:

- There are currently about 1,400 spaces in public parking garages within the Specific Plan area that are expected to remain. Since the current occupancies at these garages are not known, the number of spaces that may be available in the future is not known.

- The Alta Bates and Kaiser Medical Centers provide more than 3,700 parking spaces in various garages. These garages operate at or near capacity during weekday business hours but are expected to have capacity on weekday evenings and weekends. In addition, since these facilities are operated by the medical centers for their employees and patients/visitors, they may not be available to non-medical center users.
- Northern portions of Downtown Oakland provide more than 2,600 spaces in parking garages and more than 700 spaces in surface parking lots. Most of these facilities are expected to operate at or near capacity during weekday business hours but are expected to have capacity on weekday evenings and weekends. Similar to surface parking lots in the Plan Area, the surface parking lots in Downtown Oakland may also be developed and not be available for parking.

It is expected that some of the existing parking facilities described above would have adequate capacity and be available to motorists that currently park at the surface lots in the Plan Area and the parking demand that the Specific Plan Development Program would generate. However, the amount of existing unused parking that would be available cannot be quantified at this time. Therefore, this analysis does **not** account for the existing parking supply that may be available.

Parking Supply under Specific Plan

The Broadway Valdez Specific Plan recommends parking supply ratios based on parking requirements in Metropolitan Transportation Commission's (MTC) *Toolbox/Handbook: Parking Best Practices and Strategies for Supporting Transit Oriented Development in the San Francisco Bay Area* for City Center/ Urban Neighborhoods. **Table 4.13-18** presents the estimated parking supply, using these parking ratios, for the Development Program buildout.

**TABLE 4.13-18
BROADWAY VALDEZ SPECIFIC PLAN DEVELOPMENT PROGRAM
ESTIMATED PARKING SUPPLY^a**

Land Use	Units	Parking Ratio	Supply (Parking Spaces)
Multi-Family Residential	1,797 DU	1.0	1,797
Retail	1,114.1 KSF	2.5	2,785
General Office	336.0 KSF	2.0	672
Medical Office	358.9 KSF	3.0	1,077
Hotel	180 rooms	0.5	90
Total			6,421

^a Based on parking ratios presented in the Broadway Valdez Specific Plan.

SOURCE: Fehr & Peers, 2013.

Based on the Specific Plan parking ratios, the Development Program would provide about 6,420 new parking spaces throughout the plan area.

Parking Management Policies

Previously, this EIR discussed Specific Plan policies that would reduce automobile demand in the Plan Area. These policies would also reduce parking demand. The Specific Plan also includes the following policies to reduce overall parking supply and maximize parking use:

- **Policy C.7.1** would encourage shared parking within each development and between different developments. Shared Parking is defined as the ability to share parking spaces due variations in the accumulation of vehicles by hour, by day, or by season at individual land uses. For example, shared parking is where an office has high use during the day and a restaurant has high use during the evening, enabling both uses to utilize the same space at different times. Shared parking would reduce the overall parking supply by allowing one parking space to be used by more than one use.
- **Policy C.7.2** would encourage construction of centralized parking facilities that do not assign parking spaces to specific uses in order to encourage a “park once” strategy. Instead of driving to multiple destinations, this strategy would allow users visiting multiple sites to park once and walk to the various destinations within the Plan Area and adjacent neighborhoods.
- **Policy C.7.3** would explore publicly funding construction of parking that serves the catalyst retail projects in the early phases of Specific Plan development in order to compete with other destination retail in the area and encourage retailers to the Plan Area.
- **Policy C.7.4** would explore establishing a Community Benefit District or a Parking Benefit District to manage the on-street and off-street parking supply and use the parking revenue to fund additional parking facilities and/or improve circulation and transportation in the Plan Area.
- **Policy C.7.5** would encourage residential developments to unbundle the cost of parking from the cost of housing. When parking is bundled (a parking space is included in an apartment rent or is sold with a condominium) into apartment tenant leases or condominium prices, the true cost of parking is hidden. For example the price for an apartment with one parking space may be rented for \$1,000 per month. However, if the parking spaces were unbundled, the rent for the apartment may be \$900 per month, plus \$100 per month for the parking space. Unbundled parking would help tenants understand the cost of parking, and may influence a resident’s decision to own a car. Not including the cost of parking in the apartment rent or condominium price would attract and/or residents that do not own an automobile.
- **Policy C.7.6** would encourage the use of existing parking facilities in the Plan Area and vicinity, rather than construction new parking facilities. Currently, Alta Bates and Kaiser Medical Centers provide more than 3,700 parking spaces in or near the northern portions of the Specific Plan area. There are also more than 2,600 spaces in the northern portions of Downtown Oakland. Most of these parking facilities generally operate at or near capacity during weekday business hours. However, many are far below capacity on weekday evenings and nights and weekends and may be available to Specific Plan area parkers.
- **Policy C.7.7** would encourage implementing an areawide real-time parking information system that would direct visitors to the Plan Area to the nearest available parking, which would improve efficiency of the parking facilities and reduce excessive automobile circulation looking for parking.

- **Policy C.7.8** would consider using attendant parking during peak shopping periods. Considering that most retail uses peak during the holiday shopping period. Using attendant or valet parking during the peak demand periods would avoid constructing large amounts of surplus parking that remain unused throughout the rest of the year.
- **Policy C.7.9** would explore implementing a parking pricing strategy that encourages Plan Area employees to walk, bike or use transit. Combined with the TDM strategies previously discussed, setting reasonable short-term parking rates and high long-term rates can discourage employees from driving and ensure parking availability for shoppers.
- **Policy C.7.10** would provide metered on-street parking along commercial frontages and explore strategies, such as smart meters, variable demand-based pricing and time restrictions, to better manage the on-street parking supply in order to provide convenient parking with high turnover rates for short-term commercial customers.
- **Policy C.7.11** would consider monitoring parking demand in the Plan Area in the early phases of development so that parking supply and strategies in later phases of development can be adjusted to reflect observed conditions.
- **Policy C.7.12** would study the need for implementing Residential Parking Permit (RPP) on nearby residential streets to discourage potential parking spillover from the Plan Area into nearby residential neighborhoods.

In addition, SCA 25, *Parking and Transportation Demand Management*, discussed on page 4.13-32, would be applicable to the Specific Plan developments and would require implementation of programs and strategies to reduce a project's parking demand.

Estimated Automobile Parking Demand

Automobile parking demand generated by the buildout of the Specific Plan Development Program is estimated under two scenarios without and with implementation of the parking management strategies described above. This analysis is based on data and methodology published in Urban Land Institute's *Shared Parking*, adjusted to account for the non-automobile mode share and mixed-use characteristics of the area.

Parking Demand with no Parking Management Strategies. Table 4.13-19 summarizes the estimated parking demand by the Specific Plan Development Program at buildout assuming that each development would provide its own parking supply with no opportunity for sharing parking supply between developments. This scenario also assumes that the parking management strategies described above would not be implemented.

It is estimated that buildout of the Development Program would have a peak parking demand of about 7,400 spaces on weekdays and 7,870 spaces on weekends, which would exceed the recommended supply by about 980 and 1,450 spaces on weekday and weekends, respectively. Both peak weekday and weekend peak demand would occur in December, when the retail components of the project would generate about 40 percent of the weekday demand and 50 percent of the weekend demand. The parking deficit would be smaller during other times of the year.

**TABLE 4.13-19
BROADWAY VALDEZ SPECIFIC PLAN DEVELOPMENT PROGRAM
ESTIMATED PARKING DEMAND WITH NO PARKING MANAGEMENT STRATEGIES**

Land Use	Units	Parking Demand		Parking Supply ^a	Surplus (Deficit)	
		Weekday	Weekend		Weekday	Weekend
Multi-Family Residential ^b	1,797 DU	2,182	2,182	1,797	-385	
Retail - December ^c	1,114.1 KSF	3,218	4,191	2,785	-433	-1,406
Retail – Non-December ^d		2,408	3,155		+377	-370
General Office ^e	336.0 KSF	598	79	672	+74	+593
Medical Office ^f	358.9 KSF	1,227	1,227	1,077	-150	-150
Hotel ^g	180 rooms	179	187	90	-89	-97
Total – December		7,403	7,865	6,421	-983	-1,445
Total – Non-December		6,593	6,829		-173	-409

Parking demand based on base rates published in *Shared Parking* and reduced to account for non-automobile traffic and mixed-use character of the project area.

^a See Table 4.13-18 for details.

^b Based on adjusted demand rate of 1.21 parking spaces per dwelling unit on weekdays and weekends.

^c Based on adjusted demand rate of 2.89 parking spaces per KSF on weekdays and 3.76 spaces per KSF on weekends for December.

^d Based on adjusted demand rate of 2.16 parking spaces per KSF on weekdays and 2.83 spaces per KSF on weekends for non-December.

^e Based on adjusted demand rate of 1.78 spaces per KSF on weekdays and 0.23 spaces per KSF on weekends.

^f Based on adjusted demand rate of 3.42 spaces per KSF on weekdays and weekends.

^g Based on adjusted demand rate of 0.99 spaces per room on weekdays and 1.04 spaces per KSF on weekends.

SOURCE: Fehr & Peers, 2013.

Parking Demand with Parking Management Strategies Implemented. Table 4.13-20

summarizes the estimated parking demand by the Specific Plan Development Program at buildout assuming that the parking management strategies previously discussed would be implemented. Specifically, this scenario accounts for the following strategies:

- All new off-street parking spaces in the Specific Plan area would be available to parking generated by the Development Program per Policies C.7.1 and C.7.2.
- Instead of reserved parking spaces, residential developments would be provided with parking passes for unreserved spaces for sale or lease separately from the cost of housing, per Policy C.7.5. Thus, parking spaces used by residents at night would be available to area employees during the day.
- Implementation of a robust TDM program per Policy C.6.1 and SCA 25, would incentivize area residents, employees, and visitors to use non-automobile modes to travel to and from the Specific Plan area. TDM strategies would be most effective in reducing commute trips by residents and employees who travel to and from the project area daily and would be familiar with all travel options in the area. Consistent with the goals of the SCA 25, this analysis assumes that the TDM program would reduce parking demand by area employees by 20 percent and area residents by 10 percent (Although more residents would most likely shift to other travel modes for their commute trips, this analysis conservatively assumes that many would continue to own an automobile and park it in the plan area).

**TABLE 4.13-20
BROADWAY VALDEZ SPECIFIC PLAN DEVELOPMENT PROGRAM
ESTIMATED PARKING DEMAND WITH PARKING MANAGEMENT STRATEGIES**

Scenario	Parking Demand		Parking Supply ^a	Surplus (Deficit)	
	Weekday	Weekend		Weekday	Weekend
No Parking Management Strategies ^b					
December	7,403	7,865	6,421	-983	-1,445
Non-December	6,593	6,829		-173	-409
Parking Management Strategies Implemented ^c					
December	6,073	5,542	6,421	348	879
Non-December	5,299	4,696		1,122	1,725

Parking demand based on base rates published in *Shared Parking* and reduced to account for non-automobile traffic and mixed-use character of the project area.

^a See Table 4.13-18 for details.

^b See Table 4.13-19 for details.

^c See Appendix G.Q for details.

SOURCE: Fehr & Peers, 2013.

As previously discussed, the Specific Plan includes other parking management policies that would reduce overall parking supply and maximize parking use. These strategies are either in support of the strategies described above or their effectiveness on reducing parking demand cannot be accurately assessed at this time.

As shown in Table 4.13-20, the implementation of the parking management strategies is estimated to reduce the overall peak parking demand generated by the Development Program to about 6,070 spaces on weekday and 5,540 spaces on weekends, which corresponds to an approximately 18 to 30 percent reduction in parking demand compared to the scenario with no parking management strategies. The peak parking demand would occur in December and would be less at other times during the year. If implemented, parking management strategies would reduce the overall estimated parking demand to below the parking supply recommended in the Specific Plan.

Parking Conclusions

The discussion in previous sections provides a broad overview of parking demand and supply for the Broadway Valdez Specific Plan. The Broadway Valdez Specific Plan Development Program would have a peak parking demand of about 7,870 parking spaces at buildout but the recommended parking ratios provided in the Specific Plan would yield 6,420 parking spaces, which would not be adequate to meet the estimated overall peak parking demand. To eliminate this parking deficit, the Specific Plan would implement parking management strategies that can reduce the peak parking demand to about 6,070 spaces.

As previously described, the location or amount of parking supply under the Specific Plan is not known at this time. Furthermore, although the implementation of the parking management strategies would reduce the parking demand, the specific strategies that would be implemented by

individual developments are not known at this time. Thus, individual developments or areas within the plan area, as well as the overall Specific Plan area, may experience parking deficits at certain times. In addition, development of existing parking lots in the Specific Plan area would eliminate about 1,100 spaces that are currently available. Although parking facilities in and around the Specific Plan area would continue to have parking available, their availability cannot be assessed at this time. Thus, this EIR cannot accurately determine if the proposed Specific Plan would result in a parking deficit or surplus.

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

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

Development under the Specific Plan would include a mix of uses in a dense urban neighborhood. The proximity of uses to each other, combined with the transportation infrastructure that promotes walking, bicycling, and transit, is intended to reduce reliance on the automobile and the need for parking. Therefore, many residents and workers who choose to live and work in the Plan Area may not have an automobile or need parking. Thus, the parking demand estimate presented in this EIR may overestimate the actual parking demand at Specific Plan buildout.

However, one of the primary goals of the Specific Plan is development of destination retail that would draw regional visitors. Many potential shoppers may not consider transit a viable travel mode due to lack of access and/or convenience. The destination retail in the Plan Area would also compete with other destination retail areas in the region that have convenient and/or inexpensive parking. Thus, availability and cost of parking may be a key factor for many shoppers in deciding to shop at the Broadway Valdez District. In general, the parking management strategies proposed by the Specific Plan intend to reduce the overall demand for parking, better manage the available parking supply, and provide adequate flexibility to attract and retain destination retail in the Plan Area. It is expected that early developments in the Plan Area would provide higher parking supplies; however, the parking demand rates would decrease over time and later developments would provide smaller parking supplies.

Transit Ridership

One of the stated goals in City of Oakland General Plan LUTE is the promotion of transit ridership and encouragement of transit accessibility and improvement of transit service throughout Oakland. The Specific Plan includes policies and infrastructure improvements that encourage transit use and that would increase transit ridership in the study area. Thus, as described on page 4.13-49, an increase in transit ridership is not identified as an adverse impact under CEQA because transit load is not part of the permanent physical environment and transit service changes over time due to a variety of factors. Any resulting shifts from driving to transit would be in keeping with the City's Public Transit and Alternative Modes (i.e., "Transit First") and Complete Street Policies, as well as the goals of the Broadway Valdez Specific Plan.

As previously described, transit service is not a part of the permanent physical environment, and can change over time in response to a variety of factors. The supply (transit service) and demand (transit ridership) for both AC Transit bus and BART service change over time. **Table 4.13-21** shows the level of supply (revenue vehicle hours which is an indicator for transit service provided) and demand (systemwide weekday average ridership) and for both AC Transit and BART over the last ten years. As shown in the table, both AC Transit and BART have generally reduced service in the last ten years, while AC Transit ridership has also generally decreased, and BART ridership has fluctuated. AC Transit ridership peaked in fiscal year 2006-2007, while revenue vehicle hours peaked in fiscal year 2008-2009. The most recent available data for AC Transit shows that both ridership and revenue vehicle hours were the lowest in fiscal year 2010-2011. BART ridership peaked in fiscal year 2011-2012, while revenue vehicle hours were about seven percent less than the peak which occurred in fiscal year 2006-2007.

**TABLE 4.13-21
OVERALL TRANSIT RIDERSHIP (2003-2012)**

	AC Transit		BART	
	Average Weekday Ridership	Revenue Vehicle Hours (x 1,000)	Average Weekday Ridership	Revenue Vehicle Hours (x 1,000)
FY 2003-2004	215,466	1,915	324,993	1,768
FY 2004-2005	210,496	1,800	329,199	1,775
FY 2005-2006	226,732	1,817	343,026	1,820
FY 2006-2007	226,855	1,822	362,483	1,959
FY 2007-2008	218,245	1,870	384,231	1,940
FY 2008-2009	197,208	1,897	379,007	1,942
FY 2009-2010	197,445	1,853	357,461	1,780
FY 2010-2011	190,948	1,660	367,505	1,775
FY 2011-2012	N/A	N/A	391,777	1,814

SOURCE: MTC, 2008 and 2013.

Various factors, such as the following, have affected transit supply and demand in the last decade:

- Both AC Transit and BART have generally reduced service in the last few years due to reduction in operating budget caused by the 2007/2008 Recession. AC Transit has

generally eliminated routes, and reduced frequency of service and hours of operations on some routes, while BART has reduced frequency of service and the number of cars in some trains, resulting in fewer revenue vehicle hours for both transit providers.

- The increase in overall unemployment, caused by the 2007/2008 Recession, resulted in fewer transit riders as less people commuted to work. However, ridership has started increasing as employment levels increase.
- External factors such as increase in cost and decrease in availability of parking especially in major employment areas such as downtowns, increase in cost of fuel, and increase in employer TDM incentives such as free or partially subsidized transit employee costs, have generally increased transit ridership in the region.

In addition, the level of supply (transit service) and demand (transit ridership) influence each other. Just as drivers change their travel behavior depending on the nature of the parking supply, transit riders will adapt their travel behavior depending on the nature of the transit service. Transit ridership generally increases as additional routes are added, hours of operations are expanded, and frequency of service is increased.

Although not considered an impact under CEQA requirements, this section analyzes the transit system with trips associated with the Broadway Valdez Development Program would be added to the existing system. This analysis presents the extent of impacts relative to existing transit conditions. This EIR does not analyze future transit ridership and load factors because they cannot be estimated accurately due to the uncertainty and volatility in both transit service and various factors affecting transit ridership.

Based on the application of the MXD Model and the results of the ACTC Model, **Table 4.13-22** summarizes the transit trip generation by the Broadway Valdez Development Program.

**TABLE 4.13-22
TRANSIT TRIP GENERATION ESTIMATE
(BROADWAY VALDEZ DEVELOPMENT PROGRAM BUILDOUT)**

	AC Transit	BART	Total Transit
Daily	2,340	6,430	8,780
AM Peak Hour	100	450	550
PM Peak Hour	230	780	1,010

SOURCE: Fehr & Peers, 2013.

AC Transit Ridership

As shown in Table 4.13-18, the Broadway Valdez Development Program is estimated to generate about 2,340 weekday daily, 100 AM peak-hour, and 230 PM peak-hour trips on AC Transit buses. Currently five bus routes directly serve the Plan Area. Because the PM peak hour generates the most number of bus trips, the Project-generated PM peak-hour AC Transit trips were distributed among the five AC Transit routes that serve the Plan Area, in proportion to their

existing ridership. **Table 4.13-23** summarizes maximum load factors on buses serving the Plan Area with and without the trips generated by the Broadway Valdez Development Program.

**TABLE 4.13-23
AC TRANSIT BOARDINGS AND ALIGHTINGS (WITH AND WITHOUT PROJECT)**

Bus Route	Direction	Average Capacity (Seats)	Existing		Existing Plus Project	
			Maximum Load (Passengers) ^a	Maximum Load Factor ^b	Maximum Load (Passengers) ^c	Maximum Load Factor ^b
Route 1	SB	47	44	94%	50	106%
	NB		54	115%	61	130%
Route 1R	SB	47	45	96%	51	109%
	NB		59	126%	67	143%
Route 11	EB	40	24	60%	27	68%
	WB		35	88%	40	99%
Route 12	EB	25	20	80%	23	90%
	WB		25	100%	29	114%
Route 51A	SB	32	37	116%	42	131%
	NB		53	166%	60	188%

^a Maximum number of passengers on the bus observed on a typical weekday based on data collected in spring 2012 by AC Transit.

^b Maximum load divided by average seated capacity.

^c Maximum number of existing passengers on the bus plus Broadway Valdez Development Program generated bus trips.

Bold indicates load factor above 125 percent.

SOURCE: Fehr & Peers, 2013.

As previously described, the Project would affect bus load factors if it would increase ridership on AC Transit lines by three percent at bus stops where the load factor with the project in place would exceed 125 percent over a peak 30-minute period. As shown in Table 4.13-23, the bus trips generated by the Broadway Valdez Development Program would result in buses on Routes 1, 1R, and 51A to operate with a load factor above 125 percent with the Project increasing the load factor by more than three percent. The analysis summarized in Table 4.13-23 is conservative in that it is based on the maximum load factor, rather than the average load factor over a peak 30-minute period, which would be lower than the maximum load factor.

As previously described, increase in bus ridership is not considered a significant impact under CEQA; based on the goals of the Specific Plan and City of Oakland General Plan, the increase in bus ridership is considered a benefit. Furthermore, it is expected that AC Transit bus trips generated by the Plan Area would increase as the Plan Area develops and policies and infrastructure improvements that support transit are implemented.

BART Ridership

As shown in Table 4.13-22, the Broadway Valdez Development Program is estimated to generate about 6,430 weekday daily, 450 AM peak-hour, and 780 PM peak-hour trips on BART. The

Project-generated BART trips were distributed among the six BART lines that serve the Specific Plan Area, in proportion to their existing ridership. **Table 4.13-24** summarizes maximum load factors on BART trains with and without the trips generated by the Broadway Valdez Development Program.

**TABLE 4.13-24
BART PEAK HOUR LOADS BY LINE (WITH AND WITHOUT PROJECT)**

Line	Total Capacity (Passengers/Car) ^a	Existing		Existing Plus Project	
		Maximum Load (Passengers/Car)	Load Factor	Maximum Load (Passengers/Car)	Load Factor
Pittsburg/Bay Point-Daly City	107	114	1.07	116	1.09
Daly City-Pittsburg/Bay Point	107	106	0.99	110	1.03
Colma/Daly City-Richmond	107	99	0.93	103	0.96
Richmond-Daly City/Colma	107	101	0.86	103	0.96
Fremont-Richmond	107	92	0.86	95	0.88
Richmond-Fremont	107	58	0.54	60	0.56

Bold indicates maximum load above capacity.

^a BART defines total capacity to include 67 seated and 40 standing passengers.

SOURCE: Fehr & Peers, 2013.

As previously described, the Project would affect BART load factors if it were to increase the peak-hour average ridership on BART by three percent where the passenger volume would exceed the standing capacity of BART trains. As shown in Table 4.13-24, BART trips generated by the Broadway Valdez Development Program would add ridership on all BART lines serving the Plan Area. The Daly City-Pittsburg/Bay Point line is the only line that maximum passenger load would exceed the standing capacity of the train and increase peak-hour ridership by more than three percent in both directions. The analysis summarized in Table 4.13-24 is conservative in that it is based on the maximum load factor on each BART line, rather than the average load factor over the peak hour, which would be lower than the maximum load factor. This analysis also conservatively assumes that each BART car has a capacity of 107 passengers (67 seated and 40 standing passengers), which is much less than the actual capacity of the cars. All BART cars can carry more than 200 passengers in a crush load.

As previously described, increase in BART ridership is not considered a significant impact under CEQA; based on the goals of the Specific Plan and City of Oakland General Plan, the increase in BART ridership is considered a benefit. Furthermore, it is expected that BART trips generated by the Plan Area would increase as the Plan Area develops and policies and infrastructure improvements that support transit are implemented.

BART Faregates

Although the Plan Area can be accessed through 19th Street and MacArthur BART Stations, it is expected that most Project generated BART trips would use the 19th Street Station, because it is closer to most of the Plan Area. It is assumed that all Project generated BART trips would use the 19th Street Station portals nearest to the Plan Area, which are at the northeast and southwest corners of the 20th Street/Broadway intersection. The following two faregate arrays in the north end of the station are the nearest to the portals and would most likely be used by Project BART trips:

- The northeast array consists of five faregates, configured to provide three exit faregates, one entry faregate, and one bidirectional (for bikes, ADA, etc.) faregate during the AM peak period.
- The northwest array consists of three faregates, which are configured to provide two exit faregates and one entry faregate during the AM peak period.

Based on observations in January 2013, more passengers use the northeast array than the northwest array to enter and exit the train platforms. This is most likely because more office buildings are located on the east side of Broadway than the west side.

Faregate queuing is typically most critical for exiting travelers as trains, and passengers they carry, arrive at the station at the same time. As previously shown in Table 4.13-3, exiting passengers at the 19th Street Station peak during the AM peak period.

Based on January 2013 observations, maximum faregate queues occur when a Richmond bound and a Pittsburg/Bay Point bound train arrive at the station at the same time because of the timed transfer at the 19th Street Station which is scheduled to occur every 15 minutes during peak periods. At this time, the maximum observed queue at the north faregate arrays in the 19th Street BART Station was about 10 passengers which took approximately 25 seconds to clear (i.e., the 10th person was in the queue for about 25 seconds). The rolling queue, which never exceeded 10 persons took about one to 1.5 minutes to clear. Note that this maximum queue and associated delay only occurs when two trains arrive simultaneously at the station. It is very difficult to measure average wait times during the peak hour through observations. Because faregate queues and associated delays are much lower at all other times, it is estimated that the average peak-hour wait time at the north faregate arrays in the 19th Street BART Station are much lower than the maximum observed wait time of 25 seconds.

As previously stated, the Project would affect faregate operations if it would increase peak-hour average ridership at a BART station by three percent where average waiting time at fare gates would exceed one minute. Because the current average wait time at the 19th Street BART Station north faregate arrays, which are most likely to be used by Plan Area BART passengers, is currently substantially below one minute, the development under the Specific Plan would not affect faregate operations.

Transit Ridership Conclusion

As previously described, Project's effects on both AC Transit and BART ridership are not considered CEQA impacts due to the transitory nature of both transit ridership and service in general and because they are not impacts to the physical environment. In addition, various other factors contribute to both transit ridership and service. Similar to parking, as previously discussed in this Draft EIR as a non-CEQA topic, transit riders will adjust their travel behavior depending on the available transit service.

As described starting on page 4.13-37, the proposed Specific Plan includes infrastructure improvements that would improve bus service and increase ridership in the project area. The proposed Specific Plan would not modify BART infrastructure such as station features or tracks. The BART system would continue to operate with the current effectiveness and safety and the proposed project would not decrease the performance or safety of the BART system.

Therefore, identification of impacts to AC Transit and BART service, as well as the mitigation of any such impacts, is not required. Furthermore, the Broadway Valdez Development Program would result in an increase in property and sales taxes which will contribute to the operating budget for both AC Transit and BART which can be used to increase transit service.

Intersection Queuing Analysis

Environmental impacts of the Broadway Valdez Development Program on intersection traffic operations were analyzed through the delay/LOS analysis presented earlier in this document. Although not an environmental impact, an analysis of project's impacts on queuing at intersections within the Plan Area was also completed to provide additional information to aid the public and decision makers in evaluating and considering the merits of the Specific Plan.

Queuing analysis for intersections in the Plan Area was completed for the Existing and 2020 scenarios using the Synchro software. The software calculates the expected queue using a formula that extrapolates the length of queue based on two cycle lengths. This methodology provides reasonable results for locations operating in the LOS A through LOS D, but can misrepresent conditions as intersection operations approach capacity. In these instances, the software output denotes the condition with a letter/symbol adjacent to the analysis output worksheet.

Queuing impacts were identified where the Project trips would add 25 or more feet to the 95th percentile queue if the 95th percentile queue was over the available storage length with or without the Project. **Table 4.13-25** presents queues at locations where the Project would increase queue length over the available storage length by 25 or more feet during the weekday PM or Saturday peak hours. Appendix G.Q summarizes queues at all intersections in the Plan Area.

Collision Characteristics

Collision data in the Plan Area and surroundings for the five year period from 2007 through 2011 was obtained through the Statewide Integrated Traffic Records System (SWITRS). A total of 178 collisions, including 25 (about 14 percent) involving bicycles and 12 (about seven percent)

**TABLE 4.13-25
QUEUEING SUMMARY**

Intersection	Movement ^a	Storage (feet)	Existing ^b		Existing Plus Project ^b		Existing Plus Project Mitigated ^b		2020 No Project ^b		2020 Plus Project ^b		2020 Plus Project Mitigated ^b	
			PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)
20. Piedmont Ave./Broadway	WB Left	60	100	50	140	90			120	50	160	80		
	NB Right	75	#240	120	m#330	m#180			m#250	m#140	m#290	m#170		
	SB Thru	150	190	130	230	210			220	160	250	230		
21. Hawthorne Ave./Brook St./Broadway	EB Right	60	20	20	90	40			30	20	70	40		
	NB Left	100	m10	10	m#160	#140			m10	20	m#130	#170		
23. 30th St./Broadway	EB	250	110	40	#260	110			120	40	#200	110		
24. 29th St./Broadway	EB	150	170	70	200	90			190	90	190	90		
	SB Left	125	10	20	m#160	50			20	30	m#110	m20		
30. 27th St./Broadway	WB Thru	350	130	50	190	80			190	70	#400	120		
	NB Left	90	120	70	#170	90			130	80	#140	80		
	SB Left	75	90	80	m#220	#190			#200	110	#340	#180		
	SB Thru	225	200	130	260	210			220	170	260	240		
34. 25th St/Broadway/Webster St.	NB Thru	250	180	80	290	190	120	120	230	90	m300	180	150	70
	SB Left	85/125 ^c	160	90	#220	70	#220	70	170	100	#240	70	#240	70
36. 24th St/Broadway	WB	150	30	20	**	**	150	140	70	30	**	**	120	80
37. 27th St./24th Street/Bay Pl./Harrison St.	EB Right	50	#180	80	#480	#400			#540	100	#790	#370	300	90
	WB Left	175	110	#130	110	#130			#230	#200	#260	#200	#170	100
	WB Thru	175	210	250	310	360			230	340	300	420	240	320
	NB Left	400	#250	110	#310	140			#630	140	#370	170	#450	110
	NB Thru	400	600	180	670	230			#910	250	#970	280	#820	250
	SB Thru	325	250	160	300	220			310	220	360	280	320	240

**TABLE 4.13-25 (Continued)
QUEUING SUMMARY**

Intersection	Movement ^a	Storage (feet)	Existing ^b		Existing Plus Project ^b		Existing Plus Project Mitigated ^b		2020 No Project ^b		2020 Plus Project ^b		2020 Plus Project Mitigated ^b	
			PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)	PM (feet)	SAT (feet)
39. 23rd St/Broadway	EB	350	50	10	**	330	m80	m40	90	10	**	300	m70	m50
	WB	500	40	10	**	700	160	150	70	10	**	570	140	130
40. 23rd St/ Harrison St.	NB	150	10	10	10	10	200	90	10	10	10	10	#390	120
49. Grand Ave./Broadway	WB Thru	325	170	120	180	160			#260	160	#360	180		
	NB Left	150	150	40	#240	50			#250	50	#290	70		
	NB Thru	150	110	60	160	90			150	70	170	100		
52. Grand Ave./Harrison Street	NB Thru	500	320	110	350	140			#620	160	#650	180		
	SB Thru	150	150	90	200	130			230	120	280	150		

NOTES: **Bold** indicates where project would increase queues by more than 25 feet and queues would be longer than available storage.

^a NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound.

^b 95th Percentile queue as estimated by Synchro for weekday PM and Saturday peak hours. Only movements where queue would increase by more than 25 feet are reported.

^c Storage at this location is currently 85 feet, but would increase to 125 feet with the Plan Area.

= 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

m = Volume for 95th percentile queue is metered by upstream signal.

** = queue cannot be estimated accurately.

SOURCE: Fehr & Peers, 2013.

involving pedestrians were reported at intersections and mid-block in the study area. About 37 percent of all collisions resulted in injury, including 68 percent of collisions involving bicycles and 92 percent of collisions involving pedestrians. No fatal collisions were reported during this period in the study area. Appendix G.R summarizes the data for vehicle/vehicle, vehicle/bicycle, and vehicle/pedestrian collisions.

The highest number of collisions was reported at the Harrison Street/27th Street/24th Street/Bay Place intersection. A total of 21 collisions were reported over the five year period, with four resulting in injuries. The intersection has five approaches and one of the highest traffic volumes in the study area, which contribute to the high number of reported collisions. The highest number of injuries from vehicle/vehicle collisions was reported at the 24th Street/Broadway and 29th Street/Broadway intersections where five collisions resulting in injuries were reported at each intersection. The most common vehicle/vehicle collision type at intersections was broadside.

Vehicle collisions with bicycles and pedestrians accounted for about 21 percent of reported collisions at intersections in the Plan Area. Eight bicycle collisions were reported along 27th Street. The 27th Street/Broadway intersection had the highest number of bicycle collisions with six collisions and four resulting in injury, while the Grand Avenue/Broadway intersection followed with four collisions, with three collisions resulting in injury.

Pedestrian collisions accounted for the fewest number of collisions of the three types of collisions. Two pedestrian collisions were reported at the Grand Avenue/Broadway, 27th Street/Broadway, 29th Street/Broadway and Webster Street/Grand Avenue intersections, with one or no collisions reported elsewhere.

Similar to other urban areas, a relatively small percentage of the collisions (about 16 percent) within the study area were reported mid-block between intersections. These collisions were largely between vehicles, with sideswipe and rear-end the most common. One mid-block collision involving pedestrians and three mid-block collisions involving a bicycle was reported. The highest number of vehicle collisions was reported on Broadway between 30th Street and Piedmont Avenue.

4.13.5 References

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4.14 Utilities and Service Systems

This section describes existing public utilities in the Specific Plan Area and evaluates the impact of the adoption and development under the Specific Plan on the provision of public utilities and possible adverse physical impacts to the environment that could result from adoption and development under the Specific Plan. Topics analyzed in this section include public water supply, sanitary sewer (wastewater), stormwater drainage facilities, solid waste, and energy services. This section describes the environmental and regulatory setting relevant utilities and service systems in the Plan Area. Potential impacts are discussed and evaluated, and appropriate mitigation measures or Standard Conditions of Approval (SCA) are identified, as necessary.

4.14.1 Environmental Setting

Water Service

Water Supply System

The East Bay Municipal Utility District (EBMUD) is a publicly owned water utility supplying water and wastewater treatment for parts of western Alameda and Contra Costa Counties, including the Specific Plan Area. The 627-square-mile Mokelumne River watershed is the major water source for EBMUD, with the source of water originating in the Sierra Nevada Mountains of eastern California. The watershed of this river collects snowmelt from western slope of the Sierra Nevada in Alpine, Amador, and Calaveras counties. Water from the river is collected at the Pardee Dam and Reservoir, located 38 miles northeast of Stockton near the town of Jackson. A portion of the water stored in Pardee Reservoir is conveyed to the EBMUD service area via the Mokelumne Aqueducts. The remainder of the water is released into the nearby Camanche Reservoir. EBMUD has water rights and contracts for up to 325 million gallons per day (mgd) from the Mokelumne River, but the precise amount of this entitlement available in any given year is dependent on a range of variables.

In addition, EBMUD has been recycling water at its main wastewater treatment facility since the early 1970s. Recycled water is suitable for land uses that do not require potable water sources, such as golf courses, some agricultural areas, and industrial uses. Incentives used by EBMUD to encourage customers to utilize recycled water include rate discounts on recycled water and low-interest loans used to retrofit buildings so that they can accommodate recycled water. EBMUD's existing and committed inventory of recycled water projects were estimated to generate 9.3 mgd of recycled water in 2010 (EBMUD, 2012a).

The East Bayshore Recycled Water Project, currently under construction, will use water treated in EBMUD's wastewater treatment plant (see Sanitary Sewer Service, below) and supply an annual average of 2.2 mgd of recycled water to portions of Alameda, Albany, Berkeley, Emeryville, and Oakland. Recycled water will be used for irrigation, industrial, and commercial activities and possibly wetland restoration projects and will offset demands for potable water supply. The first customers received deliveries in 2008 and in fiscal year 2011, the project delivered recycled

water to offset the need for more than 30 million gallons of drinking water (EBMUD, 2011b). The closest available recycled water connection to the Specific Plan Area is approximately 0.6 miles southwest at the intersection of 14th Street and San Pablo Avenue (City Hall Plaza) (BKF, 2012).

There are six water treatment plants in the EBMUD water supply and distribution system. Combined, the six plants have a treatment capacity of over 375 mgd (EBMUD, 2011c). Potable water to the Plan Area is supplied by the Orinda Water Treatment Plant and treats water through coagulation, filtration, and disinfection (BKF, 2012).

Water Demand

EBMUD's *2010 Urban Water Management Plan (UWMP)* was adopted by the EBMUD Board of Directors on June 28, 2011 to assess current and projected water usage, water supply planning, water conservation, and recycling programs over a 20-year planning horizon. The UWMP sets minimum performance goals for water supply in the service area including reliability, flexibility, and the minimization of water rationing. Key components of the UWMP are water conservation and recycling. According to the UWMP, the projected water demand in 2010 was 216 mgd and is anticipated to increase to 229 mgd in 2030. This projection assumes that the existing EBMUD water conservation program would reduce annual demand by 56 mgd and the water recycling program would decrease water demand by 19 mgd (EBMUD, 2011a).

On April 24, 2012, EBMUD adopted the *Water Supply Management Program 2040 Plan (WSMP)*. The WSMP is a program-level effort that estimates EBMUD's dry-year water supply needs through 2040 and anticipates 50 mgd of future supply being provided by water conservation and recycling. The demand for water in the EBMUD's service area is projected to increase to 247 mgd by 2040 under a 15 percent maximum customer rationing scenario (EBMUD, 2012a).

Sanitary Sewer Service

Sanitary Sewer Conveyance

The City of Oakland is responsible for operation and maintenance of the local sanitary sewer collection system within the Plan Area, while EBMUD is responsible for operation and maintenance of interceptor lines and the treatment of sewage. The City's sewer collection system includes over 1,000 miles of pipes ranging in size from 6-inches to 72-inches, as well as seven pump stations. Local collection lines within the Plan Area range in size from 8- to 12-inches. The collection system is separated into basins and sub-basins with the Plan Area located within Basin 52 and sub-basins 5205, 5206, 5209, 5210, and 5211 (BKF, 2012). Each numbered sub-basin encompasses a specific physical area, and its sewer flows are assigned to a single discharge point from the City's collection system into EBMUD's interceptor lines.

The City has instituted an Inflow and Infiltration (I&I) Correction Program to reduce wet weather overflows into the sanitary sewer system. This program is anticipated to increase the capacity of

the collection system to allow an approximately 20 percent increase in wastewater flows for each subarea within the City.

In 1986, the City completed a Sewer System Evaluation Survey (SSES) for North Oakland, which included the Plan Area. The SSES identified improvements needed to reduce I&I and provide additional capacity for wastewater flows. These improvements included repair of fractured sewer pipes/manholes and removal of unpermitted storm drain connections. The City has indicated that I&I improvements to the sewer system have been completed for Basin 52 (BKF, 2012).

The only reported existing collection system capacity issue in the vicinity of the Specific Plan Area is related to an existing 24-inch trunk main south of the Plan Area within Harrison Street that has a history of backing up due to an accumulation of sediment and grease in the lines. There have been no other reports of deficiencies for other existing trunk lines within and downstream of the Plan Area (BKF, 2012).

Sanitary Sewer Treatment

EBMUD provides sanitary sewer treatment services to approximately 655,00 people within an 83-square-mile area of Alameda and Contra Costa counties, including the City of Oakland (also known as Special District No.1). EBMUD's collection system includes approximately 29 miles of interceptor pipeline and 15 pump stations. EBMUD's Main Wastewater Treatment Plant is located southwest of the Interstate 580/Interstate 80 interchange in Oakland, adjacent to the San Francisco/Oakland Bay Bridge approach. The plant is designed to provide primary treatment for up to 320 mgd and secondary treatment for a maximum flow of 168 mgd. Average daily flow is 73 mgd (EBMUD, 2012b).

Stormwater Drainage Facilities

Stormwater runoff in Oakland is collected from the southwesterly flows from the Oakland/Berkeley hills to the developed flatlands, where it then flows primarily through underground storm drains and culverts to the San Francisco Bay via the Oakland Estuary (directly or by way of Lake Merritt) or through the City of Emeryville. The Plan Area generally slopes from northwest to southeast and is largely covered with impervious surfaces (buildings and pavement) with the majority of runoff draining overland to curbside inlets that enter the City's piped storm drainage system. Storm drainage from the Plan Area generally flows south and east, eventually discharging into the Glen Echo Creek system and Lake Merritt.

The Plan Area is located within two watersheds: the Rockridge and Glen Echo Creeks watershed north of 25th Street and the 14th Avenue Creek and the Oakland Estuary watershed south of 25th Street. The City of Oakland is responsible for operation and maintenance of the local storm drainage system within the Plan Area while the Alameda County Flood Control and Water Conservation District (ACFCWCD) is responsible for portions of Glen Echo Creek and other major creeks and flood control channels generally downstream of the City's storm drain facilities. Glen Echo Creek has alternating daylighted and culverted sections along its 1.25-mile length from its origin above the Mountain View Cemetery at the northern terminus of Piedmont Avenue,

southwest to its outlet in Lake Merritt. The City is responsible for the part of the Broadway Creek culvert system that crosses through the northern portion of the Plan Area before joining Glen Echo Creek, as well as the portion of the creek under 27th and Harrison Streets, between 26th Street and where the creek resurfaces at 23rd Street.

In 2006, the City completed a comprehensive inventory and assessment of the storm drain infrastructure, the Storm Drainage Master Plan (SDMP). According to this report, the City's storm drainage infrastructure is nearing the end of its useful life cycle and is generally in poor condition, primarily due to inadequate resources to keep up with required improvements. The SDMP states that demand and burden on the system have increased due to infill development and that normal storm events as well as El Nino-type events have led to increasing instances of flooding, erosion, and property damage. The SDMP notes that storm drainage structures within the Plan Area, as well as much of downtown, were observed to have three inches or more of debris accumulation in 2003. However, of the three locations within the Plan Area that were assessed, two had no silt accumulation and the other only showed a half-inch of silt depth as observed by the City in 2004. This data indicates that reduction in capacity due to debris accumulation has a relatively minimal impact to the performance of the storm drain system in the Plan Area. The SDMP identifies a Capital Improvement Project (CIP) within the Plan Area to increase the capacity of 622 linear feet of storm drain line in 26th Street between Broadway and 27th Street in order to alleviate hydraulic grade line issues. The SDMP proposes upsizing an existing 30-inch storm drain to 48-inches that would need to tie-in with an existing hydrodynamic separator unit at the downstream reach prior to connecting to the culverted portion of Glen Echo Creek at 27th Street. The City has indicated that funding is not currently available to begin the required improvements (BKF, 2012).

In 2002, ACFCWCD completed improvements to Glen Echo Creek between 28th and 29th Streets, which included rehabilitation of the culvert and replacement of piping. These improvements, known as Phase 1, removed flow restrictions to the creek that caused occasional winter flooding at 30th Street and Richmond Boulevard. ACFCWCD also has plans for Phase 2 improvements that include increasing channel capacity and restoration of the greenbelt from 29th Street to Frisbie Street. However, based on discussions with City of Oakland Public Works Agency staff, Phase 2 is currently on hold since Phase 1 has so far successfully resolved flooding (BKF, 2012).

Solid Waste

Waste Management and Disposal

Non-hazardous waste in the City of Oakland is collected by Waste Management of Alameda County (WMAC), which provides curbside pickup for residential, commercial and industrial non-hazardous waste, and transports it to WMAC's Davis Street Transfer Station in San Leandro. Transfer trucks haul waste to the Altamont Landfill and Resource Facility, located approximately 35 miles east of Oakland near Livermore. In 2012, approximately 284,149 tons of disposed solid waste was generated in Oakland, including 235,478 tons that went to the Altamont Landfill (CalRecycle, 2013a). Most of the remaining solid waste was sent to four other landfills: Forward Landfill in San Joaquin County; the Keller Canyon Landfill in Contra Costa County, Potrero Hills Landfill in Solano County, and the Vasco Road Landfill in Alameda County. The Altamont

Landfill has a maximum permitted capacity of 62,000,000 cubic yards. As of 2005, 74 percent of this capacity was remaining (CalRecycle, 2013b).

Alameda County's Integrated Waste Management Plan, prepared by the Alameda County Waste Management Authority pursuant to Assembly Bill 939 (see below), projects an expected closure for the Vasco Road Landfill in 2022 and Altamont Landfill in 2040 (ACWMA, 2011).

Waste Generation and Diversion

AB 939, enacted in 1989, requires Source Reduction and Recycling Element of each city and county to include an implementation schedule to divert a percentage of its solid waste from landfill disposal through source reduction, recycling, and composting activities. AB 939 specifies a required diversion rate of at least 50 percent of wastes by the year 2000. The California Department of Resources Recycling and Recovery (CalRecycle) indicates that the Oakland's diversion rate was 59 percent in 2006. Beginning with the 2007 jurisdiction annual reports, diversion rates were no longer measured. With the passage of SB 1016 in 2006, the Per Capita Disposal Measurement System, only per capita disposal rates are measured to determine if jurisdiction's efforts are meeting the intent of AB 939. In 2012, Oakland had a per resident disposal target rate of 5.8 pounds per day (PPD) and a per employee disposal target rate of 15.3 PPD. In 2012, the City reported an actual annual per resident PPD of 3.9 and 9.0 PPD per employee, thereby meeting the City's waste diversion goals for 2012 (City of Oakland, 2013).

Energy Services

Electricity and gas service in the City of Oakland is provided primarily by Pacific Gas and Electric (PG&E), which owns the gas and electrical utility supply lines. Some users purchase energy services directly from alternate power providers. Other companies may also provide electricity, but PG&E delivers the service. Electrical energy is supplied to the City of Oakland via electrical substations, to which electricity is transported through high-voltage electric cables. Large transformers at the local substations convert the electricity which is provided to the existing PG&E customers. Throughout most of Oakland, electrical power is delivered via overhead distribution and transmission lines, and natural gas is distributed through underground piping. PG&E expands its services on an as-needed basis and requires the user to fund the extension of service.

The majority of the electrical infrastructure in the Plan Area is comprised of 12-kilovolt (kV) transmission lines from the PG&E substation located in 21st Street west of Telegraph Avenue. The substation receives 155 kV and transmits electrical power to both the Upper Downtown and West Oakland areas. Existing gas lines within the Plan Area include low pressure lines and semi-high pressure lines that range in size from 2- to 24- inches (BKF, 2012).

4.14.2 Regulatory Setting

Water Quality, Supply, and Distribution

Safe Drinking Water Act

The USEPA administers the Safe Drinking Water Act (SDWA), the primary federal law that regulates the quality of drinking water and establishes standards to protect public health and safety. The Department of Health Services (DHS) implements the SDWA and oversees public water system quality statewide. DHS establishes legal drinking water standards for contaminants that could threaten public health.

Senate Bill (SB) 610 / Senate Bill (SB) 221

Senate Bill (SB) 610, codified as Sections 10910-10915 of the California Public Resources Code, requires local water providers to conduct a water supply assessment for projects proposing over 500 housing units¹, 250,000 square feet of commercial office space (or more than 1,000 employees), a shopping center or business establishment with over 500,000 square feet (or more than 1,000 employees), or equivalent usage. Local water suppliers must also prepare or have already prepared an Urban Water Management Plan to guide planning and development in the water supplier's service area, and specifically pursue efficient use of water resources.

Water Conservation in Landscaping Act (Assembly Bill 1881, 2006)

The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881, Laird) requires cities, counties, and charter cities and charter counties to adopt landscape water conservation ordinances by January 1, 2010. Pursuant to this law, the Department of Water Resources (DWR) has prepared a Model Water Efficient Landscape Ordinance (Model Ordinance) for use by local agencies. Most new and rehabilitated landscapes are subject to a water efficient landscape ordinance. Public landscapes and private development projects are subject to the Model Ordinance. However, the Ordinance does not apply to registered local, state, or federal historic sites, ecological restoration projects, mined-land reclamation projects, or plant collections.

Stormwater Drainage

Regulations related to the quality and quantity of stormwater runoff (i.e., Federal Clean Water Act / NPDES) are discussed in Section 4.8, *Hydrology and Water Quality*.

¹ Senate Bill (SB) 221 similarly amended the Subdivision Map Act to ensure confirmation that public water supply is sufficient to serve proposed development projects of 500 dwelling units or more.

Solid Waste

Assembly Bill (AB) 939

Assembly Bill (AB) 939, enacted in 1989 and known as the Integrated Waste Management Act, required each city and/or county to prepare a Source Reduction and Recycling Element to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Diversion includes waste prevention, reuse, and recycling. Senate Bill (SB) 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal. The 50 percent equivalent per capita disposal target is the average amount of disposal a jurisdiction would have had during 2003 to 2006 if it had been exactly at a 50 percent diversion rate.

Assembly Bill (AB) 341

Assembly Bill (AB) 341, enacted in 2011 applies to businesses generating four or more cubic yards of garbage per week, and to multi-family residential buildings with five or more units. Effective July 1, 2012, it requires affected businesses and multi-family property owners to have recycling service sufficient to handle the amount of recyclable material produced at the business or property.

Alameda County Waste Reduction and Recycling Initiative (Measure D)

In addition to AB 939, the 1990 Voter Initiative Measure D (Alameda County Waste Reduction and Recycling Initiative) mandates Alameda County to divert 75 percent of its solid waste from landfills by the year 2010.

Alameda County Ordinance Prohibiting the Landfill Disposal of Plant Debris (Ordinance 2008-01)

Ordinance 2008-01 was enacted in 2009 and applies to any businesses or organization generating significant amounts of plant debris, and that hauls the material to Alameda County disposal facilities, or places the material in bins for collection. Affected businesses and organizations include but are not limited to: residential landscapers and gardeners; commercial landscapers and gardeners; commercial and residential property managers; municipalities and institutions (e.g. colleges, hospitals); and businesses subscribing to four cubic yards or more of weekly solid waste collection service.

Alameda County Mandatory Recycling Ordinance (Ordinance 2012-01)

Ordinance 2012-01 was enacted in 2012 and applies to businesses generating four or more cubic yards of solid waste per week, and to multi-family residential buildings with five or more units. Phase 1 of the ordinance, effective July 1, 2012, requires affected businesses and multi-family property owners to have recycling service sufficient to handle the amount of recyclable material produced at their business or property. This includes paper, cardboard, and recyclable food and beverage glass containers, aluminum and metal containers, and HDPE and PET plastic bottles.

Phase 2 of the ordinance, effective July 1, 2014, will add discarded food and compostable papers to the materials covered in Phase 1, and apply to all businesses that generate solid waste.

Construction and Demolition (C&D) Debris Waste Reduction and Recycling Ordinance (Oakland Municipal Code 15.34)

The City of Oakland's Construction and Demolition (C&D) Ordinance is intended to further the goals of AB 939 and Alameda County's Measure D. The C&D Ordinance affects the following projects:

- All New Construction;
- All Alterations, Renovations, Repairs, or Modifications with construction value of \$50,000 or greater, excluding R-3;
- All Demolition, including Soft Demo, and excluding R-3;

Building permit applicants (Applicants) must complete a Waste Reduction and Recycling Plan (WRRP) as part of the Building Permit Application process to detail the plan for salvaging and recycling C&D debris generated during the course of the project. Standards current at the time of this writing call for salvage and/or recycling 100% of asphalt and concrete, and at least 65% of all remaining debris. These standards are subject to administrative adjustment and applicants must follow the standards published at the time of building permit application.

The City will not issue a building permit for a covered project without an approved WRRP on file.

Upon approval of the WRRP and issuance of the permit(s), the applicant shall execute the plan. Prior to the Final Inspection, Temporary Certificate of Occupancy or Certificate of Occupancy, the Applicant must complete and obtain approval of a Construction and Demolition Summary Report (CDSR). The CDSR documents the salvage, recycling and disposal activities that took place during the project. The CDSR must include documentation, such as scale tickets, that support the data provided in the CDSR.²

Energy

Buildings constructed after June 30, 1977 must comply with standards identified in Title 24 of the California Code of Regulations. Title 24, established by the California Energy Commission (CEC) in 1978, requires the inclusion of state-of-the-art energy conservation features in building design and construction including the incorporation of specific energy conserving design features, use of non-depletable energy resources, or a demonstration that buildings would comply with a designated energy budget.

² More details are available at: <http://www2.oaklandnet.com/Government/o/PWA/o/FE/s/GAR/OAK024368>.

Local Plans and Policies

City of Oakland General Plan

The Oakland General Plan includes the following policy related to the provision of utilities and infrastructure:

- ***Policy I/C 1.9:*** Adequate public infrastructure should be ensured within existing and proposed industrial and commercial areas to retain viable uses, improve the marketability of existing, vacant or underutilized sites, and encourage future use and development of these areas with activities consistent with the goals of the *General Plan*.

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

The City's Standard Conditions of Approval (SCA) relevant to reducing impacts on utilities and service systems and that apply to the adoption and development under the Specific Plan are listed below. If the Specific Plan is adopted by the City, all applicable SCAs would be adopted as conditions of approval and required, as applicable, of the development under the Specific Plan to help ensure less-than-significant impacts to utilities. Because the conditions of approval are incorporated as part of the Specific Plan, they are not listed as mitigation measures.

- **SCA 36: Waste Reduction and Recycling**

The project applicant will submit a Construction and Demolition WRRP and an Operational Diversion Plan (ODP) for review and approval by the Public Works Agency.

Chapter 15.34 of the Oakland Municipal Code outlines requirements for reducing waste and optimizing construction and demolition (C&D) recycling. Affected projects include:

- All New Construction;
- All Alterations, Renovations, Repairs, or Modifications with construction value of \$50,000 or greater, excluding R-3;
- All Demolition, including Soft Demo, and excluding R-3;

Applicants must complete a Waste Reduction and Recycling Plan (WRRP) as part of the Building Permit Application process to detail the plan for salvaging and recycling C&D debris generated during the course of the project. Standards current at the time of this writing call for salvage and/or recycling 100% of asphalt and concrete, and at least 65% of all remaining debris. These rates are subject to administrative adjustment and Applicants must follow the standards published at the time of building permit application. The City will not issue an affected permit without an approved WRRP on file.

Upon approval of the WRRP and issuance of the permit(s), the Applicant shall execute the plan. Prior to the Final Inspection, Temporary Certificate of Occupancy or Certificate of Occupancy, the Applicant must complete and obtain approval of a Construction and Demolition Summary Report (CDSR). The CDSR documents the salvage, recycling and disposal activities that took place during the project. The CDSR must include documentation, such as scale tickets, that support the data provided in the CDSR.

Additional information is available at: <http://www2.oaklandnet.com/Government/o/PWA/o/FE/s/GAR/OAK024368>

The ODP will identify how the project complies with the Recycling Space Allocation Ordinance, (Chapter 17.118 of the Oakland Municipal Code), including capacity calculations, and specify the methods by which the development will meet the current City recycling standards for materials generated by operation of the proposed project. The proposed program shall be implemented and maintained for the duration of the proposed activity or facility, and conform with the requirements of the Alameda County Mandatory Recycling Ordinance. Any incentive programs shall remain fully operational as long as residents and businesses exist at the project site.

- **SCA 91: Stormwater and Sewer**

Confirmation of the capacity of the City's surrounding stormwater and sanitary sewer system and state of repair shall be completed by a qualified civil engineer with funding from the project applicant. The project applicant shall be responsible for the necessary stormwater and sanitary sewer infrastructure improvements to accommodate the proposed project. In addition, the applicant shall be required to pay additional fees to improve sanitary sewer infrastructure if required by the Sewer and Stormwater Division. Improvements to the existing sanitary sewer collection system shall specifically include, but are not limited to, mechanisms to control or minimize increases in infiltration/inflow to offset sanitary sewer increases associated with the proposed project. To the maximum extent practicable, the applicant will be required to implement Best Management Practices to reduce the peak stormwater runoff from the project site. Additionally, the project applicant shall be responsible for payment of the required installation or hook-up fees to the affected service providers.

- **SCA H: Compliance with the Green Building Ordinance, OMC Chapter 18.02**

Prior to issuance of a demolition, grading, or building permit. The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, OMC Chapter 18.02.

- a) The following information shall be submitted to the Building Services Division for review and approval with the application for a building permit:
 - i. Documentation showing compliance with Title 24 of the 2008 California Building Energy Efficiency Standards.
 - ii. Completed copy of the final green building checklist approved during the review of the Planning and Zoning permit.
 - iii. Copy of the Unreasonable Hardship Exemption, if granted, during the review of the Planning and Zoning permit.
 - iv. Permit plans that show, in general notes, detailed design drawings, and specifications as necessary, compliance with the items listed in subsection (b) below.
 - v. Copy of the signed statement by the Green Building Certifier approved during the review of the Planning and Zoning permit that the project complied with the requirements of the Green Building Ordinance.

- vi. Signed statement by the Green Building Certifier that the project still complies with the requirements of the Green Building Ordinance, unless an Unreasonable Hardship Exemption was granted during the review of the Planning and Zoning permit.
 - vii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.
- b) The set of plans in subsection (a) shall demonstrate compliance with the following:
- i. CALGreen mandatory measures.
 - ii. All pre-requisites per the LEED / GreenPoint Rated checklist approved during the review of the Planning and Zoning permit, or, if applicable, all the green building measures approved as part of the Unreasonable Hardship Exemption granted during the review of the Planning and Zoning permit.
 - iii. [Insert green building point level/certification requirement: (See Green Building Summary Table; for New Construction of Residential or Non-residential projects that remove a Historic Resource (as defined by the Green Building Ordinance) the point level certification requirement is 75 points for residential and LEED Gold for non-residential)] per the appropriate checklist approved during the Planning entitlement process.
 - iv. All green building points identified on the checklist approved during review of the Planning and Zoning permit, unless a Request for Revision Plan-check application is submitted and approved by the Planning and Zoning Division that shows the previously approved points that will be eliminated or substituted.
 - v. The required green building point minimums in the appropriate credit categories.

During construction. The applicant shall comply with the applicable requirements CALGreen and the Green Building Ordinance, Chapter 18.02.

- a) The following information shall be submitted to the Building Inspections Division of the Building Services Division for review and approval:
- i. Completed copies of the green building checklists approved during the review of the Planning and Zoning permit and during the review of the building permit.
 - ii. Signed statement(s) by the Green Building Certifier during all relevant phases of construction that the project complies with the requirements of the Green Building Ordinance.
 - iii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

After construction, as specified below. Within sixty (60) days of the final inspection of the building permit for the project, the Green Building Certifier shall submit the appropriate documentation to Build It Green / Green Building Certification Institute and attain the minimum certification/point level identified in subsection (a) above. Within one year of the final inspection of the building permit for the project, the applicant shall submit to the

Planning and Zoning Division the Certificate from the organization listed above demonstrating certification and compliance with the minimum point/certification level noted above.

I. Compliance with the Green Building Ordinance, OMC Chapter 18.02, for Building and Landscape Projects Using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist

Prior to issuance of a building permit. The applicant shall comply with the requirements of the California Green Building Standards (CALGreen) mandatory measures and the applicable requirements of the Green Building Ordinance, (OMC Chapter 18.02.) for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

- a) The following information shall be submitted to the Building Services Division for review and approval with application for a Building permit:
 - i. Documentation showing compliance with the 2008 Title 24, California Building Energy Efficiency Standards.
 - ii. Completed copy of the green building checklist approved during the review of a Planning and Zoning permit.
 - iii. Permit plans that show in general notes, detailed design drawings and specifications as necessary compliance with the items listed in subsection (b) below.
 - iv. Other documentation to prove compliance.
- b) The set of plans in subsection (a) shall demonstrate compliance with the following:
 - i. CALGreen mandatory measures.
 - ii. All applicable green building measures identified on the StopWaste.Org checklist approved during the review of a Planning and Zoning permit, or submittal of a Request for Revision Plan-check application that shows the previously approved points that will be eliminated or substituted.

During construction. The applicant shall comply with the applicable requirements of CALGreen and Green Building Ordinance, Chapter 18.02 for projects using the StopWaste.Org Small Commercial or Bay Friendly Basic Landscape Checklist.

- a) The following information shall be submitted to the Building Inspections Division for review and approval:
 - i. Completed copy of the green building checklists approved during review of the Planning and Zoning permit and during the review of the Building permit.
 - ii. Other documentation as deemed necessary by the City to demonstrate compliance with the Green Building Ordinance.

SCAs related to Hydrology and Water Quality, including those related to stormwater, are described in Section 4.8, *Hydrology and Water Quality* of this document.

4.14.3 Impacts and Mitigation Measures

Significance Criteria

Adoption and development under the Specific Plan would have a significant impact on the environment if it were to:

1. Exceed wastewater treatment requirements of the San Francisco Bay Regional Water Quality Control Board;
2. Require or result in construction of new stormwater drainage facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
3. Exceed water supplies available to serve the project from existing entitlements and resources, and require or result in construction of water facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
4. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new wastewater treatment facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
5. Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs and require or result in construction of landfill facilities or expansion of existing facilities, construction of which could cause significant environmental effects;
6. Violate applicable federal, state, and local statutes and regulations related to solid waste;
7. Violate applicable federal, state and local statutes and regulations relating to energy standards; or
8. Result in a determination by the energy provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities, construction of which could cause significant environmental effects.

Approach to Analysis

The increases in population and land use intensity that would result from adoption and development under the Specific Plan were evaluated based on information regarding the various utilities agencies with jurisdiction over the Plan Area and their service capabilities.

Impacts

Water Supply

Impact UTIL-1: The water demand generated by adoption and development under the Specific Plan would not exceed water supplies available from existing entitlements and resources (Criterion 3). (Less than Significant)

As stated above, the projected water demand in the EBMUD service area in 2010 was 216 mgd and is anticipated to increase to 229 mgd in 2030. This projection assumes that the existing EBMUD water conservation program would reduce annual demand by 56 mgd and the water recycling program would decrease water demand by 19 mgd (EBMUD, 2011a). The demand is projected to increase to 247 mgd by 2040 under a 15 percent maximum customer rationing scenario (EBMUD, 2012a).

Pursuant to Sections 10910 through 10915 (SB 610) of the California Water Code, the City of Oakland requested a Water Supply Assessment from EBMUD to verify that adequate water supply is available to meet proposed demand anticipated with adoption and development under the Specific Plan. In its response to the City's request, EBMUD provided an estimated existing demand of approximately 185,000 gpd and a Specific Plan buildout of 860,000 gpd. EBMUD confirmed that the water demands for the adoption and development under the Specific Plan are accounted for in its water demand projections as published in the district's UWMP (EBMUD, 2013) (see Appendix H).

As discussed under the Drought Management Program of the UWMP, EBMUD's system storage generally allows it to continue serving its customers during dry-year events. Despite water savings from EBMUD's conservation and recycling programs and rationing of up to 15 percent, additional supplemental supplies would be needed during a multi-year drought. The UWMP also identified a variety of projects for providing supplemental supplies that will allow EBMUD to meet water demand in the future.

Pressure and flow data provided by EBMUD indicates that there is adequate system wide pressure and flow capacity. Based on this data, adoption and development under the Specific Plan would not require expansion of existing water delivery facilities. However, 4-inch and 6-inch distribution lines would need to be upgraded to 8-inches to achieve the minimum fire flow for compliance with the California Fire Code and to address fire flow issues identified by the Oakland Fire Department. These upgrades are only proposed where new building service connections are necessary or older existing buildings are renovated (BKF, 2012).

No recycled water system improvements are proposed in the Plan Area since the closest available service is approximately 0.6 miles southwest at the intersection of 14th Street and San Pablo Avenue (City Hall Plaza). However, given water conservation incentives from EBMUD and the likely buildout of the Broadway Valdez Development Program over many years or even decades, planning for future use of recycled water in the Plan Area could include the installation of such

features as dual plumbing and irrigation systems constructed to recycled water standards that can be connected to an expanded recycled water system in the future (BKF, 2012).

In conclusion, adoption and development under the Specific Plan would not require new water supply entitlements, resources, facilities, or expansion of existing facilities beyond that which is already planned for in EBMUD's water supply planning analyses, and the impact would be less than significant.

Mitigation: None Required.

Sanitary Sewer

Impact UTIL-2: Adoption and development under the Specific Plan would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required (Criteria 1 and 4). (Less than Significant)

Adoption and development under the Specific Plan would increase the amount of wastewater generated within the Specific Plan Area. Approximately 357,442 gpd of wastewater is currently generated in the Specific Plan Area. Buildout of the Specific Plan is estimated to increase wastewater generation to approximately 958,281 gpd, or an increase of 600,839 (BKF, 2012). As discussed above, EBMUD's Main Wastewater Treatment Plant is currently operating at approximately 43 percent of its 168 mgd secondary treatment capacity (EBMUD, 2012b). Proposed sewer generation within the Plan Area was reviewed by EBMUD's Wastewater Planning Engineering Group, which indicated that there will be adequate wastewater treatment capacity to accommodate increased sewer generation for the Specific Plan Area (BKF, 2012). Therefore, expansion of existing treatment facilities would not be required.

In terms of wastewater flow conveyance to EBMUD treatment facilities, adoption and development under the Specific Plan may require localized investment in new or upgraded local City-owned sanitary sewer infrastructure, or in the larger EBMUD-owned sanitary sewer transmission infrastructure. Proposed sewer generation has been reviewed with the City of Oakland Public Works Agency to determine if there is capacity within Basin 52 to support adoption and development under the Specific Plan. The City has commented that sub-basins 5205, 5206, 5209, 5210, and 5211, either individually or combined do not have enough capacity to serve additional sewer capacity demand.

Any development within the Specific Plan Area that increases sewer capacity demand beyond the existing demand would need to perform I&I rehabilitation projects in other basins in order to reallocate additional capacity to Basin 52. Repairing I&I problem areas in other basins would help to offset the increase in demand in Basin 52. By repairing I&I issues in other basins, the overall amount of sewage to be treated from the City decreases and the differential volume can be reallocated to Basin 52, which would support the increased demand generated by adoption and

development under the Specific Plan. The City has provided an estimated sewer mitigation that is included as part of the infrastructure costs. This fee represents the proportional share of improvement costs associated with I&I rehabilitation improvements within other basins to reallocate basin capacity to Basin 52.

In terms of specific capacity upgrades, the 24-inch sewer line within Harrison Street may require upgrades, specifically in the area from 23rd Street to 20th Street where the Harrison Street line connects with a 66-inch interceptor within 20th Street. Local collection lines in the Plan Area range from 8- to 12-inches and these lines likely have sufficient conveyance capacity (BKF, 2012).

Further, implementation of SCA 91, *Stormwater and Sewer*, would require that the applicants of future projects under the Specific Plan to construct the necessary sanitary sewer infrastructure improvements, the environmental impacts of which are discussed in this document. However, these projects would not require or result in the construction of new wastewater treatment facilities or expansion of existing treatment facilities because EBMUD has adequate capacity to treat this projected demand in addition to its existing commitments. Adoption and development under the Specific Plan would have a less-than-significant impact on sanitary sewer service and treatment.

Mitigation: None Required.

Stormwater Drainage Facilities

Impact UTIL-3: Adoption and development under the Specific Plan would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Criteria 2). (Less than Significant)

Given the location of the Specific Plan Area within a built-out urban environment, much of the area comprises impervious surfaces. The Specific Plan would facilitate construction of projects that could alter the composition of the overall impervious surfaces. The City of Oakland Storm Drainage Design Guidelines require the post-project peak discharge rate be maintained at a level less than or equal to the pre-project peak discharge. To the extent possible, the City has set a goal of reducing the peak runoff into the City's storm drains by 25 percent. Given the existing urban nature of the Plan Area, proposed land uses would likely decrease storm drain runoff since the majority of existing surfaces are already paved. For development within the Plan Area to meet the City's goal of reducing peak runoff by 25 percent, incorporation of additional pervious area through landscaping (e.g., bio-filtration) is recommended by the City of Oakland Environmental Services Division. Other options, including storm water detention, may also be required to achieve the City's goal of reducing peak runoff into storm drains by 25 percent (BKF, 2012).

Implementation of SCA 91, *Stormwater and Sewer*, would require that the applicants of future projects under the Specific Plan to construct the necessary stormwater infrastructure improvements, the environmental impacts of which are discussed in this document. Future projects under the Specific Plan also would be required to implement SCA 80, *Post-construction Stormwater Pollution Prevention Plan*, which requires compliance with Provision C.3 of the Alameda Countywide Clean Water Program and regulates post-construction stormwater runoff; and SCA 75, *Stormwater Pollution Prevention Plan* (see Section 4.8, *Hydrology and Water Quality*).

Because adoption and development under the Specific Plan would not result in an increase in stormwater runoff, and individual projects would be required to meet the SCA listed above, the adoption and development under the Specific Plan would have a less-than-significant impact on storm drainage facilities.

Mitigation: None Required.

Solid Waste Services

Impact UTIL-4: Adoption and development under the Specific Plan would not violate applicable federal, state, and local statutes and regulations related to solid waste; nor generate solid waste that would exceed the permitted capacity of the landfills serving the area (Criteria 5 and 6). (Less than Significant)

Adoption and development under the Specific Plan would generate construction/demolition debris. In addition, the residential and employee population increase associated with adoption and development under the Specific Plan would increase demand for recycling and solid waste services.

As stated above, the Altamont Landfill is projected to have capacity through 2040; therefore, adoption and development under the Specific Plan would have a less-than-significant impact on solid waste services and landfill capacity. Therefore, the Specific Plan would not impede the ability of the City to meet waste diversion requirements or cause the City to violate other applicable federal, state, and local statutes and regulations related to solid waste. In addition, future projects under the Specific Plan would be required to implement SCA 36, *Waste Reduction and Recycling*, which requires the preparation of an Operational Diversion Plan to identify how projects would comply with the City's Recycling Space Allocation Ordinance (Chapter 17.118 OMC). Therefore, adoption and development under the Specific Plan would have a less-than-significant impact on solid waste services and landfill capacity.

Mitigation: None Required.

Energy

Impact UTIL-5: Adoption and development under the Specific Plan would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities (Criteria 7 and 8). (Less than Significant)

The adoption and development under the Specific Plan would result in an incremental increase in the demand for gas and electrical power. PG&E stated that there are currently no known capacity limitations within the existing electrical system, and the Plan Area is not anticipated to have significant adverse impacts to the electrical system. Therefore, upgrades to the existing system would only include the undergrounding of existing overhead lines and providing service to both proposed and existing structures from the undergrounded lines. PG&E also stated there are currently no known capacity limitations within the existing gas system. The gas distribution network within the Plan Area is well supported given that there is an existing 20-inch semi-high pressure transmission main in Broadway, 26th Street, 27th Street, and Harrison Street (BKF, 2012).

Adoption and development under the Specific Plan would comply with all standards of Title 24 of the California Code of Regulations, as well as with SCAs H and I, which requires construction projects to incorporate energy-conserving design measures into projects. Adoption and development under the Specific Plan would not be expected to violate applicable federal, state, and local statutes and regulations relating to energy standards or exceed PG&E's service capacity or require new or expanded facilities. Therefore, impacts to energy services would be less than significant.

Mitigation: None Required.

Cumulative Impacts

Impact UTIL-6: Adoption and development under the Specific Plan in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would result in an increased demand for utilities services. (Less than Significant)

Geographic Context

The cumulative geographic context for utilities and service systems for the adoption and development under the Specific Plan consists of the Plan Area in addition to all areas of the city since utilities services are provided citywide as well as regionally. Cumulative development considers those projects in the Major Projects List in Appendix B to this Draft EIR and discussed in Section 4.07.2, *Cumulative Context*, in Chapter 4 of this Draft EIR.

Impacts

EBMUD's projections for water and wastewater demand incorporate growth pursuant to service-area-wide growth projections. As stated above, EBMUD has determined that it would meet area-wide water demand in wet and normal years, as well as meet demand during multiple dry years through a combination of conservation, recycled water, and new water supply projects. EBMUD and the City of Oakland plans regarding wastewater capacity similarly include cumulative development.

Adoption and development under the Specific Plan would not result in a significant impact related to stormwater, solid waste, and energy services. Thus, the adoption and development under the Specific Plan would not combine with, or add to, any potential adverse impacts on the provision of stormwater, solid waste or energy services that may be associated with other cumulative development. In addition, past projects have been subject to, and current and reasonably foreseeable future projects would be subject to, SCA 36, *Waste Reduction and Recycling*, SCA 91, *Stormwater and Sewer*, SCA 75, *Stormwater Pollution Prevention Plan*, and SCA 80, *Post-construction Stormwater Management Plan*. Based on the information in this section and for the reasons summarized above, the adoption and development under the Specific Plan would not contribute to any significant adverse cumulative impacts on utilities or service systems when considered together with past, present, existing, approved, pending and reasonably foreseeable development.

Mitigation: None Required.

4.14.4 References

- Alameda County Waste Management Authority (ACWMA), 2011. *Alameda County Integrated Waste Management Plan, Countywide Element*, adopted February 26, 2003, amended December 14, 2011.
- BKF Engineers (BKF), 2012. *Broadway/Valdez District Specific Plan, Infrastructure Analysis*, prepared for the City of Oakland, November 2012.
- California Department of Resources Recycling and Recovery (CalRecycle), 2013a. Disposal Reporting System, www.calrecycle.ca.gov/LGCentral/Reports/DRS/Destination/JurDspFa.aspx, accessed February 11, 2013.
- CalRecycle, 2013b. Facility/Site Summary Details, Altamont Landfill and Resource Recovery (01-11-0009), www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/, accessed February 11, 2013.
- City of Oakland, 2013. *Electronic Annual Report Summary to CalRecycle: Oakland (2012)*, July 25, 2013.
- East Bay Municipal Utility District (EBMUD), 2011a. *2010 Urban Water Management Plan*, June 2011.

EBMUD, 2011b. *East Bayshore Recycled Water Project Fact Sheet*, December 2011.

EBMUD, 2011c. *2011 Annual Water Quality Report*, May 2012.

EBMUD, 2012a. *Water Supply Management Program 2040 Plan*, April 2012.

EBMUD, 2012b. *Sewer System Management Plan*, updated 2012.

EBMUD, 2013. Letter from William R. Kirkpatrick, Manager of Water Distribution Planning Division to Alisa Shen, Planner III, City of Oakland, Re: Water Supply Assessment, Broadway/Valdez District Specific Plan, January 22, 2013.

CHAPTER 5

Alternatives

5.1 Criteria for Selecting Alternatives

CEQA requires that the EIR compare the effects of a “reasonable range of alternatives” to the effects of the project. The alternatives selected for comparison would attain most of the basic objectives of the project and avoid or substantially lessen one or more significant effects of the project (CEQA Guidelines Section 15126.6). The “range of alternatives” is governed by the “rule of reason” which requires the EIR to set forth only those alternatives necessary to permit an informed and reasoned choice by the decision-making body and informed public participation (CEQA Guidelines Section 15126.6(f)). CEQA generally defines “feasible” to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors.

Therefore, each of the alternatives to the Specific Plan addressed in this EIR were selected based on the following factors:

1. The extent to which the alternative would accomplish most of the basic objectives of the Specific Plan (identified in Chapter 3);
2. The extent to which the alternative would avoid or lessen any of the identified significant and unavoidable environmental effects of adoption and development under the Specific Plan (discussed throughout Chapter 4);
3. The feasibility of the alternative, taking into account site suitability, availability of infrastructure, property control (ownership), and consistency with applicable plans and regulatory limitations;
4. The extent to which the alternative contributes to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
5. The requirement of the CEQA Guidelines to consider a no-project alternative and to identify an environmentally superior alternative in addition to the no-project alternative (CEQA Guidelines, Section 15126.6(e)). The purpose of evaluating the no-project alternative is to allow decision makers to compare the impacts of approving the Specific Plan with the impacts of not approving the Specific Plan.

5.2 Significant Impacts

To determine alternatives that would avoid or lessen any of the identified significant and unavoidable environmental effects of adoption and development under the Specific Plan, the significant impacts must be considered. Impacts that are not mitigated to less than significant are considered “significant and unavoidable” (“SU”). The SU impacts identified for adoption and development under the Specific Plan are listed below.

SU Aesthetics Impacts

- **Impact AES-4:** Adoption and development under the Specific Plan could result in substantial new shadow that could shade the Temple Sinai. Although Mitigation Measure AES-4 would require a shadow study to evaluate the shadowing effects, it cannot be known with certainty that a project redesign would eliminate the potential for new significant shading on the Temple Sinai. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-5:** Adoption and development under the Specific Plan has the potential to result in adverse wind conditions in cases where structures 100 feet in height or taller are proposed for development. Although Mitigation Measure AES-5 would require a wind study to evaluate the effects of proposed development, it cannot be known with certainty that a project redesign would eliminate the potential for new adverse wind impacts. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-6:** For the reasons listed above, adoption and development under the Specific Plan is conservatively deemed to result in significant cumulative wind, and shadow impacts. Therefore, adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area, also is conservatively deemed significant and unavoidable.

SU Air Quality Impacts

- **Impact AIR-1:** Construction associated with adoption and development under the Specific Plan would result in average daily emissions in excess of 54 pounds per day of ROG. With the inclusion of Recommended Measure AIR-1, it cannot reliably be demonstrated that ROG emissions from application of architectural coatings associated with adoption and development under the Specific Plan would be reduced to 54 pounds per day or less. To assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AIR-2:** Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NOX, or PM_{2.5}; 82 pounds per day of PM₁₀; or result in maximum annual emissions of 10 tons per year of ROG, NOX, or PM_{2.5} or 15 tons per year of PM₁₀. Although implementation of SCA 25 and Recommended Measure AIR-2 would reduce environmental effects on air quality, adoption and development under the Specific Plan still would contribute substantially to an existing air quality violation (ozone precursors and particulate matter).

Therefore, even with implementation of Recommended Measure AIR-2, this impact would remain significant and unavoidable for emissions of ROG, NOX, and PM₁₀. To assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the significant and unavoidable determination is considered conservative.

- **Impact AIR-4:** Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) under cumulative conditions resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter as a result of project operations. Although, due to the BAAQMD's permitting requirements, residual risk for a given generator would be less than 10 in one million, and although implementation of Mitigation Measure AIR-4 would substantially reduce potential cancer risks associated with DPM, the degree to which multiple sources, if concentrated on one area, would maintain cumulative risks to below 100 in one million cannot be assured. Therefore, the impact is conservatively deemed significant and unavoidable.

SU Cultural Resources Impacts

- **Impact CUL-1:** Adoption and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **Impact CUL-5:** Adoption and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources.

SU Greenhouse Gas Impacts

- **Impact GHG-1:** Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO₂e per year that would exceed the project-level threshold of 4.6 metric tons of CO₂e per service population annually. Although future projects under the Specific Plan would be subject to SCA F, GHG Reduction Plan, according to the specific applicability criteria, and GHG emissions would be reduced through project-by-project implementation of project-specific reduction measures, it cannot be guaranteed that sufficient reductions can be achieved. Therefore, the impact is conservatively deemed significant and unavoidable.

SU Noise Impacts

- **Impact NOI-5:** Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area.
- **Impact NOI-6:** Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past,

present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels.

- **Impact NOI-7:** Adoption and development under the Specific Plan could result in stationary noise sources, such as rooftop mechanical equipment and back-up generators; that when combined with noise from traffic generated by adoption and development under the Specific Plan; as well as from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area.

SU Transportation and Circulation Impacts

Existing Plus Project Conditions

- **Impact TRANS-2:** The development under the Specific Plan would degrade the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour under Existing Plus Project conditions.
- **Impact TRANS-6:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under Existing Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS A during both weekday PM and Saturday peak hours, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.

2020 Plus Project Conditions

- **Impact TRANS-7:** The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more, increase the total intersection v/c ratio by 0.03 or more, and increase the v/c ratio for a critical movement by 0.05 or more at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) which would operate at LOS F during the weekday PM peak hour under 2020 conditions.
- **Impact TRANS-8:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**).
- **Impact TRANS-10:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2020 conditions.
- **Impact TRANS-12:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* (**Intersection #40**) intersection which would meet peak-hour signal warrant under 2020 Plus Project conditions. Although,

with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.

- **Impact TRANS-13:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *West Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the PM peak hour in 2020.

2035 Plus Project Conditions

- **Impact TRANS-14:** The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM and Saturday peak hours at the *51st Street/Pleasant Valley Avenue/Broadway* intersection (**Intersection #7**) under 2035 conditions.
- **Impact TRANS-17:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday PM peak hour at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) under 2035 conditions.
- **Impact TRANS-18:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more at an intersection operating at LOS F during the Saturday peak hour at the *Grand Avenue/Lake Park Avenue/Santa Clara Avenue* (**Intersection #16**) intersection under 2035 conditions.
- **Impact TRANS-19:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions.
- **Impact TRANS-20:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway* intersections (**Intersections #20 and #21**) under 2035 conditions.
- **Impact TRANS-21:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *27th Street/Telegraph Avenue* intersection (**Intersection #29**) which would operate at LOS F during the weekday PM peak hour under 2035 conditions.
- **Impact TRANS-22:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour and at the *27th Street/ Broadway* intersection (**Intersection #30**) under 2035 conditions.

- **Impact TRANS-24:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the Saturday peak hour at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2035 conditions.
- **Impact TRANS-26:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under 2035 Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact TRANS-27:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the West *Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the weekday PM peak hour in 2035.
- **Impact TRANS-28:** The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Grand Avenue/Broadway* intersection (**Intersection #49**) in 2035.

Roadway Segment Evaluation

- **Impact TRANS-29:** The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments:
 - MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035.
 - Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035.
 - Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035.
 - Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035.
 - San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035.
 - Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035.

Previous environmental documents have identified intersections that either currently operate at an unacceptable LOS or are projected to operate at an unacceptable LOS in the future. This EIR identifies these intersections as “impacted intersections” because components of the proposed project may affect those locations. Appendix G presents the intersections that previously published environmental documents identified as having significant and unavoidable impacts.

Under CEQA, the important consideration is whether the alternatives reduce significant impacts to less than significant. Each of the alternatives is discussed below. **Table 5-5** at the end of this chapter compares all the impacts of the Specific Plan to each of the alternatives and indicates whether the impacts would have the same, fewer, or greater effect on the environment.

5.3 Alternatives Selected for Consideration

The alternatives selected for evaluation in this EIR are summarized below.

1. **No Project Alternative 1:** Under this alternative, the Specific Plan would not be adopted, and therefore the Broadway Valdez Development Program would not occur. However, the No Project Alternative does include reasonably foreseeable development that could occur even without adoption and development under the Specific Plan. This includes certain already approved but not built projects in the Plan Area (Broadway West Grand Mixed-Use Project, Parcel B), as well as development that would reasonably be expected to occur in the Plan Area in accordance with existing plans, zoning, and regulatory framework.
2. **Partially Mitigated Alternative 2:** Under this alternative, the Plan Area would be developed at a reduced intensity (roughly 25 percent of the non-residential development compared with the Broadway Valdez Development Program). The mix of uses would shift such that a higher percentage of residential development would occur compared to commercial (retail and office) development. This alternative also would reduce maximum allowable heights on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street, and would not amend the General Plan to expand the *Central Business District* land use designation. All other aspects of the Specific Plan would be adopted with this Alternative.
3. **Maximum Theoretical Buildout Alternative 3:** This alternative evaluates the theoretical possibility that every parcel would be built out to the new maximum level permissible under the General Plan and Planning Code regulations as revised through adoption of the Specific Plan. Under this alternative, the Plan Area would be developed at an increased density/intensity (roughly 300 percent of the residential development and 200 percent of non-residential development assumed in the Broadway Valdez Development Program). All other aspects of the Plan would occur with this Alternative.
4. **Historic Preservation Sub-Alternative:** The intent of this sub-alternative is to avoid the SU historic resources impacts identified for the Plan. Under this sub-alternative, development on sites with historic resources would be prohibited and thus no identified historic resources within the Plan Area would be demolished or significantly altered. In addition, allowable heights on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street would be reduced such that new development within that parcel would avoid

adversely shading the stained glass windows of the Temple Sinai during morning worship periods. The development restrictions and limitations of this sub-alternative are assumed in the Partially Mitigated Alternative 2 and thus represented together with Alternative 2 in Tables 5.1, 5.3, and 5.5. The development restrictions and limitations of this sub-alternative also could be used in combination with the Specific Plan and thus are classified as a sub-alternative to provide for this flexibility. In this case, all other aspects of the Specific Plan would occur if combined with this sub-alternative.

The set of selected alternatives above are considered to reflect a “reasonable range” of feasible alternatives in that they include reduced scenarios that lessen and/or avoid significant and unavoidable effects, as well as less-than-significant effects, of the Specific Plan and generally would align with the basic objectives of the Plan, which the City would assess when it considers the merits of the Plan and the alternatives. The Plan is specific to the geography of the Broadway Valdez District; therefore this analysis does not consider an off-site alternative. A fully mitigated alternative that avoids nearly all of the SU impacts of the Plan is discussed in this analysis but is not evaluated in detail because it would be substantially inconsistent with the Specific Plan’s basic objectives to achieve a “dynamic and active neighborhood” that is a “retail destination.” Each of the selected alternatives is outlined in **Table 5-1, Summary of Alternatives to the Project**. Tables comparing the development program of each alternative to the Broadway Valdez Development Program are presented with the detailed description of each alternative and the alternative analyses in Section 5.4, *Comparative Alternatives Analysis*.

5.4 Comparative Alternatives Analysis

This section describes each alternative followed by a discussion of the impacts of the alternative compared with those identified with adoption and development under the Specific Plan. Impact comparisons to the Plan’s SU impacts are highlighted in ***bold italic*** text for convenience.

The impacts associated with adoption and development under the Specific Plan and each alternative are for buildout conditions. Impacts are stated as levels of significance *after* implementation of mitigation measures identified in Chapter 4, and all applicable City Standard Conditions of Approval (SCA) are assumed to be part of each alternative, just as they are also assumed to be part of the Specific Plan.

As permitted by CEQA, the effects of the alternatives are discussed in less detail than the impact discussions for the Specific Plan in Chapter 4 (CEQA Guidelines Section 15126.6[d]). However, the alternatives analysis is conducted at a sufficient level of detail to provide the public, other public agencies, and City decision-makers adequate information to allow meaningful evaluation, analysis, and comparison with the Specific Plan as analyzed in Chapter 4.

**TABLE 5-1
SUMMARY OF ALTERNATIVES TO THE PROJECT**

	Broadway Valdez Development Program	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Residential Units	1,800	1,400	1,800	5,400
Office (sq. ft.)	700,000	120,000	300,000	2,090,000
Retail (sq. ft.)	1,100,000	140,000	150,000	1,670,000
Hotel Rooms	180	0	0	540
<i>Non-Residential Development (sq. ft.)</i>	<i>1,800,000</i>	<i>260,000</i>	<i>600,000</i>	<i>3,760,000</i>
Estimated Daily Trip Generation	40,301	12,908	17,293	65,953
Service Population				
Employees	4,500	650	1,210	10,400
Residents	3,230	2,500	3,230	9,690
Total	7,740	3,160	4,440	20,090
GHG Emissions				
Total Emissions (CO ₂ e)	38,116 MT/yr	<u>12,648 MT/yr</u>	<u>17,943 MT/yr</u>	77,693 MT/yr
GHG Emissions by Service Population (CO ₂ e)	4.9 MT/yr	<u>4.0 MT/yr</u>	<u>4.0 MT/yr</u>	<u>3.9 MT/yr</u>
Average Daily Construction Emissions (lb/day) (Worst Case Year)				
ROG	120 pounds per day (lb/day)	<u>72 lb/day</u>	<u>75 lb/day</u>	691 lb/day
NOx	55 lb/day	<u>40 lb/day</u>	<u>42 lb/day</u>	75 lb/day
Average Daily Operational Emissions (lb/day)				
ROG	181 pounds per day (lb/day)	<u>73 (lb/day)</u>	<u>99 (lb/day)</u>	404 (lb/day)
NOx	197 (lb/day)	<u>66 (lb/day)</u>	<u>90 (lb/day)</u>	348(lb/day)
PM ₁₀	253(lb/day)	<u>87(lb/day)</u>	<u>119 (lb/day)</u>	443(lb/day)
Maximum Annual Operational Emissions (ton/year)				
ROG	31 tons per year (ton/yr)	<u>13 ton/yr</u>	<u>17 ton/yr</u>	70 ton/yr
NOx	36 ton/yr	<u>12 ton/yr</u>	<u>16 ton/yr</u>	63 ton/yr
PM ₁₀	37 ton/yr	<u>13 ton/yr</u>	<u>17 ton/yr</u>	65 ton/yr

Bold and underlined formatted text indicates value is less than would occur with the Specific Plan.

SOURCE: Detailed tables for each of the data in this table are provided in Appendix I, *Alternatives Technical Background*, to this Draft EIR.

5.4.1 No Project Alternative 1

Description

Under the No Project Alternative, the Specific Plan would not be adopted; therefore, the Broadway Valdez Development Program would not occur. However, the No Project Alternative would include development that could occur even without adoption of the Specific Plan.¹ Under the No Project Alternative, non-residential development would be substantially less than with the Plan in place (14 percent of non-residential development assumed in the Broadway Valdez Development Program would occur). This extent of development would include reasonably foreseeable mixed-use developments in the Plan Area, such as Broadway-West Grand Parcel B, and the retail project, The Shops at Broadway, as well as other potential development and reuse throughout the Plan Area.

Table 5-2 shows the growth potential estimated based on development trends in the Plan Area vicinity, on known proposed project sites, and on existing land use and zoning. Future development under the No Project Alternative would continue to be consistent with the policies of the City of Oakland General Plan and specifically the Land Use and Transportation Element (LUTE), the Housing Element, and the Historic Preservation Element. Future development also would be subject to the City's Planning Code, Zoning Ordinance and Standard Conditions of Approval. Table 5-2 compares the No Project development to the Broadway Valdez Development Program.

**TABLE 5-2
NO PROJECT ALTERNATIVE 1 COMPARED WITH
THE BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Broadway Valdez Development Program	No Project Alternative 1	% Change
Residential Units	1,800	1,400	-22%
Office (sq. ft.)	700,000	120,000	-83%
Retail (sq. ft.)	1,100,000	140,000	-87%
Hotel Rooms	180	0	-100%
<i>Non-Residential Development (sq. ft.)</i>	<i>1,800,000</i>	<i>260,000</i>	<i>-86%</i>
Estimated Trip Generation			
Daily	40,301	12,908	-68%
Weekday AM Peak Hour	1,980	701	-65%
Weekday PM Peak Hour	3,709	1,226	-67%
Saturday Peak Hour	4,114	1,387	-66%

SOURCE: Detailed trip generation calculations are provided in Appendix I, *Alternatives Technical Background*, to this Draft EIR

¹ The development assumptions incorporated into this alternatives analysis differ from the No Project scenario used for Plan development comparison in Section 4.13, *Transportation and Circulation*, which, for the purpose of conducting a conservative analysis, assumed no additional development in the Plan Area whatsoever.

Comparison of No Project Alternative 1 Impacts to the Plan's Impacts²

Aesthetics, Shadow and Wind

Similar to the adoption and development under the Specific Plan, individual developments that would occur under the No Project Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Development under the No Project Alternative would be substantially less than with the Plan; therefore, the aesthetic effects from that development likely would continue to be less than significant as with adoption and development under the Specific Plan. While still considered less than significant (and not resulting from changes to existing conditions, on which the CEQA analysis focuses), it is worth noting that adoption and development under the Specific Plan would result in improved aesthetic conditions in the Plan Area that would not occur under the No Project Alternative.

Height limits in the existing Zoning Ordinance allow for taller structures in portions of the Plan Area than would be permitted with adoption of the Plan. Under the No Project Alternative, structures up to 75 feet would be permitted on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street as opposed to 65 feet under the Plan's Physical Height Model (see Figure 3-11 in Chapter 3, *Project Description*). Therefore, taller projects proposed for development on that parcel would be required to evaluate the potential for new shading on the stained glass windows of the Temple Sinai during morning worship periods, and could be required to complete a shadow analysis (consistent with Mitigation Measure AES-4). Although there would be substantially less development compared with the Broadway Valdez Development Program, there still would be the potential for development to result in adverse shadow effects if new development is unable to fully avoid new shading on Temple Sinai, which would materially impair this resource's historic significance. At this time, it cannot be known with certainty that mitigations would prevent new development from resulting in adverse shadow effects. ***Therefore, the conservative SU shadow impact identified with the Plan (Impact AES-4, shading an historic resource), would continue to be conservatively SU under the No Project Alternative since new development still could potentially shade an historic resource.***

Under the No Project Alternative, there would be no amendment to the General Plan that would extend the *Central Business District* land use designation northward to 27th Street and throughout the Valdez subarea. Therefore, although height limits in the existing Zoning Ordinance allow for buildings up to 120 feet in portions of the Plan Area, the City's threshold requiring project sponsors proposing buildings 100 feet tall or taller within the *Central Business District*, to conduct detailed wind studies (consistent with Mitigation Measure AES-5), would not apply. ***Therefore, the conservative SU wind impact identified with adoption and development under the Specific Plan (Impact AES-5, adverse wind conditions) would be avoided under the No Project Alternative.***

The No Project Alternative would avoid the conservative SU wind impact identified with adoption and development under the Specific Plan. However, because it would not avoid the SU shadow impact, the No Project Alternative, when combined with cumulative development, would contribute

² Comparative discussion of SU impacts are shown in ***bold italic*** text.

to cumulative shadow effects. ***Therefore, conservative SU cumulative impact for shadow identified with the Plan (Impact AES-6), would continue under the No Project Alternative.***

Overall, the No Project Alternative would avoid the conservative SU wind impact but would have the same conservative SU shadow and cumulative impacts, and result in the same less than significant aesthetics impacts identified with adoption and development under the Specific Plan.

Air Quality

Given that substantially less development and related construction activity would occur under the No Project Alternative as compared with the Specific Plan, and the proportionally fewer new residents and workers that would occur in the Plan Area, air quality emissions and the potential for exposing new residents to air pollutants would be less than that identified for the Plan. However, even with an approximate 50 percent reduction in overall new building square footage constructed, as shown in Table 5.1, ROG emissions from application of architectural coatings would remain in excess of the 54 pounds per day threshold. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-1, construction average daily emissions) would continue to be conservatively SU under the No Project Alternative since new development (although less than with the Plan) likely still would exceed the threshold for ROG.***

Although the development program would be substantially less when compared with the Plan, as demonstrated in Table 5.1, the No Project Alternative would continue to result in SU operational average daily emissions. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-2, operational average daily and maximum annual emissions) would continue to be conservatively SU under the No Project Alternative since new development (although less than with the Plan) still would exceed thresholds.***

Under the No Project Alternative, although there would be substantially less development compared with the Broadway Valdez Development Program, there still would be the potential for multiple new sources of TACs, each with a cancer risk less than 10 in one million, to cumulatively increase cancer risks to greater than 100 in one million. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-4, cumulative operational TAC impacts from new sources) would continue to be conservatively SU under the No Project Alternative since new development, under cumulative conditions, (although less than with the Plan) still could potentially exceed the cumulative threshold.***

The No Project Alternative also would result in the same less than significant air quality impacts that would occur with the Plan, and the No Project Alternative would be subject to the same air quality Recommended Measures, Mitigation Measures, and SCAs that would apply to the Plan.

Overall, the No Project Alternative would result in the same conservative SU and less-than-significant air quality impacts identified with the Plan, even though development would be substantially less compared with the Plan.

Biological Resources

Under the No Project Alternative, development still would occur in the Plan Area and the construction activities and operation of development could impact biological resources. Similar to the adoption and development under the Specific Plan, individual projects would be required to conform to all of the City's SCAs. Overall, given its reduced development, the No Project Alternative would maintain the same less-than-significant impacts on biological resources identified with the Plan, even though construction and development operations would be relatively less.

Cultural Resources

Under the No Project Alternative, although there would be substantially less development compared with the Broadway Valdez Development Program, there still would be the potential for development to effect historical resources if new development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures. ***Therefore, the SU historic resources impacts identified with the Plan (Impacts CUL-1 and CUL-5, impacts to historic resources – project and cumulative), would continue to be SU under the No Project Alternative.***

All other cultural resources impacts with the No Project Alternative would be less than significant as identified with adoption and development under the Specific Plan. Therefore, overall impacts to cultural resources under the No Project Alternative would result in the same SU and less-than-significant impacts as the Plan even though development would be at a substantially smaller scale compared with the Plan.

Geology, Soils and Geohazards

Under the No Project Alternative, development still would occur in the Plan Area and the construction activities and operation of development could expose residents to geologic hazards including strong ground shaking during a seismic event, as with adoption and development under the Specific Plan. However, as discussed above, new development would be at a smaller scale as compared with the Plan, and would therefore result in fewer new residents and workers in the Plan Area. As with the adoption and development under the Specific Plan, individual projects would be required to incorporate all applicable SCAs. Thus, the No Project Alternative would result the same less-than-significant impacts to geology, soils and geohazards as identified with the Plan, even though the extent of exposure and risks would be reduced given the reduced development and population.

Greenhouse Gases and Climate Change

The reduced development and related construction, operations and vehicle trips that would occur under the No Project Alternative would generate reduced annual greenhouse gas emissions compared with adoption and development under the Specific Plan. Further, in part due to residential development making up a higher percentage of the overall development assumed, the No Project Alternative would result in a larger service population relative to the estimated annual greenhouse gas emissions (see Table 5.1). As such, the No Project Alternative would result in GHG emissions per Service Population ratio below the threshold and avoid the SU impact.

Therefore, the conservative SU Greenhouse Gases and Climate Change impact identified with the Plan (Impact GHG-1, Greenhouse Gas Emissions), would be avoided under the No Project Alternative. Regardless, all applicable SCAs, including SCA F, *GHG Reduction Plan*, still would be incorporated in future developments, as applicable.

As with adoption and development under the Specific Plan, the No Project Alternative would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. Overall, the No Project Alternative would result in the same less than significant greenhouse gas policy impacts, and avoid the conservative SU greenhouse gas emissions impacts identified with adoption and development under the Specific Plan.

Hazardous Materials

Under the No Project Alternative, development still would occur in the Plan Area and the construction activities involving demolition, soil disturbance and excavation could continue to potentially expose construction workers and residents to potential hazards and hazardous materials as identified for adoption and development under the Specific Plan. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Plan, any new construction would incorporate applicable City SCAs, and therefore would result in the same less-than-significant impacts associated with hazardous materials and hazards compared with adoption and development under the Specific Plan, even though the extent of exposure would be less given the reduced development that would occur under the No Project Alternative. Overall, the No Project Alternative would result in the same less-than-significant impacts identified with adoption and development under the Specific Plan.

Hydrology and Water Quality

Under the No Project Alternative, development still would occur in the Plan Area and the construction activities could lead to increased contaminants being washed into San Francisco Bay. Development under the No Project Alternative could alter drainage patterns and could be susceptible to flooding hazards or inundation. However, as discussed above, the No Project Alternative would have less new development than assumed in the Broadway Valdez Development Program. Any development would incorporate the City's applicable SCAs and implement best management practices. Therefore, impacts to water quality under the No Project Alternative would continue to be less than significant.

Land Use, Plans and Policies

Under the No Project Alternative, development still would occur in the Plan Area, but, as discussed above, development would be at a substantially smaller scale compared with the Plan. All new development would be required to be consistent with the General Plan and current Oakland Zoning designations. The reduced development would not introduce land uses unlike those identified with in the Broadway Valdez Development Program or locate these uses in a manner that would adversely affect existing communities or natural resources more than would the Plan. Therefore,

the No Project Alternative would result in the same less-than-significant land use impacts identified with adoption and development under the Specific Plan.

Noise

Given the substantially reduced scale of development and related construction activity that would occur under the No Project Alternative compared with the Plan, and the proportionally fewer new residents and workers that would occur in the Plan Area, construction and operational noise impacts would be less than identified with adoption and development under the Specific Plan. As with the Plan, any new construction would incorporate applicable City SCAs. Therefore, the No Project Alternative would have the same less-than-significant noise impacts as would occur with adoption and development under the Specific Plan.

The three SU noise impacts identified with adoption and development under the Specific Plan result primarily from traffic noise and traffic noise in combination with future operational noise. As demonstrated in Table 5.2, above, the No Project Alternative would result in substantially fewer new peak hour trips when compared with the Broadway Valdez Development Program. Roadway noise modeling based on the percentage decrease in project traffic contributions demonstrates that *two of the three SU noise impacts identified with adoption and development under the Specific Plan (Impact NOI-5, traffic noise; and Impact NOI-6, cumulative traffic noise) would be avoided under the No Project Alternative*. Additionally, impacts to one of the two significantly impacted receptors in Impact NOI-7 would be reduced to less than significant under this Alternative; however, *the SU noise impact identified with adoption and development under the Specific Plan (Impact NOI-7, cumulative noise) would remain SU under the No Project Alternative* given the second impacted receptor. Overall, the No Project Alternative would avoid two of the three SU noise impacts and have the same less-than-significant noise impacts identified with adoption and development under the Specific Plan since development would be substantially less compared with the Plan.

Population, Housing, and Employment

Under the No Project Alternative there would be substantially less development in the Plan Area compared with the Broadway Valdez Development Program. As a result, there would be substantially less total potential population (approximately 2,500 persons compared with 3,230, or 78 percent) and employment (approximately 650 jobs compared with 4,500, or 14 percent) under this Alternative. Therefore, the No Project Alternative would have the same less-than-significant impacts regarding the displacement of substantial housing, people, businesses, or jobs, as identified for adoption and development under the Specific Plan.

Public Services and Recreation Facilities

The demand for public services and recreation facilities under the No Project Alternative, and the use of such facilities, would be less than would occur with the Broadway Valdez Development Program. Compared with the public service demands associated with adoption and development under the Specific Plan, less police, fire and emergency services and facilities would be required, fewer students would be generated by the reduced housing, and the demand for and use of park

and recreational facilities would be less under the No Project Alternative. Thus, it is not anticipated that new physical facilities would be required, the construction of which could result in adverse environmental effects. Therefore, the No Project Alternative would have the same less-than-significant public services and recreation facilities impacts as identified with the Plan.

Transportation and Circulation

As shown in Table 5-2, the No Project Alternative would generate about one-third of the peak hour traffic generated by the Broadway Valdez Development Program. Although specific intersection evaluation was not conducted for the alternatives analysis, based on the trip generation estimates, it can be reasonably assumed that the No Project Alternative would eliminate most of the significant impacts on traffic operations identified with the Plan. However, it is anticipated that a few of the significant and unavoidable impacts at a few intersections would remain under the No Project Alternative; although the magnitude of these impacts would be much less than with adoption and development under the Specific Plan.

The No Project Alternative is expected to have similar effects on non-traffic operation topics; such as transportation safety and consistency with adopted policies, plans, or programs supporting alternative transportation.

Utilities and Service Systems

Under the No Project Alternative, the demands for utilities and service systems would be substantially less than with adoption and development under the Specific Plan given the reduced development that would occur. There would be notably less demand for water and energy services, and less need for increased wastewater and solid waste disposal. Therefore, the No Project Alternative would have the same less-than-significant utilities and service systems impacts as identified with adoption and development under the Specific Plan.

5.4.2 Partially Mitigated Alternative 2

Description

The Partially Mitigated Alternative would reduce the extent of growth and development anticipated within the Plan Area as a result of adoption and development under the Specific Plan. Therefore, the growth of new businesses and population also would be reduced. This alternative is designed with the goal of avoiding significant unavoidable impacts identified for the Broadway Valdez Development Program to less than significant levels. However, since the No Project Alternative would not avoid all identified SU impacts, and considering the extent of development reductions necessary to fully avoid all SU impacts, specifically those related to transportation and circulation, a “fully mitigated” alternative was eliminated from further consideration in this EIR (see subsection 5.6.2, below). Rather, the Partially Mitigated Alternative comprises a development program that is reduced to the greatest extent while continuing to be feasible from a market standpoint (i.e. not less development than assumed for the No Project Alternative) in combination with the Historic Preservation Sub-Alternative (see subsection 5.4.4 below).

While the Partially Mitigated Alternative would preserve the level of residential development within the Plan Area, the non-residential development represents an approximate 75 percent decrease when compared with the Broadway Valdez Development Program (see **Table 5-3**, below). The Partially Mitigated Alternative differs from the Specific Plan in that it would reduce maximum allowable heights on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street, and would not amend the General Plan to expand *Central Business District* land use designation. All other aspects of the Specific Plan would be adopted with this alternative.

**TABLE 5-3
PARTIALLY MITIGATED ALTERNATIVE 2 COMPARED WITH
THE BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Broadway Valdez Development Program	Partially Mitigated Alternative 2	% Change
Residential Units	1,800	1,800	0%
Office (sq. ft.)	700,000	300,000	-57%
Retail (sq. ft.)	1,100,000	150,000	-86%
Hotel Rooms	180	0	-100%
<i>Non-Residential Development (sq. ft.)</i>	<i>1,800,000</i>	<i>450,000</i>	<i>-75%</i>
Estimated Trip Generation			
Daily	40,301	17,293	-57%
Weekday AM Peak Hour	1,980	1,050	-47%
Weekday PM Peak Hour	3,709	1,585	-57%
Saturday Peak Hour	4,114	1,636	-60%

SOURCE: Detailed trip generation calculations are provided in Appendix I, *Alternatives Technical Background*, to this Draft EIR

Comparison of Partially Mitigated Alternative 2 Impacts to the Plan Impacts³

Aesthetics, Shadow and Wind

Similar to the adoption and development under the Specific Plan, individual developments that would occur under the Partially Mitigated Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Development under the Partially Mitigated Alternative would be less than the Broadway Valdez Development Program, therefore the aesthetic effects from that development likely would continue to be less than significant.

As stated above, the Partially Mitigated Alternative assumes the development program above in combination with the aspects and constraints detailed in the Historic Preservation Sub-Alternative. Therefore, the Partially Mitigated Alternative would reduce the allowable heights on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street such that new development would avoid shading the stained glass windows of the Temple Sinai during morning worship periods, and avoid the conservative SU shadow impact. ***Therefore, the conservative SU***

³ Comparative discussion of SU impacts are shown in ***bold italic*** text.

shadow impact identified with the Plan (Impact AES-4, shading an historic resource), would be avoided under the Partially Mitigated Alternative.

The Partially Mitigated Alternative would not amend the General Plan to expand the *Central Business District* land use designation northward to 27th Street and throughout the Valdez subarea. As such, the City's threshold requiring project sponsors proposing buildings 100 feet tall or taller within the *Central Business District*, to conduct detailed wind studies (consistent with Mitigation Measure AES-5), would not apply. ***Therefore, the conservative SU wind impact identified with adoption and development under the Specific Plan (Impact AES-5, adverse wind conditions) would be avoided under the Partially Mitigated Alternative.***

The Partially Mitigated Alternative would avoid the conservative SU shadow and wind impacts identified with adoption and development under the Specific Plan. ***Therefore, conservative SU cumulative impacts for shadow and wind identified with the Plan (Impact AES-6), would be avoided under the Partially Mitigated Alternative.***

Overall, the Partially Mitigated Alternative would avoid the conservative SU impacts and have the same less than significant aesthetics impacts identified with adoption and development under the Specific Plan.

Air Quality

Given the reduced development program and related reduction in construction activity that would occur under the Partially Mitigated Alternative compared with the Specific Plan, and the proportionally fewer new residents and workers that would occur in the Plan Area, air quality emissions and the potential for exposing new residents to air pollutants would be less than that identified for the Plan. However, similar to the No Project Alternative, ROG emissions from application of architectural coatings would remain in excess of the 54 pounds per day threshold (see Table 5.1). ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-1, construction average daily emissions) would continue to be conservatively SU under the Partially Mitigated Alternative since new development (although less than with the Plan) would likely still exceed threshold for ROG.***

Although the development program would be less than the Broadway Valdez Development Program, as shown in Table 5.1, the Partially Mitigated Alternative would continue to result in SU operational average daily emissions. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-2, operational average daily and maximum annual emissions) would continue to be conservatively SU under the Partially Mitigated Alternative since new development (although less than with the Plan) still would exceed thresholds.***

Under the Partially Mitigated Alternative, there still would be the potential for multiple new sources of TACs, each with a cancer risk less than 10 in one million, to cumulatively increase cancer risks to greater than 100 in one million. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-4, cumulative operational TAC impacts from new sources) would continue to be conservatively SU under the Partially Mitigated Alternative***

since new development, under cumulative conditions, still could potentially exceed the cumulative threshold.

The Partially Mitigated Alternative also would result in the same less than significant air quality impacts that would occur with the Plan, and the new development would be subject to the same air quality Recommended Measures, Mitigation Measures, and SCAs that would apply to the Plan.

Overall, the Partially Mitigated Alternative would result in the same conservative SU and less-than-significant air quality impacts identified with the Plan, even though development would be substantially less compared with the Plan.

Biological Resources

Under the Partially Mitigated Alternative, development still would occur in the Plan Area and the construction activities and operation of development could impact biological resources. Similar to the adoption and development under the Specific Plan, individual projects would be required to conform to all the City's SCAs. Overall, given its reduced development, the Partially Mitigated Alternative would maintain the same less-than-significant impacts on biological resources identified with the Plan, even though construction and development operations would be relatively less.

Cultural Resources

As stated above, the Partially Mitigated Alternative would combine with the aspects and constraints detailed in the Historic Preservation Sub-Alternative. As such, new development would be prohibited from demolishing or damaging historically significant structures within the Plan Area. *Therefore, the SU historic resources impacts identified with the Plan (Impacts CUL-1 and CUL-5, impacts to historic resources – project and cumulative), would be avoided under the Partially Mitigated Alternative.*

All other cultural resources impacts with the Partially Mitigated Alternative would be less than significant as identified with adoption and development under the Specific Plan. Therefore, overall impacts to cultural resources under the Partially Mitigated Alternative would result in the same less-than-significant impacts as the Plan and avoid the SU impacts identified for the Broadway Valdez Development Program.

Geology, Soils and Geohazards

Under the Partially Mitigated Alternative, development still would occur in the Plan Area and the construction activities and operation of development could expose residents to geologic hazards including strong ground shaking during a seismic event, as with adoption and development under the Specific Plan. However, as discussed above, new development would be at a smaller scale compared with the Plan, and would therefore result in fewer new residents and workers in the Plan Area. As with the adoption and development under the Specific Plan, individual projects would be required to incorporate all applicable SCAs. Thus, the Partially Mitigated Alternative

would result the same less-than-significant impacts to geology, soils and geohazards as identified with the Plan, even though the extent of exposure and risks would be reduced given the reduced development and population.

Greenhouse Gases and Climate Change

The reduced development and related construction, operations and vehicle trips that would occur under the Partially Mitigated Alternative would generate reduced annual greenhouse gas emissions compared with adoption and development under the Specific Plan. Further, in part due to residential development making up a higher percentage of the overall development assumed, the Partially Mitigated Alternative would result in a larger service population relative to the estimated annual greenhouse gas emissions (see Table 5.1). As such, the Partially Mitigated Alternative would result in GHG emissions per Service Population ratio below the threshold and avoid the SU impact. ***Therefore, the conservative SU Greenhouse Gases and Climate Change impact identified with the Plan (Impact GHG-1, Greenhouse Gas Emissions), would be avoided under the Partially Mitigated Alternative.*** Regardless, all applicable SCAs, including SCA F, *GHG Reduction Plan*, still would be incorporated in future developments, as applicable.

As with adoption and development under the Specific Plan, the Partially Mitigated Alternative would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. Overall, the Partially Mitigated Alternative would result in the same less-than-significant greenhouse gas policy impacts, and avoid the SU greenhouse gas emissions impacts identified with adoption and development under the Specific Plan.

Hazardous Materials

Under the Partially Mitigated Alternative, development still would occur in the Plan Area and the construction activities involving demolition, soil disturbance and excavation would continue to have the potential to expose construction workers and residents to hazards and hazardous materials. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Plan, any new construction would incorporate applicable City SCAs, and therefore would result in the same less-than-significant impacts associated with hazardous materials and hazards compared with adoption and development under the Specific Plan, even though the extent of exposure would be less given the reduced development. Overall, the Partially Mitigated Alternative would result in the same less-than-significant impacts identified with adoption and development under the Specific Plan.

Hydrology and Water Quality

Under the Partially Mitigated Alternative, development still would occur in the Plan Area and the construction activities could lead to increased contaminants being washed into San Francisco Bay. Development under the Partially Mitigated Alternative could alter drainage patterns and could be susceptible to flooding hazards or inundation. However, as discussed above, the Partially Mitigated Alternative would have less new development than assumed in the Broadway Valdez Development Program. Any development would incorporate the City's applicable SCAs and

implement best management practices. Therefore, impacts to water quality under the Partially Mitigated Alternative would continue to be less than significant.

Land Use, Plans and Policies

Under the Partially Mitigated Alternative, development still would occur in the Plan Area, but, as discussed above, development would be at a smaller scale compared with the Plan. The reduced development would not introduce land uses unlike those identified with in the Broadway Valdez Development Program or locate these uses in a manner that would adversely affect existing communities or natural resources more than would the Plan. Therefore, the Partially Mitigated Alternative would result in the same less-than-significant land use impacts identified with adoption and development under the Specific Plan.

Noise

Given the reduced scale of development and related construction activity that would occur under the Partially Mitigated Alternative compared with the Plan, and the proportionally fewer new workers that would occur in the Plan Area, construction and operational noise impacts would be less than identified with adoption and development under the Specific Plan. As with the Plan, any new construction would incorporate applicable City SCAs. Therefore, the Partially Mitigated Alternative would have the same less-than-significant noise impacts as would occur with adoption and development under the Specific Plan.

The three SU noise impacts identified with adoption and development under the Specific Plan result primarily from traffic noise and traffic noise in combination with future operational noise. As demonstrated in Table 5.3, above, the Partially Mitigated Alternative would result in substantially fewer new peak hour trips when compared with the Broadway Valdez Development Program. Roadway noise modeling based on the percentage decrease in project traffic contributions demonstrates that ***two of the three SU noise impacts identified with adoption and development under the Specific Plan (Impact NOI-5, traffic noise and Impact NOI-6, cumulative traffic noise) would be avoided under the Partially Mitigated Alternative.*** Additionally, impacts to one of the two significantly impacted receptors in Impact NOI-7 would be reduced to less than significant under this Alternative; however, ***the SU noise impact identified with adoption and development under the Specific Plan (Impact NOI-7, cumulative noise) would remain SU under the Partially Mitigated Alternative*** given the second impacted receptor.

Overall, the Partially Mitigated Alternative would avoid two of the three SU noise impacts and have the same less-than-significant noise impacts identified with adoption and development under the Specific Plan since development would be substantially less compared with the Plan.

Population, Housing, and Employment

Under the Partially Mitigated Alternative there would be less development in the Plan Area compared with the Broadway Valdez Development Program. The development program for the Partially Mitigated Alternative would result in a population increase similar to the Broadway

Valdez Development Program (approximately 3,230) but would result in less total potential employment (approximately 2,000 jobs compared with 4,500, or 44 percent). Therefore, the Partially Mitigated Alternative would have the same less-than-significant impacts regarding the displacement of substantial housing, people, businesses or jobs, as identified for adoption and development under the Specific Plan.

Public Services and Recreation Facilities

The increase in population associated with the development that would occur under the Partially Mitigated Alternative would be less than would occur with the Broadway Valdez Development Program. Compared with the public service demands associated with adoption and development under the Specific Plan, less police, fire and emergency services and facilities would be required, and the demand for and use of park and recreational facilities would be less under the Partially Mitigated Alternative. The Partially Mitigated Alternative would generate the same number of students as the Broadway Valdez Development Program since the number of residential units would not change. Thus, it is not anticipated that new physical facilities would be required, the construction of which could result in adverse environmental effects. Therefore, the Partially Mitigated Alternative would have the same less-than-significant public services and recreation facilities impacts as identified with the Plan.

Transportation and Circulation

As shown in Table 5-3, the Partially Mitigated Alternative would generate at most about half of the peak hour traffic generated by the Broadway Valdez Development Program. Although specific intersection evaluation was not conducted for the alternatives analysis, based on the trip generation estimates, it can be reasonably assumed that the Partially Mitigated Alternative would eliminate most of the significant impacts on traffic operations identified with the Plan. However, it is anticipated that a few of the significant and unavoidable impacts at a few intersections would remain under the Partially Mitigated Alternative; although the magnitude of these impacts would be less than with adoption and development under the Specific Plan.

The Partially Mitigated Alternative is expected to have similar affects on non-traffic operation topics, such as transportation safety and consistency with adopted policies, plans, or programs supporting alternative transportation, because the Partially Mitigated Alternative would continue to provide similar policies as the Specific Plan.

Utilities and Service Systems

Under the Partially Mitigated Alternative, the demands for utilities and service systems would be less than with adoption and development under the Specific Plan given the reduced development that would occur. There would be less demand for water and energy services, and a smaller increase in the need for wastewater and solid waste disposal. Therefore, the Partially Mitigated Alternative would have the same less-than-significant utilities and service systems impacts as identified with adoption and development under the Specific Plan.

5.4.3 Maximum Theoretical Buildout Alternative 3

Description

The Broadway Valdez Development Program is based on a detailed analysis of available opportunity sites, historic turnover rates, and the estimated demand for new development in the Plan Area. This amount assumes that development and growth would not occur on all parcels. This is a reasonable assumption insofar as the Plan Area is mostly developed and the disparate, largely private ownership make it highly unlikely that new development and growth would exceed the “reasonably foreseeable” amount set forth in the Broadway Valdez Development Program. Thus the Broadway Valdez Development Program is the basis for analysis of the environmental effects of the Plan.

Although development and growth under the Broadway Valdez Development Program would not likely occur on every parcel, the revised land use designation, height limits and zoning regulations adopted with the Plan would in fact apply to all parcels within the Plan Area. Thus, theoretically, every parcel in the Plan Area could be “built out,” consistent with the Specific Plan regulations. The Specific Plan regulations would increase the allowable density/intensity on Plan Area parcels relative to existing regulations embodied in the current General Plan and Planning Code, and because the Specific Plan’s regulations would apply to every parcel within the Plan Area, the Maximum Theoretical Buildout Alternative 3 evaluates the theoretical possibility that every parcel would be built out to the new maximum level permissible under the General Plan and Planning Code regulations as revised through adoption of the Specific Plan.

Under the Maximum Theoretical Buildout Alternative, overall development would be substantially greater than the Broadway Valdez Development Program (roughly 300 percent of the residential development and 200 percent of non-residential development assumed in the Broadway Valdez Development Program). The growth potential is shown in **Table 5-4**, which compares the Maximum Theoretical Buildout Alternative with the Broadway Valdez Development Program. For the reasons stated above, the likelihood of “maximum buildout” occurring is considered so highly unlikely, if not impossible, it is referred to as theoretical.

**TABLE 5-4
MAXIMUM THEORETICAL BUILDOUT ALTERNATIVE 3 COMPARED WITH THE
BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Broadway Valdez Development Program	Maximum Theoretical Buildout Alternative 3	% Change
Residential Units	1,800	5,400	300%
Office (sq. ft.)	700,000	2,090,000	300%
Retail (sq. ft.)	1,100,000	1,670,000	150%
Hotel Rooms	180	540	300%
<i>Non-Residential Development (sq. ft.)</i>	<i>1,800,000</i>	<i>3,760,000</i>	<i>210%</i>
Estimated Trip Generation			
Daily	40,301	65,953	164%
Weekday AM Peak Hour	1,980	4,237	214%
Weekday PM Peak Hour	3,709	6,346	171%
Saturday Peak Hour	4,114	6,960	169%

SOURCE: Detailed trip generation calculations are provided in Appendix I, *Alternatives Technical Background*, to this Draft EIR

The Maximum Theoretical Buildout Alternative assumes an increment of growth substantially greater than the Broadway Valdez Development Program and therefore would result in greater environmental effects for nearly every environmental topic considered. Most of the Plan's SU impacts would be substantially increased in intensity under Alternative 3 when compared with Broadway Valdez Development Program.

Comparison of Maximum Theoretical Buildout Alternative 3 Impacts to the Plan Impacts⁴

Aesthetics, Shadow and Wind

Similar to the adoption and development under the Specific Plan, individual developments that would occur under the Maximum Theoretical Buildout Alternative would be required to incorporate all the City's SCAs, as well as adhere to the City's design review process. Development under the Maximum Theoretical Buildout Alternative would be substantially greater than with the Plan, however, with adherence to the City's SCA's and design review process, new development likely would continue to be less than significant as with adoption and development under the Specific Plan.

Under the Maximum Theoretical Buildout Alternatives, there still would be the potential for development to result in adverse shadow effects if new development is unable to fully avoid new shading on Temple Sinai that would materially impair this resource's historic significance.

Therefore, the conservative SU shadow impact identified with the Plan (Impact AES-4, shading an historic resource), would continue to be conservatively SU under the Maximum Theoretical Buildout Alternative since new development still could occur and could potentially shade an historic resource.

Under the Maximum Theoretical Buildout Alternative, the Specific Plan would be adopted and the General Plan amended such that the *Central Business District* land use designation would be extended northward to 27th Street and throughout the Valdez subarea. As such, the City's threshold requiring project sponsors proposing buildings 100 feet tall or taller within the *Central Business District*, to conduct detailed wind studies (consistent with Mitigation Measure AES-5), would apply. As with the Plan, it cannot be known with certainty that a future project redesign would eliminate the potential for new adverse wind impacts. ***Therefore, the conservative SU wind impact identified with adoption and development under the Specific Plan (Impact AES-5, adverse wind conditions) would continue to be conservatively SU under the Maximum Theoretical Buildout Alternative.***

The Maximum Theoretical Buildout would have the same conservative SU shadow and wind impacts identified with adoption and development under the Specific Plan. As such, the Maximum Theoretical Buildout, when combined with cumulative development, would contribute to cumulative shadow and wind effects. ***Therefore, conservative SU cumulative impact for***

⁴ Comparative discussion of SU impacts are shown in ***bold italic*** text.

shadow and wind identified with the Plan (Impact AES-6), would continue to be conservatively SU under the Maximum Theoretical Buildout Alternative.

Overall, the Maximum Theoretical Buildout Alternative would result in the same SU and less-than-significant aesthetics, shadow, and wind, and cumulative impacts identified with the Plan. In addition, because the Maximum Theoretical Buildout Alternative assumes an increment of growth substantially greater than the Broadway Valdez Development Program, the SU impacts related to Aesthetics, Shadow, and Wind would be substantially increased in intensity under Alternative 3 when compared with Broadway Valdez Development Program.

Air Quality

Given the substantially greater development and related construction activity that would occur under the Maximum Theoretical Buildout Alternative compared with the Broadway Valdez Development Program, and the greater increase in residents and workers that would occur in the Plan Area, air quality emissions and the potential for exposing new residents to air pollutants would be greater than that identified for the Plan. As shown in Table 5.1, the Maximum Theoretical Buildout Alternative would result in greater levels of construction, average daily operational, and maximum annual operational emissions when compared with the Plan.

Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-1, construction average daily emissions and Impact AIR-2, operational average daily and maximum annual emissions) would continue to be conservatively SU under the Maximum Theoretical Buildout Alternative since new development still would exceed thresholds.

Under the Maximum Theoretical Buildout Alternative, there still would be the potential for multiple new sources of TACs, each with a cancer risk less than 10 in one million, to cumulatively increase cancer risks to greater than 100 in one million. ***Therefore, the conservative SU air quality impact identified with the Plan (Impact AIR-4, cumulative operational TAC impacts from new sources) would continue to be conservatively SU under the Maximum Theoretical Buildout Alternative since new development, under cumulative conditions, still could potentially exceed the cumulative threshold.***

The Maximum Theoretical Buildout Alternative also would result in the same less than significant air quality impacts that would occur with the Plan, and the Maximum Theoretical Buildout Alternative would be subject to the same air quality Recommended Measures, Mitigation Measures, and SCAs that would apply to the Plan.

Overall, the Maximum Theoretical Buildout Alternative would result in the same conservative SU and less-than-significant air quality impacts identified with the Plan. In addition, because the Maximum Theoretical Buildout Alternative assumes an increment of growth substantially greater than the Broadway Valdez Development Program, the SU impacts related to Air Quality would be substantially increased in intensity under Alternative 3 when compared with Broadway Valdez Development Program.

Biological Resources

Under the Maximum Theoretical Buildout Alternative, development still would occur in the Plan Area and the construction activities and operation of development could impact biological resources. Similar to the Broadway Valdez Development Program, individual projects would be required to conform to all of the City's SCAs. Overall, the Maximum Theoretical Buildout Alternative would maintain the same less-than-significant impacts on biological resources identified with the Broadway Valdez Development Program, even though construction and development operations would be greater.

Cultural Resources

Under the Maximum Theoretical Buildout Alternative, all existing historic resource within the Plan Area would be developed and there still would be the potential for an adverse impact if new development is unable to avoid, adaptively reuse, or appropriately relocate historically significant structures. ***Therefore, the SU historic resources impacts identified with the Plan (Impacts CUL-1 and CUL-5, impacts to historic resources – project and cumulative), would continue to be SU under the Maximum Theoretical Buildout Alternative.***

All other cultural resources impacts with the Maximum Theoretical Buildout Alternative would be less than significant as identified with Broadway Valdez Development Program. Therefore, overall impacts to cultural resources under the Maximum Theoretical Buildout Alternative would result in the same SU and less-than-significant impacts as the Broadway Valdez Development Program. In addition, because the Maximum Theoretical Buildout Alternative assumes an increment of growth substantially greater than the Broadway Valdez Development Program, the SU impacts related to Cultural Resources would be substantially increased in intensity under Alternative 3 when compared with Broadway Valdez Development Program.

Geology, Soils and Geohazards

Under the Maximum Theoretical Buildout Alternative, development still would occur in the Plan Area and the construction activities and operation of development could expose residents to geologic hazards including strong ground shaking during a seismic event, as with the Broadway Valdez Development Program. New development would be at a greater scale compared with the Broadway Valdez Development Program, and would therefore result in more new residents and workers in the Plan Area. As with the Broadway Valdez Development Program, individual projects would be required to incorporate all applicable SCAs. Thus, the Maximum Theoretical Buildout Alternative would result the same less-than-significant impacts to geology, soils and geohazards as identified with the Broadway Valdez Development Program even though the extent of exposure and risks would be greater given the greater development and population. In addition, new buildings would be built to current code and thus provide greater life-safety measures.

Greenhouse Gases and Climate Change

The increased development and related construction, operations and vehicle trips that would occur under the Maximum Theoretical Buildout Alternative would generate more annual

greenhouse gas emissions compared to the Broadway Valdez Development Program. However, due to residential development making up a higher percentage of the overall development assumed, the Maximum Theoretical Buildout Alternative would result in a larger service population relative to the estimated annual greenhouse gas emissions (see Table 5.1). As such, the Maximum Theoretical Buildout Alternative would result in GHG emissions per Service Population ratio below the threshold and avoid the SU impact. ***Therefore, the conservative SU Greenhouse Gases and Climate Change impact identified with the Plan (Impact GHG-1, Greenhouse Gas Emissions), would be avoided under the Maximum Theoretical Buildout Alternative.*** Regardless, all applicable SCAs, including SCA F, *GHG Reduction Plan*, still would be incorporated in future developments, as applicable.

As with the Broadway Valdez Development Program, the Maximum Theoretical Buildout Alternative would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. Overall, the Maximum Theoretical Buildout Alternative would result in the same less than significant greenhouse gas policy impacts, and SU greenhouse gas emissions impacts identified with adoption and development under the Specific Plan. This is the same finding as for the Maximum Theoretical Buildout Alternative and the Partially Mitigated Alternative.

Hazardous Materials

Under the Maximum Theoretical Buildout Alternative, development still would occur in the Plan Area and construction activities involving demolition, soil disturbance and excavation could continue to potentially expose construction workers and residents to potential hazards and hazardous materials as identified for adoption and development under the Specific Plan. These potential hazardous materials include asbestos, PCBs, lead-based paint, contents of underground and aboveground storage tanks, and potentially contaminated soil and water. As with the Broadway Valdez Development Program, any new construction would incorporate applicable City SCAs, and therefore would result in the same less-than-significant impacts associated with hazardous materials and hazards, even though the extent of exposure would be greater given the increased development that would occur under the Maximum Theoretical Buildout Alternative. Overall, the Maximum Theoretical Buildout Alternative would result in the same less-than-significant impacts identified with the Broadway Valdez Development Program.

Hydrology and Water Quality

Under the Maximum Theoretical Buildout Alternative, development still would occur in the Plan Area and the construction activities could lead to increased contaminants being washed into San Francisco Bay. Development under the Maximum Theoretical Buildout Alternative could alter drainage patterns and could be susceptible to flooding hazards or inundation. However, all new development would incorporate the City's applicable SCAs and implement best management practices. Therefore, impacts to water quality under the Maximum Theoretical Buildout Alternative would continue to be less than significant.

Land Use, Plans and Policies

Under the Maximum Theoretical Buildout Alternative, development still would occur in the Plan Area, but, as discussed above, development would be at a substantially greater scale compared with the Broadway Valdez Development Program. However, all new development would be required to be consistent with the General Plan and Oakland Zoning designations, as amended. The increased development would not introduce land uses unlike those identified with in the Broadway Valdez Development Program or locate these uses in a manner that would adversely affect existing communities or natural resources more than would the Broadway Valdez Development Program. Therefore, the Maximum Theoretical Buildout Alternative would result in the same less-than-significant land use impacts identified with the Broadway Valdez Development Program.

Noise

Given the substantially increased scale of development and related construction activity that would occur under the Maximum Theoretical Buildout Alternative compared with the Broadway Valdez Development Program, construction and operational noise impacts would be greater. However, any new construction would incorporate applicable City SCAs. Therefore, the Maximum Theoretical Buildout Alternative would have the same less-than-significant noise impacts as would occur with the Broadway Valdez Development Program.

The three SU noise impacts identified with adoption and development under the Specific Plan result primarily from traffic noise and traffic noise in combination with future operational noise. The Maximum Theoretical Buildout Alternative would result in substantially greater number of new daily trips when compared with the Broadway Valdez Development Program. ***Therefore, the three SU noise impacts identified with adoption and development under the Specific Plan (Impact NOI-5, traffic noise; Impacts NOI-6, cumulative traffic noise; and NOI-7, cumulative noise) would continue to be SU under the Maximum Theoretical Buildout Alternative.*** Additionally the roadway segment along 23rd Street west of Broadway would result in an additional significant impact under Impacts NOI-5 and NOI-6.

Overall, the Maximum Theoretical Buildout Alternative would have the same less-than-significant and SU noise impacts identified with adoption and development under the Specific Plan. In addition, because the Maximum Theoretical Buildout Alternative assumes an increment of growth substantially greater than the Broadway Valdez Development Program, the SU impacts related to Noise would be substantially increased in intensity under Alternative 3 when compared with Broadway Valdez Development Program.

Population, Housing, and Employment

Under the Maximum Theoretical Buildout Alternative there would be substantially greater development in the Plan Area compared with the Broadway Valdez Development Program. As a result, there would be substantially greater total potential population (approximately 9,690 persons compared with 3,230) and employment (approximately 10,400 jobs compared with 4,500) under this Alternative. Ultimately, the Maximum Theoretical Buildout Alternative population and

employment growth would represent approximately seven percent and 11 percent, respectively, of the anticipated growth Citywide between 2010 and 2035 (approximately 141,100 and 93,300, respectively, see Section 4.11, *Population, Housing, and Employment*). This level of development would absorb a greater portion of the region's anticipated population growth within the Plan Area. While this level of development is greater than described for the area within the Housing Element, it is within the level of growth anticipated, by the General Plan, for the City. Therefore, the Maximum Theoretical Buildout Alternative would have the same less-than-significant population, housing, and employment impacts identified for adoption and development under the Specific Plan.

Public Services and Recreation Facilities

When compared with the Broadway Valdez Development Program, substantially greater population growth and associated generation of new students would occur as a result of development under the Maximum Theoretical Buildout Alternative. The demand for public services, school facilities, and recreation facilities, and the use of such facilities, also would be greater under the Maximum Theoretical Buildout Alternative. Although all new development would be required to be consistent with the General Plan and to incorporate the City's SCAs, the potential remains that new or expanded public services, school, and recreational resources facilities may be required to maintain acceptable public services given the increased demand associated with the Maximum Theoretical Buildout Alternative to overwhelm existing. However, future development would incorporate all City SCA's related to construction activity to ensure less than significant effects, therefore, it is not assumed the potential construction of new facilities that could be needed would result in adverse environmental effects. In summary, the Maximum Theoretical Buildout Alternative would have the same less-than-significant public services and recreation impacts identified with the Broadway Valdez Development Program.

Transportation and Circulation

As shown in Table 5-1, the Maximum Theoretical Buildout Alternative would generate between 70 percent and 114 percent more traffic than would be generated by the Broadway Valdez Development Program. The Maximum Theoretical Buildout Alternative would continue to cause the same significant impacts as identified for the Plan. Although specific intersection evaluation was not conducted for the alternatives analysis, since the Maximum Theoretical Buildout Alternative would generate more traffic than the Plan, it can be reasonably assumed that it would cause additional significant, and significant and unavoidable impacts not identified for the Plan and increase the magnitude of the already identified significant and unavoidable impacts.

The Maximum Theoretical Buildout Alternative is expected to have similar affects on non-traffic operation topics, such as transportation safety and consistency with adopted policies, plans, or programs supporting alternative transportation, because the Maximum Theoretical Buildout Alternative would continue to provide similar policies as the Specific Plan.

Utilities and Service Systems

Under the Maximum Theoretical Buildout Alternative, the demands for utilities and service systems would be greater than with the Broadway Valdez Development Program given the

increased development that would occur. There would be a greater demand for water and energy services, and for increased wastewater and solid waste disposal. Therefore, it is possible that construction of new facilities that could be needed to accommodate the substantial level of increased development and demand.

The level of development and population growth under the Maximum Theoretical Buildout Alternative could result in the need to construct new or expanded utilities, including in particular water or wastewater facilities. All new development would be required to be consistent with the General Plan and to incorporate the City's SCAs, including in particular those intended to reduce adverse effects of construction activity to less than significant. New development under this alternative would also be required to adhere to all applicable federal, state and local statutes and regulations that would avoid adverse environmental effects related to energy and solid waste service demands.

Overall, the Maximum Theoretical Buildout Alternative would likely have the same less-than-significant utilities and service systems impacts as identified with the Broadway Valdez Development Program.

5.4.4 Historic Preservation Sub-Alternative

The intent of the Historic Preservation Sub-Alternative is to avoid the SU historic resources impacts identified for the Plan. The development restrictions and limitations of this sub-alternative are assumed in the Partially Mitigated Alternative 2 and thus represented together with Alternative 2 in Tables 5-1, 5-3, and 5-5. The development restrictions and limitations of this sub-alternative also could be used in combination with the Specific Plan and thus are classified as a sub-alternative to provide for this flexibility. However, this sub-alternative could not combine with the Maximum Theoretical Buildout Alternative 3 since that alternative assumes development on every parcel within the Plan Area.

Under the Historic Preservation Sub-Alternative, all identified historic resources within the Plan Area would be protected from demolition and significant alteration by prohibiting development on parcels where such resources are located. Specifically, this sub-alternative in combination with the Specific Plan, would avoid the SU historic resources impact identified for five Historic Resources (Biff's II Coffee Shop, 2401 Broadway, Connell GMC Pontiac Cadillac/Bay City Chevrolet building, the Seventh Church of Christ Scientist, and the Newsom Apartments) with adoption and development under the Specific Plan. ***Therefore, the SU historic resources impacts identified with the Plan (Impacts CUL-1 and CUL-5, impacts to historic resources – project and cumulative), would be avoided under the Historic Preservation Sub-Alternative.***

Further, this alternative would reduce the allowable heights on the parcel bounded by Webster, 29th Street, Broadway, and 28th Street such that new development would avoid shading the stained glass windows of the Temple Sinai during morning worship periods, and avoid the SU shadow impact. ***Therefore, the conservative SU shadow impact identified with the Plan (Impact AES-4, shading an historic resource), would be avoided under the Historic Preservation Sub-Alternative.***

All other aspects of the Plan or Alternative would occur with this sub-alternative.

5.5 Environmentally Superior Alternative

CEQA Guidelines require that the EIR identify an environmentally superior alternative (CEQA Guidelines, Section 15126.6), which is the CEQA alternative that reduces or avoids the environmental impacts identified for adoption and development under the Specific Plan to the greatest extent. The evaluation below first considers the extent to which each of the CEQA alternatives reduces or avoids the significant and unavoidable impacts identified with the Specific Plan. The extent to which an alternative reduces or avoids less-than-significant impacts identified with the Plan is also considered, balanced by consideration of the extent to which the impact affects the physical environment. The comparison of impacts resulting with the Plan and all of the alternatives discussed in this chapter is summarized in **Table 5-5**, Summary Comparison of Impacts, at the end of this chapter.

5.5.1 No Project Alternative 1

As summarized in **Table 5-5** below, and described in the analysis in Section 5.4 above, the No Project Alternative would reduce some of the SU impacts identified with the Plan to less than significant. Under the No Project Alternative, *the conservative SU Aesthetics impact (AES-5), conservative SU Greenhouse Gases impact (GHG-1), SU Noise impacts (NOI-5 and NOI-6), and many of the Transportation impacts would no longer occur*. No impacts would be greater than those identified with the Plan.

However, Section 15126.6(e)(2) of the CEQA Guidelines requires that if the No Project Alternative is identified as the environmentally superior alternative, then the EIR shall identify another alternative as the environmentally superior alternative.

5.5.2 Partially Mitigated Alternative 2

The Partially Mitigated Alternative would be the environmentally superior alternative after consideration of the No Project Alternative. The Partially Mitigated Alternative would avoid several SU impacts that would occur with the Plan and with the other alternatives (other than the No Project Alternative, as discussed above). Specifically, as with the No Project Alternative, the Partially Mitigated Alternative would avoid *the conservative SU Aesthetics impact (AES-5), conservative SU Greenhouse Gases impact (GHG-1), SU Noise impacts (NOI-5 and NOI-6), and many of the Transportation impacts would no longer occur*. *In addition, the conservative SU Aesthetics impacts (AES-4 and AES-6), and SU Cultural Resources impacts (CUL-1 and CUL-5), would no longer occur*.

There are no SU impacts that would be avoided under the No Project Alternative, but that would still occur with the Partially Mitigated Alternative. However, many of the SU Transportation impacts that potentially would be reduced to less-than-significant under the No Project Alternative, potentially would be reduced under the Partially Mitigated but would continue to be

SU. Also, the Partially Mitigated Alternative would reduce the degree of each less-than-significant impact identified with the Plan given the reduced development that would occur. This alternative would also meet most of the basic objectives of the Specific Plan (which the City would assess when it considers the merits of the Plan and the alternatives), which are described in Chapter 3, Project Description. No impacts resulting with the Partially Mitigated Alternative would be greater than those identified with the Plan.

5.6 Alternatives Considered but Not Analyzed Further in the EIR

CEQA Guidelines Section 15126.6 sets forth several requirements regarding the consideration of alternatives in an EIR. Section 15126.6(a) and related case law hold that alternatives that are not reasonable or are infeasible need not be discussed at length; alternatives that do not offer substantial environmental advantages over the project can be rejected from consideration; and alternatives that do not accomplish most of the basic objectives of the project can be excluded from detailed analysis. Accordingly, this section briefly summarizes alternatives considered but rejected from further analysis, including the reasons for this rejection.

5.6.1 Off-site Location

As discussed above in Section 5.3, *Alternatives Selected for Consideration*, a range of alternatives was selected for analysis in this EIR that consider lesser and greater densities, alternative land uses, and revised regulations. In addition to the selected alternatives, an off-site location for the Specific Plan and a fully-mitigated alternative to the Plan were considered but rejected from further consideration in this EIR for the reasons discussed below.

In considering the range of alternatives to be analyzed in an EIR, CEQA Guidelines state that an alternative site location should be considered when feasible alternative locations are available and the “significant effects of the project would be avoided or substantially lessened by putting the project in another location” (CEQA Guidelines, Section 15126.6(f)).

This alternative would consist of increasing allowable growth in another location in the City of Oakland. However, it fails to meet the basic objectives of the Specific Plan – fostering growth within the Broadway Valdez District Area (which the City would assess when it considers the merits of the Plan and the alternatives). This alternative would preserve existing land use regulations within the Plan Area, as described under the No Project Alternative. In addition, this alternative would focus new growth elsewhere in the City and thus would not avoid the majority of SU impacts identified for the Plan. For these reasons, the City did not forward an off-site location alternative for further evaluation in this EIR.

5.6.2 “Fully Mitigated” Alternative

As more fully described under Alternative 1, the No Project Alternative would avoid many of the SU impacts identified for the Plan. However, SU impacts related to shadow, cultural resources,

construction emissions, operational emissions, noise, and transportation would persist. As more fully described under Alternative 2, the Partially Mitigated Alternative avoids the same SU impacts as the No Project Alternative and further avoids impacts related to shadow and cultural resources. However, SU impacts from construction emissions, operational emissions, noise, and transportation would continue to be SU under this alternative.

A fully mitigated alternative would avoid the SU impacts from construction emissions, operational emissions, noise, and traffic that would continue to occur with the alternatives fully analyzed in this EIR. To achieve a fully mitigated alternative, the development projections for the 25 year planning period would have to be reduced by approximately 73 percent compared to the Broadway Valdez Development Program. This development scenario would be significantly less than development under the No Project Alternative. In addition, a fully mitigated alternative would have to modify the location and type of development that would occur within the Plan Area, as these factors affect the traffic impacts. The following scenarios would avoid the SU impacts on traffic:

- About 20,000 square feet of retail development in the North End; or
- About 100 multi-family residential units, 30,000 square feet of retail, and 60,000 square feet of office in the Valdez Triangle.

Development of this scale would avoid the SU operational emissions and traffic impacts identified with the Plan, it would not necessarily avoid the SU impacts related to greenhouse gas emissions. Further, this hypothetical reduced development scenario would not accomplish most of the Plan's basic objectives, which the City would assess when it considers the merits of the Plan and the alternatives. For these reasons a fully mitigated alternative is not likely feasible, and the City chose to not forward it for further consideration in this EIR.

5.7 Summary

In summary, the Partially Mitigated Alternative 2 is considered the environmentally superior alternative as it would avoid and/or substantially reduce SU impacts of the Plan to the greatest extent compared with the Broadway Valdez Specific Plan and still meet the basic objectives of the Specific Plan, which the City would assess when it considers the merits of the Plan and the alternatives.

**TABLE 5-5
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES**

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Aesthetics, Shadow and Wind				
Impact AES-1: Adoption and development under the Specific Plan would not adversely affect scenic public vistas or views of scenic resources (Criteria 1 and 2). (Less than Significant)	LS	LS	LS	LS
Impact AES-2: Adoption and development under the Specific Plan would not substantially degrade the existing visual character or quality of the site and its surroundings (Criterion 3). (Less than Significant)	LS	LS	LS	LS
Impact AES-3: Adoption and development under the Specific Plan would result in new sources of light or glare which would not substantially and adversely affect day or nighttime views in the area (Criterion 4). (Less than Significant)	LS	LS	LS	LS
Impact AES-4: Adoption and development under the Specific Plan could result in substantial new shadow that would shade solar collectors, passive solar heaters, public open spaces, or historic resources or otherwise result in inadequate provision of adequate light (Criteria 5 through 9). (Conservatively Significant and Unavoidable)	Conservatively SU	Conservatively SU	LS	Conservatively SU↑
Impact AES-5: Adoption and development under the Specific Plan has the potential to result in adverse wind conditions (Criterion 10). (Conservatively Significant and Unavoidable)	Conservatively SU	LS	LS	Conservatively SU↑
Impact AES-6: Adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area, would result in significant cumulative wind, and shadow impacts. (Conservatively Significant and Unavoidable)	Conservatively SU	Conservatively SU	LS	Conservatively SU↑
Air Quality				
Impact AIR-1: Construction associated with adoption and development under the Specific Plan would result in average daily emissions of 54 pounds per day of ROG, NO _x , or PM _{2.5} or 82 pounds per day of PM ₁₀ (Criterion 1). (Conservatively Significant and Unavoidable)	Conservatively SU	Conservatively SU↓	Conservatively SU↓	Conservatively SU↑
Impact AIR-2: Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NO _x , or PM _{2.5} or 82 pounds per day of PM ₁₀ ; or result in maximum annual emissions of 10 tons per year of ROG, NO _x , or PM _{2.5} or 15 tons per year of PM ₁₀ (Criterion 2). (Conservatively Significant and Unavoidable)	Conservatively SU	Conservatively SU↓	Conservatively SU↓	Conservatively SU↑

Legend

LS Less than significant or negligible impact; no mitigation required

LSM Less than significant impact, after mitigation

SU Significant and unavoidable adverse impact, after mitigation or standard conditions

N No impact

↑↓ Impact is more severe or less severe than project impact, after mitigation, but with no change in impact determination; **Changes from proposed project impact determination shown in bold**

TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Air Quality (cont.)				
Impact AIR-3: Adoption and development under the Specific Plan would not contribute to carbon monoxide (CO) concentrations exceeding the California Ambient Air Quality Standards (CAAQS) of nine parts per million (ppm) averaged over eight hours and 20 ppm for one hour (Criterion 3). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact AIR-4: Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 10 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average PM _{2.5} concentration of greater than 0.3 micrograms per cubic meter or, under cumulative conditions, resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM _{2.5} of greater than 0.8 micrograms per cubic meter as a result of construction activities or project operations (Criterion 4). (Conservatively Significant and Unavoidable)	Conservatively SU	Conservatively SU ↓	Conservatively SU ↓	Conservatively SU ↑
Impact AIR-5: Adoption and development under the Specific Plan would not expose sensitive receptors to substantial levels of Toxic Air Contaminants (TACs) resulting in (a) a cancer risk level greater than 100 in one million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) an increase of annual average PM _{2.5} concentration of greater than 0.8 micrograms per cubic meter by siting a new sensitive receptor (Criterion 5). (Less than Significant)	LS	LS	LS	LS
Impact AIR-6: Adoption and development under the Specific Plan would not frequently and for a substantial duration, create or expose sensitive receptors to substantial objectionable odors affecting a substantial number of people (Criterion 6). (Less than Significant)	LS	LS	LS	LS
Impact AIR-7: Adoption and development under the Specific Plan would be consistent with the primary goals of the Bay Area Clean Air Plan (CAP) and would not fundamentally conflict with the CAP because the Specific Plan demonstrates reasonable efforts to implement control measures contained in the CAP (Criterion 7). (Less than Significant)	LS	LS	LS	LS
Impact AIR-8: Adoption and development under the Specific Plan would include special overlay zones containing goals, policies, and objectives to minimize potential Toxic Air Contaminant (TAC) impacts in areas located (a) near existing and planned sources of TACs and (b) within 500 feet of freeways and high-volume roadways containing 100,000 or more average daily vehicle trips (Criterion 8). (Less than Significant)	LS	LS	LS	LS

Legend

LS Less than significant or negligible impact; no mitigation required

LSM Less than significant impact, after mitigation

SU Significant and unavoidable adverse impact, after mitigation or standard conditions

N No impact

↑ ↓ Impact is more severe or less severe than project impact, after mitigation, but with no change in impact determination; **Changes from proposed project impact determination shown in bold**

TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Air Quality (cont.)				
Impact AIR-9: Adoption and development under the Specific Plan would not identify existing and planned sources of odors with policies to reduce potential odor impacts (Criterion 9). (Less than Significant)	LS	LS	LS	LS
Biological Resources				
Impact BIO-1: Adoption and development under the Specific Plan could adversely affect, either directly or through habitat modifications, any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 1). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact BIO-2: Adoption and development under the Specific Plan could have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service (Criterion 2). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact BIO-3: Adoption and development under the Specific Plan could have a substantial adverse effect on federally protected wetlands (as defined by Section 404 of the Clean Water Act) or state protected wetlands, through direct removal, filling, hydrological interruption, or other means (Criterion 3). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact BIO-4: Adoption and development under the Specific Plan could substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Criterion 4). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact BIO-5: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Tree Protection Ordinance (Oakland Municipal Code Chapter 12.36) by removal of protected trees under certain circumstances (Criterion 6). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑

Legend

LS Less than significant or negligible impact; no mitigation required

LSM Less than significant impact, after mitigation

SU Significant and unavoidable adverse impact, after mitigation or standard conditions

N No impact

↑↓ Impact is more severe or less severe than project impact, after mitigation, but with no change in impact determination; **Changes from proposed project impact determination shown in bold**

TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Biological Resources (cont.)				
Impact BIO-6: Adoption and development under the Specific Plan could fundamentally conflict with the City of Oakland Creek Protection Ordinance (OMC Chapter 13.16) intended to protect biological resources (Criterion 7). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact BIO-7: Construction activity and operations of adoption and development under the Specific Plan, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects in the Plan Area, would not result in impacts on special-status species, sensitive habitats, wildlife movement corridors, wetlands, and other waters of the U.S. (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Cultural Resources				
Impact CUL-1: Adoption of and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources (Criterion 1). (Significant and Unavoidable)	SU	SU ↓	LS	SU ↑
Impact CUL-2: Adoption of and development under the Specific Plan could result in significant impacts to unknown archaeological resources (Criterion 2). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact CUL-3: Adoption of and development under the Specific Plan could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Criterion 3). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact CUL-4: Adoption of and development under the Specific Plan could disturb human remains, including those interred outside of formal cemeteries (Criterion 4). (Less than Significant)	LS	LS ↓	LS ↓	LS ↑
Impact CUL-5: Adoption of and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources. (Significant and Unavoidable)	SU	SU ↓	LS	SU ↑

Legend

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Geology, Soils and Geohazards				
Impact GEO-1: Adoption and development under the Specific Plan could expose people or structures to seismic hazards such as ground shaking and seismic-related ground failure such as liquefaction, differential settlement, collapse, or lateral spread (Criterion 1). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact GEO-2: Adoption and development under the Specific Plan could be subjected to geologic hazards, including expansive soils, subsidence, seismically-induced settlement and differential settlement (Criterion 3). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact GEO-3: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would not result in significant cumulative impacts with respect to geology, soils or seismicity. (Less than Significant)	LS	LS↓	LS↓	LS↑
Greenhouse Gases and Climate Change				
Impact GHG-1: Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO _{2e} per year, that would exceed 4.6 metric tons of CO _{2e} per service population annually (Criterion 1). (Conservatively Significant and Unavoidable)	Conservatively SU	LS	LS	LS
Impact GHG-2: Adoption and development under the Specific Plan would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing greenhouse gas emissions (Criterion 2). (Less than Significant)	LS	LS	LS	LS
Hazards and Hazardous Materials				
Impact HAZ-1: Adoption and development under the Specific Plan would result in an increase in the routine transportation, use, and storage of hazardous chemicals (Criteria 1 and 3). (Less than Significant)	LS	LS↓	LS↓	LS↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Hazards and Hazardous Materials (cont.)				
Impact HAZ-2: Adoption and development under the Specific Plan would result in the accidental release of hazardous materials used during construction through improper handling or storage (Criterion 2). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HAZ-3: Adoption and development under the Specific Plan would result in the exposure of hazardous materials in soil and ground water (Criteria 2 and 5). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HAZ-4: Adoption and development under the Specific Plan would result in the exposure of hazardous building materials during building demolition (Criterion 2). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HAZ-5: Adoption and development under the Specific Plan would require use of hazardous materials within 0.25 mile of a school (Criterion 4). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HAZ-6: Development under Specific Plan could result in fewer than two emergency access routes for streets exceeding 600 feet in length but would not physically interfere with an adopted emergency response plan or emergency evacuation plan (Criteria 6 and 9). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HAZ-7: Adoption and development under the Specific Plan, when combined with other past, present, existing, approved, pending and reasonably foreseeable development in the vicinity, would result in cumulative hazards. (Less than Significant)	LS	LS↓	LS↓	LS↑
Hydrology and Water Quality				
Impact HYD-1: Adoption and development under the Specific Plan would alter drainage patterns and increase the volume of stormwater, or the level of contamination or siltation in stormwater flowing from the Plan Area (Criteria 1 and 3 through 7). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HYD-2: Adoption and development under the Specific Plan could be susceptible to flooding hazards as a result of being placed in a 100-year flood zone as mapped by FEMA (Criteria 8 through 10). (Less than Significant)	LS	LS↓	LS↓	LS↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Hydrology and Water Quality (cont.)				
Impact HYD-3: Adoption and development under the Specific Plan could be susceptible to flooding hazards in the event of dam or reservoir failure (Criterion 10). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HYD-4: Adoption and development under the Specific Plan could be susceptible to inundation in the event of sea-level rise (Criterion 10). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HYD-5: Adoption and development under the Specific Plan would not adversely affect the availability of groundwater supplies or interfere substantially with groundwater recharge (Criterion 2) (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HYD-6: Adoption and development under the Specific Plan would not be susceptible to mudflow, seiche, and tsunami-related hazards (Criterion 11). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact HYD-7: Adoption and development under the Specific Plan, combined with past, present, existing, approved, pending, and reasonably foreseeable future projects would not result in potentially significant cumulative impacts to hydrologic resources. (Less than Significant)	LS	LS↓	LS↓	LS↑
Land Use, Plans and Policies				
Impact LU-1: Adoption and development under the Specific Plan would not result in the physical division of an existing community or conflict with adjacent or nearby land uses (Criteria 1 and 2). (Less than Significant)	LS	LS	LS	LS
Impact LU-2: Adoption and development under the Specific Plan would not conflict with applicable land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect (Criterion 3). (Less than Significant)	LS	LS	LS	LS
Impact LU-3: Adoption and development under the Specific Plan would not fundamentally conflict with any applicable habitat conservation plan or natural community conservation plan (Criterion 4). (Less than Significant)	LS	LS	LS	LS
Impact LU-4: Development under the Specific Plan, combined with cumulative development in the defined geographic area, including past, present, existing, approved, pending, and reasonably foreseeable future development, does not reveal any significant adverse cumulative impacts in the area. (Less than Significant)	LS	LS	LS	LS

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Noise				
Impact NOI-1: Adoption and development under the Specific Plan would not result in substantial temporary or periodic increases in ambient noise levels in the Plan Area above existing levels without the Specific Plan and in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (Criteria 1, 2 and 8). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact NOI-2: Adoption and development under the Specific Plan would not increase operational noise levels in the Plan Area to levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 3). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact NOI-3: Adoption and development under the Specific Plan would not expose persons to exterior noise levels in conflict with the land use compatibility guidelines of the Oakland General Plan after incorporation of all applicable Standard Conditions of Approval (Criterion 6). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact NOI-4: Adoption and development under the Specific Plan would not expose persons to interior Ldn or CNEL greater than 45 dBA for multi-family dwellings, hotels, motels, dormitories and long-term care facilities in the Plan Area to noise levels in excess of standards established in the Oakland Noise Ordinance and Planning Code (Criterion 5). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact NOI-5: Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area (Criterion 4). (Significant and Unavoidable)	SU	LS	LS	SU↑
Impact NOI-6: Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels (Criterion 4). (Significant and Unavoidable)	SU	LS	LS	SU↑
Impact NOI-7: Stationary noise sources such as rooftop mechanical equipment and back-up generators in combination with traffic generated by adoption and development under the Specific Plan; and from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area; (Criterion 4). (Significant and Unavoidable)	SU	SU↓	SU↓	SU↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Population, Housing, and Employment				
Impact POP-1: Adoption and development under the Specific Plan could induce population growth, but not in a manner not anticipated in the General Plan (Criterion 1). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact POP-2: Adoption and development under the Specific Plan could displace existing housing and residents, but not in substantial numbers necessitating the construction of replacement housing elsewhere, in excess of that anticipated in the City's Housing Element (Criteria 2 and 3). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact POP-3: Adoption and development under the Specific Plan individually and in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects would not induce substantial population growth in a manner not contemplated in the General Plan, either directly by facilitating new housing or businesses, or indirectly through infrastructure improvements, such that additional infrastructure is required but the impacts of such were not previously considered or analyzed. (Less than Significant)	LS	LS↓	LS↓	LS↑
Public Services, Parks and Recreation				
Impact PSR-1: Adoption and development under the Specific Plan could result in an increase in calls for police services, but would not require new or physically altered police facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact PSR-2: Adoption and development under the Specific Plan could result in an increase in calls for fire protection and emergency medical response services, but would not require new or physically altered fire protection facilities in order to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact PSR-3: Adoption and development under the Specific Plan could result in new students for local schools, but would not require new or physically altered school facilities to maintain acceptable performance objectives (Criterion 1). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact PSR-4: Adoption and development under the Specific Plan could increase the use of existing neighborhood and regional parks and recreation centers, but not to the extent that substantial physical deterioration of the facilities would occur or be accelerated, nor would it cause the necessity for new or expanded facilities (Criteria 1 through 3). (Less than Significant)	LS	LS↓	LS↓	LS↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Public Services, Parks and Recreation (cont.)				
Impact PSR-5: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would not result in a cumulative increase in demand for police, fire, and school services. (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact PSR-6: Adoption and development under the Specific Plan, in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Specific Plan Area, would result in an increased demand for recreational facilities. (Less than Significant)	LS	LS↓	LS↓	LS↑
Transportation and Circulation⁵				
Impact TRANS-1: The development under the Specific Plan would degrade the <i>MacArthur Boulevard/Piedmont Avenue</i> intersection (Intersection #13) from LOS D to LOS E (Significant Threshold #1) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)	LS	LS↓	LS↓	?
Impact TRANS-2: The development under the Specific Plan would degrade the <i>Perry Place/-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour under Existing Plus Project conditions. (Significant and Unavoidable)	SU	? ↓	? ↓	SU↑
Impact TRANS-3: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17) during the weekday PM peak hour under Existing Plus Project conditions. (Significant)	LS	LS↓	LS↓	?↑

⁵ As permitted by CEQA, the effects of the alternatives are discussed in less detail than the impact discussions for the Specific Plan in Chapter 4 (CEQA Guidelines Section 15126.6[d]). For this reason, the effects of each alternative at specific intersections has been assessed relative to the effects of the Specific Plan and are determined either to be reduced or more severe. However, final impact determinations for specific intersections have not been concluded.

Legend

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Transportation and Circulation (cont.)				
Impact TRANS-4: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑
Impact TRANS-5: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑
Impact TRANS-6: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. (Significant and Unavoidable)	Conservatively SU	Conservatively SU↓	Conservatively SU↓	Conservatively SU↑
Impact TRANS-7: The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) at the <i>Perry Place/I-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) which would operate at LOS F during the weekday PM peak hour under 2020 conditions. (Significant and Unavoidable)	SU	LS↓	LS↓	SU↑
Impact TRANS-8: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17). (Significant and Unavoidable)	SU	?↓	?↓	SU↑
Impact TRANS-9: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Transportation and Circulation (cont.)				
Impact TRANS-10: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours at the <i>27th Street/24th Street/Bay Place/Harrison Street</i> intersection (Intersection #37) under 2020 conditions. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑
Impact TRANS-11: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑
Impact TRANS-12: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2020 Plus Project conditions. (Significant and Unavoidable)	Conservatively SU	Conservatively SU↓	Conservatively SU↓	Conservatively SU↑
Impact TRANS-13: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West <i>Grand Avenue/Northgate Avenue</i> intersection (Intersection #47) which would operate at LOS F during the PM peak hour in 2020. (Significant and Unavoidable)	SU	?↓	?↓	SU↑
Impact TRANS-14: The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM and Saturday peak hours at the <i>51st Street/Pleasant Valley Avenue/Broadway</i> intersection (Intersection #7) under 2035 conditions. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑
Impact TRANS-15: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) during the weekday PM peak hour at the <i>40th Street/Telegraph Avenue</i> intersection (Intersection #8) under 2035 conditions. (Significant)	LS	LS↓	LS↓	?↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Transportation and Circulation (cont.)				
Impact TRANS-16: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the <i>West MacArthur Boulevard/Telegraph Avenue</i> intersection (Intersection #11) under 2035 conditions. (Significant)	LS	LS↓	LS↓	?↑
Impact TRANS-17: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday PM peak hour at the <i>Perry Place/I-580 Eastbound Ramps/ Oakland Avenue</i> intersection (Intersection #15) under 2035 conditions. (Significant and Unavoidable)	SU	? ↓	?↓	SU↑
Impact TRANS-18: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more (Significant Threshold #5) at an intersection operating at LOS F during the Saturday peak hour at the <i>Grand Avenue/Lake Park Avenue/Santa Clara Avenue</i> intersection (Intersection #16) under 2035 conditions. (Significant and Unavoidable)	SU	LS↓	LS↓	SU↑
Impact TRANS-19: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the <i>Lake Park Avenue/Lakeshore Avenue</i> intersection (Intersection #17) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑
Impact TRANS-20: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the <i>Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway</i> intersection (Intersections #20 and #21) under 2035 conditions. (Significant and Unavoidable)	SU	LS↓	LS↓	SU↑
Impact TRANS-21: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the <i>27th Street/Telegraph Avenue</i> intersection (Intersection #29) which would operate at LOS F during the weekday PM peak hour under 2035 conditions. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Transportation and Circulation (cont.)				
Impact TRANS-22: The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour and at the <i>27th Street/ Broadway</i> intersection (Intersection #30) under 2035 conditions. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑
Impact TRANS-23: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>24th Street/Broadway</i> intersection (Intersection #36) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑
Impact TRANS-24: The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the Saturday peak hour at the <i>27th Street/24th Street/Bay Place/Harrison Street</i> intersection (Intersection #37) under 2035 conditions. (Significant and Unavoidable)	SU	SU↓	SU↓	SU↑
Impact TRANS-25: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Broadway</i> intersection (Intersection #39) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant)	LS	LS↓	LS↓	LS↑
Impact TRANS-26: The development under the Specific Plan Project would add more than 10 peak-hour trips to <i>23rd Street/Harrison Street</i> intersection (Intersection #40) which would meet peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions. (Significant and Unavoidable)	Conservatively SU	Conservatively SU↓	Conservatively SU↓	Conservatively SU↑
Impact TRANS-27: The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more (Significant Threshold #5) at the West <i>Grand Avenue/Northgate Avenue</i> intersection (Intersection #47) which would operate at LOS F during the weekday PM peak hour in 2035. (Significant and Unavoidable)	SU	?↓	SU↓	SU↑

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TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Transportation and Circulation (cont.)				
Impact TRANS-28: The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more (Significant Threshold #2) during the weekday PM peak hour at the <i>Grand Avenue/Broadway</i> intersection (Intersection #49) in 2035. (Significant and Unavoidable)	SU	LS↓	LS↓	SU↑
Impact TRANS-29: The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments: <ul style="list-style-type: none"> MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035. Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035. Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035. Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035. San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035. Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035. (Significant and Unavoidable) 	SU	?↓	SU↓	SU↑
Utilities and Service Systems				
Impact UTIL-1: The water demand generated by adoption and development under the Specific Plan would not exceed water supplies available from existing entitlements and resources (Criterion 3). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact UTIL-2: Adoption and development under the Specific Plan would not exceed the wastewater treatment requirements of the San Francisco Regional Water Quality Control Board or result in a determination that new or expanded wastewater treatment facilities would be required (Criteria 1 and 4). (Less than Significant)	LS	LS↓	LS↓	LS↑

Legend

LS Less than significant or negligible impact; no mitigation required

LSM Less than significant impact, after mitigation

SU Significant and unavoidable adverse impact, after mitigation or standard conditions

N No impact

↑↓ Impact is more severe or less severe than project impact, after mitigation, but with no change in impact determination; **Changes from proposed project impact determination shown in bold**

TABLE 5-5 (Continued)
SUMMARY COMPARISON OF IMPACTS: SPECIFIC PLAN AND ALTERNATIVES

Environmental Impact	Specific Plan (Broadway Valdez Development Program)	No Project Alternative 1	Partially Mitigated Alternative 2 (including the Historic Preservation Sub-Alternative)	Maximum Theoretical Buildout Alternative 3
Utilities and Service Systems (cont.)				
Impact UTIL-3: Adoption and development under the Specific Plan would not require or result in construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects (Criteria 2). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact UTIL-4: Adoption and development under the Specific Plan would not violate applicable federal, state, and local statutes and regulations related to solid waste; nor generate solid waste that would exceed the permitted capacity of the landfills serving the area (Criteria 5 and 6). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact UTIL-5: Adoption and development under the Specific Plan would not violate applicable federal, state and local statutes and regulations relating to energy standards; nor result in a determination by the energy provider which serves or may serve the area that it does not have adequate capacity to serve projected demand in addition to the providers' existing commitments and require or result in construction of new energy facilities or expansion of existing facilities (Criteria 7 and 8). (Less than Significant)	LS	LS↓	LS↓	LS↑
Impact UTIL-6: Adoption and development under the Specific Plan in combination with other past, present, existing, approved, pending, and reasonably foreseeable future projects within and around the Plan Area, would result in an increased demand for utilities services. (Less than Significant)	LS	LS↓	LS↓	LS↑

Legend

LS Less than significant or negligible impact; no mitigation required

LSM Less than significant impact, after mitigation

SU Significant and unavoidable adverse impact, after mitigation or standard conditions

N No impact

↑↓ Impact is more severe or less severe than project impact, after mitigation, but with no change in impact determination; **Changes from proposed project impact determination shown in bold**

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CHAPTER 6

Impact Overview and Growth Inducement

6.1 Significant, Unavoidable and Cumulative Environmental Impacts

A significant and unavoidable impact would result if a project were to reach or exceed the defined threshold of significance and no feasible mitigation measure were available to reduce the significant impact to a less-than-significant level. Adoption and development under the Broadway Valdez District Specific Plan would result in the following significant and unavoidable (SU) impacts or cumulative impacts, as identified in Chapter 4 of this EIR.

SU Aesthetics, Shadow, and Wind Impacts

- **Impact AES-4:** Adoption and development under the Specific Plan could result in substantial new shadow that could the Temple Sinai. Although Mitigation Measure AES-4 would require a shadow study to evaluate the shadowing effects, it cannot be known with certainty that a project redesign would eliminate the potential for new significant shading on the Temple Sinai. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-5:** Adoption and development under the Specific Plan has the potential to result in adverse wind conditions in cases where structures 100 feet in height or taller are proposed for development. Although Mitigation Measure AES-5 would require a wind study to evaluate the effects of proposed development, it cannot be known with certainty that a project redesign would eliminate the potential for new adverse wind impacts. Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact AES-6:** For the reasons listed above, adoption and development under the Specific Plan is conservatively deemed to result in significant cumulative wind, and shadow impacts. Therefore, adoption and development under the Specific Plan, in combination with other past, present, and reasonably foreseeable future projects within and around the Plan Area also is conservatively deemed significant and unavoidable.

SU Air Quality Impacts

- **Impact AIR-1:** Construction associated with adoption and development under the Specific Plan would result in average daily emissions in excess of 54 pounds per day of ROG. With the inclusion of Recommended Measure AIR-1, it cannot reliably be demonstrated that ROG emissions from application of architectural coatings associated with adoption and development under the Specific Plan would be reduced to 54 pounds per day or less. To

assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the impact is conservatively deemed significant and unavoidable.

- **Impact AIR-2:** Adoption and development under the Specific Plan would result in operational average daily emissions of more than 54 pounds per day of ROG, NOX, or PM_{2.5}; 82 pounds per day of PM₁₀; or result in maximum annual emissions of 10 tons per year of ROG, NOX, or PM_{2.5} or 15 tons per year of PM₁₀. Although implementation of SCA 25 and Recommended Measure AIR-2 would reduce environmental effects on air quality, adoption and development under the Specific Plan still would contribute substantially to an existing air quality violation (ozone precursors and particulate matter). Therefore, even with implementation of Recommended Measure AIR-2, this impact would remain significant and unavoidable for emissions of ROG, NOX, and PM₁₀. To assess full buildout of the Broadway Valdez Development Program under this threshold, which is intended for project-level analysis, aggressive and conservative assumptions were employed and thus yielded a conservative result. Therefore, the significant and unavoidable determination is considered conservative.
- **Impact AIR-4:** Adoption and development under the Specific Plan could generate substantial levels of Toxic Air Contaminants (TACs) under cumulative conditions resulting in (a) a cancer risk level greater than 100 in a million, (b) a non-cancer risk (chronic or acute) hazard index greater than 10.0, or (c) annual average PM_{2.5} of greater than 0.8 micrograms per cubic meter as a result of project operations. Although, due to the BAAQMD's permitting requirements, residual risk for a given generator would be less than 10 in one million, and although implementation of Mitigation Measure AIR-4 would substantially reduce potential cancer risks associated with DPM, the degree to which multiple sources, if concentrated on one area, would maintain cumulative risks to below 100 in one million cannot be assured. Therefore, the impact is conservatively deemed significant and unavoidable.

SU Cultural Resources Impacts

- **Impact CUL-1:** Adoption and development under the Specific Plan could result in the physical demolition, destruction, relocation, or alteration of historical resources that are listed in or may be eligible for listing in the federal, state, or local registers of historical resources.
- **Impact CUL-5:** Adoption and development under the Specific Plan, combined with cumulative development in the Plan Area and citywide, including past, present, existing, approved, pending, and reasonably foreseeable future development, would contribute considerably to a significant adverse cumulative impact to cultural resources.

SU Greenhouse Gas Impacts

- **Impact GHG-1:** Adoption and development under the Specific Plan would produce greenhouse gas emissions that exceed 1,100 metric tons of CO_{2e} per year that would exceed the project-level threshold of 4.6 metric tons of CO_{2e} per service population annually. Although future projects under the Specific Plan would be subject to SCA F, GHG Reduction Plan, according to the specific applicability criteria, and GHG emissions

would be reduced through project-by-project implementation of project-specific reduction measures, it cannot be guaranteed that sufficient reductions can be achieved. Therefore, the impact is conservatively deemed significant and unavoidable.

SU Noise Impacts

- **Impact NOI-5:** Traffic generated by adoption and development under the Specific Plan could substantially increase traffic noise levels in the Plan Area.
- **Impact NOI-6:** Traffic generated by adoption and development under the Specific Plan, in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could substantially increase traffic noise levels in the Plan Area; and construction and operational noise levels in combination with traffic from past, present, existing, approved, pending and reasonably foreseeable future projects, could increase ambient noise levels.
- **Impact NOI-7:** Adoption and development under the Specific Plan could result in stationary noise sources, such as rooftop mechanical equipment and back-up generators; that when combined with noise from traffic generated by adoption and development under the Specific Plan; as well as from and from past, present, existing, approved, pending and reasonably foreseeable future projects; could substantially increase noise levels at sensitive land uses in the Plan Area.

SU Transportation and Circulation Impacts

Existing Plus Project Conditions

- **Impact TRANS-2:** The development under the Specific Plan would degrade the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour under Existing Plus Project conditions.
- **Impact TRANS-6:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under Existing Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS A during both weekday PM and Saturday peak hours, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.

2020 Plus Project Conditions

- **Impact TRANS-7:** The development under the Specific Plan would degrade the intersection from LOS E to LOS F and increase intersection average delay by four seconds or more, increase the total intersection v/c ratio by 0.03 or more, and increase the v/c ratio for a critical movement by 0.05 or more at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) which would operate at LOS F during the weekday PM peak hour under 2020 conditions.

- **Impact TRANS-8:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM peak hour which would operate at LOS F under 2020 conditions at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**).
- **Impact TRANS-10:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2020 conditions.
- **Impact TRANS-12:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under 2020 Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact TRANS-13:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *West Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the PM peak hour in 2020.

2035 Plus Project Conditions

- **Impact TRANS-14:** The development under the Specific Plan would increase the v/c ratio for a critical movement by 0.05 or more during the weekday PM and Saturday peak hours at the *51st Street/Pleasant Valley Avenue/Broadway* intersection (**Intersection #7**) under 2035 conditions.
- **Impact TRANS-17:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday PM peak hour at the *Perry Place/I-580 Eastbound Ramps/ Oakland Avenue* intersection (**Intersection #15**) under 2035 conditions.
- **Impact TRANS-18:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more at an intersection operating at LOS F during the Saturday peak hour at the *Grand Avenue/Lake Park Avenue/Santa Clara Avenue* intersection (**Intersection #16**) under 2035 conditions.
- **Impact TRANS-19:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *Lake Park Avenue/Lakeshore Avenue* intersection (**Intersection #17**) during the weekday PM and Saturday peak hours which would operate at LOS F under 2035 conditions.

- **Impact TRANS-20:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Piedmont Avenue/Broadway and Hawthorne Avenue/Brook Street/Broadway* intersections (**Intersections #20 and #21**) under 2035 conditions.
- **Impact TRANS-21:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *27th Street/Telegraph Avenue* intersection (**Intersection #29**) which would operate at LOS F during the weekday PM peak hour under 2035 conditions.
- **Impact TRANS-22:** The development under the Specific Plan would degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour and at the *27th Street/ Broadway* intersection (**Intersection #30**) under 2035 conditions.
- **Impact TRANS-24:** The development under the Specific Plan would increase the total intersection v/c ratio by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at an intersection operating at LOS F during the weekday AM and PM peak hours and degrade overall intersection operations from LOS E to LOS F and increase intersection average delay by four seconds or more during the Saturday peak hour at the *27th Street/24th Street/Bay Place/Harrison Street* intersection (**Intersection #37**) under 2035 conditions.
- **Impact TRANS-26:** The development under the Specific Plan Project would add more than 10 peak-hour trips to *23rd Street/Harrison Street* intersection (**Intersection #40**) which would meet peak-hour signal warrant under 2035 Plus Project conditions. Although, with implementation of Mitigation Measure TRANS-6, this intersection may improve to LOS B during the weekday PM peak hour and LOS A during the Saturday peak hour, the specific improvements may result in potential secondary impacts at Grand Avenue/Harrison Street intersection (Intersection #52). Therefore, the impact is conservatively deemed significant and unavoidable.
- **Impact TRANS-27:** The development under the Specific Plan would increase the v/c ratio for the total intersection by 0.03 or more and increase the v/c ratio for a critical movement by 0.05 or more at the *West Grand Avenue/Northgate Avenue* intersection (**Intersection #47**) which would operate at LOS F during the weekday PM peak hour in 2035.
- **Impact TRANS-28:** The development under the Specific Plan would degrade intersection operations from LOS D to LOS F and increase intersection average delay by four seconds or more during the weekday PM peak hour at the *Grand Avenue/Broadway* intersection (**Intersection #49**) in 2035.

Roadway Segment Evaluation

- **Impact TRANS-29:** The development under the Specific Plan would degrade from LOS E or better to LOS F or increase the v/c ratio by 0.03 or more for segments operating at LOS F on the following CMP or MTS roadway segments:
 - MacArthur Boulevard in both eastbound and westbound directions between Piedmont Avenue and I-580 in 2020 and 2035.

- Grand Avenue in the eastbound direction from Adeline Street to MacArthur Boulevard, and in westbound direction from Harrison Street to San Pablo Avenue in 2035.
- Broadway in the northbound direction from 27th Street to College Avenue, and in the southbound direction from Piedmont Avenue to 27th Street in 2035.
- Telegraph Avenue in the northbound direction from MacArthur Boulevard to Shattuck Avenue in 2035.
- San Pablo Avenue in the southbound direction from Market Street to 27th Street in 2035.
- Harrison Street in the northbound direction from 27th Street to Oakland Avenue in 2035.

Previous environmental documents have identified intersections that either currently operate at an unacceptable LOS or are projected to operate at an unacceptable LOS in the future. This EIR identifies these intersections as “impacted intersections” because components of the proposed project may affect those locations. Appendix G presents the intersections that previously published environmental documents identified as having significant and unavoidable impacts.

6.2 Growth-Inducing Impacts

This section addresses the ways in which the adoption and development under the Specific Plan “could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (Section 15126.2(d) of the CEQA Guidelines). The section summarizes topics and impacts also addressed in Section 4.11 *Population, Housing, and Employment*, which provides the context for evaluating growth-inducing impacts.

6.2.1 Adoption and Development Under the Specific Plan Would Foster Growth in the Plan Area

The Broadway Valdez Specific Plan established the Broadway Valdez Development Program, which is shown below in **Table 6-1**. As described in Chapter 3, *Project Description*, the Broadway Valdez Development Program represents the *reasonably foreseeable maximum development* that the City has projected can reasonably be expected to occur in the Plan Area over the next 25 years, and is thus the level of development envisioned by the Specific Plan and analyzed in this EIR. In total, approximately 3.7 million square feet of development is envisioned, including approximately 1,800 residential units, and a new 180-room hotel. These developments would support Plan Area growth of business activity with approximately 4,505 additional jobs and growth of approximately 1,730 households with 3,230 additional residents.

**TABLE 6-1
BROADWAY VALDEZ DEVELOPMENT PROGRAM**

	Valdez Triangle Subarea	North End Subarea	Total Plan Area (Rounded) ^a
Residential Units	1,030	767	1,800
Office (sq. ft.)	116,000	579,000	695,000
Retail (sq. ft.)	794,000	321,000	1,114,000
Hotel Rooms	180	-	180
Non-Residential Development (sq. ft.)	1,027,000	899,000	1,927,000
Total Development (sq. ft.)	2,057,000	1,666,000	3,723,000

^a Totals are rounded for consistency with the Project Description (Chapter 3).

SOURCE: WRT, 2013.

This growth would not otherwise occur at this pace within the Plan Area. Compared to growth anticipated citywide, the Broadway Valdez Development Program would contribute about five percent of the employment growth and about two percent of the population growth anticipated (see Section 4.11, *Population, Housing, and Employment*).

6.2.2 Adoption and Development under the Specific Plan is Unlikely to Induce Substantial Additional Growth Outside the Plan Area

No Infrastructure-Induced Growth

Typical examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and the development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped. In this case, development under the Specific Plan would occur in already developed areas in a location well-served by existing transportation/transit systems and other infrastructure and utilities. Unlike development on vacant land in an outlying part of the region, the development under the Specific Plan would occur in an already developed urban area and would not require construction or extension of new roads, utilities, and other infrastructure that might stimulate population and employment growth in previously undeveloped areas. Adoption and development under the Specific Plan could require on-site infrastructure replacements and improvements to accommodate new development to higher densities and for new uses. The infrastructure improvements would be specific to the development sites and would not induce substantial additional population growth in other areas.

Job-Induced Population Growth

Employment growth resulting from adoption and development under the Specific Plan would support the growth of households and population to provide the additional workers. The housing

development anticipated under the Broadway Valdez Development Program also would temporarily generate additional workers. Cumulatively, citywide growth of employed residents in Oakland (59 percent increase) is projected to exceed the growth of jobs over time (49 percent increase). Thus, cumulatively, the substantial growth of housing and population anticipated to occur throughout the City could accommodate the number of additional workers resulting from adoption and development under the Specific Plan as well as the number of additional workers associated with other cumulative job growth.

Growth Supported By Additional Spending

The major retail and mixed-use developments anticipated with adoption and development under the Specific Plan would bring visitors, patrons, and shoppers to the Plan Area. Their spending would support the businesses and employees to be located in the new developments. There also could be some additional spending that would support businesses in the vicinity of the Plan Area. The additional spending is unlikely to result in the construction of new facilities because of the large amount of retail and commercial space to be developed as a result of the Specific Plan, and the availability of commercial space in existing buildings within the Plan Area and vicinity.

6.2.3 Adoption and Development under the Specific Plan Would Reduce Growth Pressures Elsewhere in the Region

From a regional perspective, the adoption and development under the Specific Plan would affect the distribution and location of growth within the East Bay and Bay Area region. It would result in more growth in Oakland and the Plan Area, at the center of the region, and less growth in other areas. As a result of adoption and development under the Specific Plan, retail and commercial developments in the Plan Area would capture activity that would otherwise locate elsewhere in the East Bay and/or Bay Area. Development of major retail shopping in the Plan Area would increase shopping opportunities in Oakland and stem the leakage of retail spending to areas outside of Oakland in the East Bay and San Francisco. Thus, adoption and development under the Specific Plan would facilitate retail and commercial development in a central, regional location with good transportation/transit accessibility from throughout the region. It would facilitate retail development in proximity to Oakland consumers thereby reducing their travel distances for shopping trips.

Adoption and development under the Specific Plan would accommodate more population growth in a location with strong housing demand, thereby reducing demand for housing in more outlying locations. Higher-density housing in the Plan Area at the center of the region would likely result in a larger total regional housing supply than would a more dispersed, lower-density pattern of regional development. Further, it would likely result in more housing in proximity to public transportation and employment centers in the Central Bay Area.

6.2.4 Summary

Overall, the effects of adoption and development under the Specific Plan on growth would be largely beneficial and are not considered substantial and adverse.

6.3 Significant Irreversible Environmental Effects

An EIR must identify any significant irreversible environmental changes that could result from adoption and development under the Specific Plan. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA dictates that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified (CEQA Guidelines §15126.2(c)). The CEQA Guidelines identify three distinct categories of significant irreversible changes: (1) changes in land use that would commit future generations; (2) irreversible changes from environmental actions; and (3) consumption of non-renewable resources.

6.3.1 Changes in Land Use Which Would Commit Future Generations

Adoption and development under the Specific Plan would result in growth and development in the approximately 95.5-acre area along Oakland's Broadway corridor between Grand Avenue and Interstate 580. Adoption and development under the Specific Plan is consistent with the land use designated by the City of Oakland's General Plan. Because the development under the Specific Plan would occur within an urban area surrounded by similar or compatible uses, it would not commit future generations to significant changes in land use.

6.3.2 Irreversible Changes from Environmental Accidents

No significant irreversible environmental damage, such as what could occur as a result of an accidental spill or explosion of hazardous materials, is anticipated due to adoption and development under the Specific Plan. Furthermore, compliance with federal, State, and local regulations, and the implementation of the City's Standard Conditions of Approval associated with hazards and hazardous materials (SCAs 35, 41, 61-69, and 74) identified in Section 4.7, *Hazards and Hazardous Materials*, would reduce to a less-than-significant level the possibility that hazardous substances within the Plan Area would cause significant environmental damage.

6.3.3 Consumption of Non-Renewable Resources

Consumption of non-renewable resources includes conversion of agricultural lands, loss of access to mining reserves, and use of non-renewable energy sources. The Plan Area is located within an urban area of Oakland; no agricultural land would be converted to non-agricultural uses. The Plan Area does not contain known mineral resources and does not serve as a mining reserve.

Adoption and development under the Specific Plan would require the use of energy, including energy produced from non-renewable resources. However, the future development projects under the Specific Plan would incorporate energy-conserving features, as required by the Uniform Building Code and California Energy Code Title 24, the City's Green Building Ordinance, and, as applicable, the City's Standard Conditions of Approval.

6.4 Effects Found Not To Be Significant

A Notice of Preparation (NOP) was circulated on April 30, 2012, and public scoping meetings were held on May 16, 2012 at the Planning Commission and May 14, 2012 at the Landmarks Preservation Advisory Board, to solicit comments from the public and city officials about the scope of this EIR. Written comments received on the NOP were considered in the preparation of the final scope for this document and in the evaluation of the adoption and development under the Specific Plan. An Initial Study was not prepared for the Specific Plan.

The NOP prepared for this EIR indicated there would likely be environmental effects on aesthetics, shadow and wind; air quality and greenhouse gases; biological resources; cultural and historic resources; geology, soils and seismicity; hazardous materials; hydrology, water quality and water supply; land use; noise; population and housing; public services and utilities; and transportation and circulation, among other topics. These environmental topics have been fully analyzed in this document (Chapter 4).

The following two topics from the CEQA Environmental Checklist were excluded from discussion in the EIR because it was determined during the scoping phase that there would be no impacts to these issues:

6.4.1 Agricultural Resources

As discussed in Section 4.9 (*Land Use, Plans, and Policies*), the Oakland General Plan Land Use Map designates various urban residential, commercial, and mixed-use land use classifications in and surrounding the Plan Area. The Plan Area, as with the majority of developed land in the City of Oakland, is designated by the California Department of Conservation's Farmland Mapping and Monitoring Program as Urban and Built-Up Land (Department of Conservation, 2011). Therefore, adoption and development under the Specific Plan would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; would not conflict with existing zoning for agricultural use or a Williamson Act contract; and would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use. Adoption and development under the Specific Plan would have no impact on agricultural resources.

6.4.2 Mineral Resources

According to the City's OSCAR Element of the General Plan, the Plan Area is located in a developed urban area that has no known existing mineral resources. The California Geological

Survey (CGS) has classified lands within the San Francisco Bay Region into Mineral Resource Zones (MRZs) based on guidelines adopted by the California State Mining and Geology Board, as mandated by the Surface Mining and Reclamation Act (SMARA) of 1974 (Stinson et al., 1982). The Plan Area is mapped by the California Department of Mines and Geology (CDMG) as Mineral Resource Zones MRZ-1—an area where adequate information indicates a low likelihood of significant mineral resources (Stinson, et al., 1982). The intent of designating significant deposits is to identify areas where mineral extraction could occur prior to development. Adoption and development under the Specific Plan would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Adoption and development under the Specific Plan would have no impact on mineral resources.

6.5 References

- City of Oakland, 2007. *Land Use and Transportation Element of the Oakland General Plan*, March 24, 1998, amended to June 21, 2007.
- City of Oakland, 1996. *Open Space, Conservation and Recreation (OSCAR), An Element of the Oakland General Plan*, adopted June 11, 1996.
- California Department of Conservation, Map of Prime Farmland in Alameda County, 2011.
- Stinson, M. C., M. W. Manson, J. J. Plappert, and others, Mineral Land Classification: Aggregate Materials in the San Francisco-Monterey Bay Area, Part II, Classification of Aggregate Resource Areas South San Francisco Bay Production-Consumption Region, California Division of Mines and Geology Special Report 146, 1982.

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CHAPTER 7

Report Preparers

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