



Meeting Date: November 3, 2023

To: Public Works Commission

Through: Carla Short, Interim Public Works Director
Albert Ko, City Engineer and Deputy Director for Public Works

From: Arun Bhatia, Public Works Project Manager

Subject: 6th Street Pedestrian Safety Project, Contract No. 1000015023 – Contract Modification

Director's Recommendation: Approve the proposed resolution adopting findings pursuant to the California Environmental Quality Act regarding the Final Sixth Street Pedestrian Safety Project Negative Declaration issued by the Planning Department on August 30, 2017 and amended on October 23, 2017 (Case No. 2014.1010E); approve an increase of \$2,017,601.00 to the contract cost contingency and an increase of 276 calendar days to the contract duration contingency for the 6th Street Pedestrian Safety Project, contract with Esquivel Grading & Paving, Inc., and authorize the Director of Public Works to approve modifications to the contract for a total contract amount of up to \$13,114,406.55 and a total contract duration of up to 1286 calendar days.

Contract Background: 6th Street Pedestrian Safety Project (Project) consists of civil roadway work, sidewalk work, landscaping work, sewer work, lighting improvements, traffic routing improvements, and decorative elements on 6th Street from Market Street to Harrison Street. On May 10, 2021, Public Works awarded Esquivel Grading & Paving, Inc. (Contractor) a construction contract for the Project in the amount of \$10,088,005.05. Construction began in January 2022.

Explanation of Requested Contract Cost and Duration: The Project is currently on schedule and on budget. The Project sponsor, The San Francisco Municipal Transportation Agency (SFMTA), has requested that improvements to two additional intersections, 6th Street at Folsom Street and Harrison Street, be added to the Project. The 6th Street corridor has one of the highest concentrations of pedestrian collisions, injuries, and fatalities in San Francisco. This Project aims to create a safe and inviting place for people to walk along 6th Street, and it was determined that the project has sufficient funding to extend the project limits by two extra intersections, bringing immediate safety impacts to the corridor. Improvements to these intersections will include civil roadway work, sidewalk work (bulbouts), sewer work, lighting improvements, and traffic routing improvements.

Contract Details:

Contract Title:	6th Street Pedestrian Safety Project
Contract Original Award Amount:	\$10,088,005.05
Contract Original Duration:	918
Contractor Name:	Esquivel Grading & Paving, Inc.

Summary of Contract Value:

Contract Cost Amount	Amounts
Original Contract Amount:	\$10,088,005.05
Original Contingency Amount:	\$1,008,800.50
Previously Approved Contingency Reserve:	-
Additional Contingency Reserve Requested:	\$2,017,601.00
Authorized Contract Cost Limit:	\$13,114,406.55

Contract Duration	Days
Original Contract Duration:	918
Original Contingency Duration:	92
Previously Approved Contingency Reserve:	-
Additional Contingency Reserve Requested:	276
Authorized Contract Duration Limit:	1286

Contract Funding Sources:	Active Transportation Program (ATP) Affordable Housing and Sustainable Communities (AHSC) Prop K Transportation Sales Tax MTA General Obligation Bond
Compliance Information:	12B Equal Benefits Ordinance Compliant
Related Commission Actions:	N/A
Additional Information:	N/A
Attachments:	Attachment 1: Commission Resolution Attachment 2: Sixth Street Pedestrian Safety Project Final Negative Declaration (FND), San Francisco Planning Department Case No. 2014.1010E (October 23, 2017) Attachment 3: Planning Department Memorandum to File, File No. 2014.1010E, Sixth Street Pedestrian Safety Project Final Negative Declaration (October 22, 2019)

**PUBLIC WORKS COMMISSION
CITY AND COUNTY OF SAN FRANCISCO**

RESOLUTION NO. _____

WHEREAS, The Sixth Street Pedestrian Safety Project (“Project”) seeks to improve pedestrian safety along the 6th Street corridor by improving the roadway, sidewalk, lighting, and traffic signal infrastructure; and

WHEREAS, The Project consists of civil roadway work, landscaping work, sewer work, lighting improvements, traffic routing improvements, and decorative elements on 6th Street from Market Street to Harrison Street; and

WHEREAS, On October 23, 2017, the San Francisco Planning Department adopted the Final Negative Declaration for the Sixth Street Pedestrian Safety Project (Case No. 2014.1010E) (“Final Negative Declaration”) pursuant to the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.) (“CEQA”); and

WHEREAS, On October 16, 2018, The San Francisco Municipal Transportation Agency (“SFMTA”) Board of Directors, in SFMTA Board of Directors Resolution No. 181016-140 made CEQA findings and approved an earlier version of the Project; and

WHEREAS, On October 22, 2019, the San Francisco Planning Department issued a Memorandum to File (“Memorandum”) that reevaluated the project based on project revisions and concluded that the revised project did not warrant additional environmental review; and

WHEREAS, On May 10, 2021, San Francisco Public Works awarded Contract No. 1000015023 under DPW Order No. 204,709 for the Sixth Street Pedestrian Safety Project to Esquivel Grading & Paving, Inc. in the amount of \$10,088,005.05 with a contract duration of 918 calendar days (“Contract”); and

WHEREAS, An increase of \$2,017,601.00 to the contract cost contingency and 276 days to the contract duration contingency is requested to enable two additional intersections along 6th Street, Harrison Street and Folsom Street, to receive safety improvements as part of the Sixth Street Pedestrian Safety Project; and

WHEREAS, The cost and duration modification approved by this action would cover the additional cost and duration required to complete the additional safety improvements; and

WHEREAS, The Project files, including the Final Negative Declaration and the Memorandum have been made available for review by the Commission and the public, and those files are part of the record before this Commission; and

WHEREAS, the Commission has reviewed and considered the information contained in the Final Negative Declaration and the Memorandum and all written and oral information provided by San Francisco Public Works for the Project; now, therefore, be it

RESOLVED, The Commission has reviewed and considered the Final Negative Declaration and the Memorandum and the record as a whole, and finds that the Final Negative Declaration and the Memorandum are adequate for the Commission's use as the decision-making body for the proposed approval of the contract for the Project and incorporates the CEQA findings contained in SFMTA Board of Directors Resolution No. 181016-140 by this reference thereto as though set forth in this Resolution; and be it further

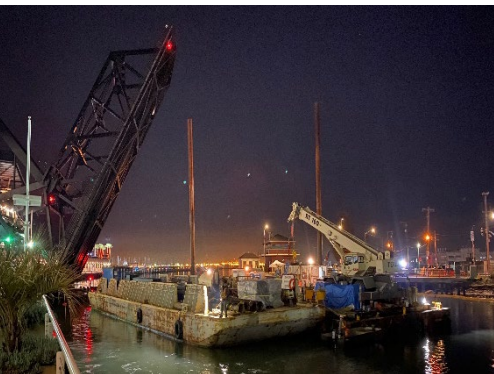
RESOLVED, The Commission further finds that since the Final Negative Declaration and the Memorandum were finalized, there have been no substantial project changes and no substantial changes in project circumstances that would require major revisions to the Final Negative Declaration or the Memorandum due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, and there is no new information of substantial importance that would change the conclusions set forth in the Final Negative Declaration and the Memorandum; and be it further

RESOLVED, That this Commission hereby approves an increase of \$2,017,601.00 to the contract cost contingency and 276 days to the contract duration contingency for the Sixth Street Pedestrian Safety Project Contract with Esquivel Grading & Paving, Inc.; and be it further

RESOLVED, That this Commission hereby authorizes the Director of Public Works to approve future modifications to the Contract for a total contract cost of up to \$13,114,406.55 and total contract duration of up to 1,286 days.

I hereby certify that the foregoing resolution was adopted by the Public Works Commission at its meeting of _____.

Commission Affairs Manager
Public Works Commission

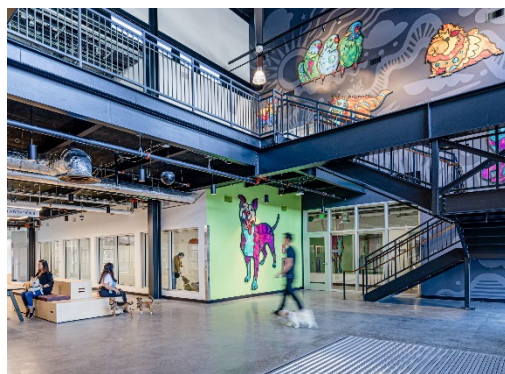


November 3, 2023

6th Street Pedestrian Safety Project

Arun Bhatia

Project Manager, Streetscape Program
Infrastructure Design & Construction



6th Street Pedestrian Safety Project

Recommend Commission:

Approve a contract modification to increase the contract cost contingency by \$2,017,601.00 and contract duration contingency by 276 calendar days.

And Recommend Commission:

Authorize the Public Works Director to approve future contract modifications for a total contract cost of up to \$13,114,406.55 and a total contract duration of up to 1286 consecutive calendar days

Original Contract Amount:

\$10,088,005.05

Original Construction Duration:

918 consecutive calendar days

Contractor:

Esquivel Grading & Paving, Inc.

Reason:

Extending project limits to include two additional intersections of work

6th Street Pedestrian Safety Project

Legend	
—	Supervisorial District Boundaries
.....	Neighborhood Boundaries

Current: 6th Street between Market Street and Howard Street
Request: Add 6th and Folsom and 6th and Harrison

District 6

More info:
<https://www.sfpublicworks.org/sixthstreet>



Project Streetscape Improvements - ongoing



6th and Stevenson

Curb Ramp Upgrades

All curb ramps within project limits are now constructed to be ADA compliant

Project Streetscape Improvements - ongoing



6th and Mission

New Paving

New curb to curb paving along 6th Street from Market to Howard

Project Streetscape Improvements - ongoing



6th and Market

Sidewalk Widening and Bulbouts

Widened sidewalks and bulbouts to shorten pedestrian crossing distances

Project Streetscape Improvements - ongoing



6th and Howard,
New traffic signals

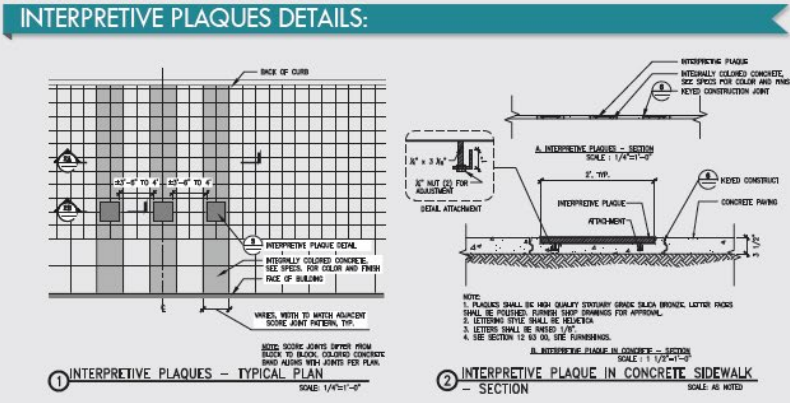


6th and Mission,
New pedestrian lights

Traffic Signal Modifications
New traffic signal systems for increased accessibility

Lighting Improvements
New pedestrian-scale lighting, improving pedestrian visibility

Project Streetscape Improvements – coming up

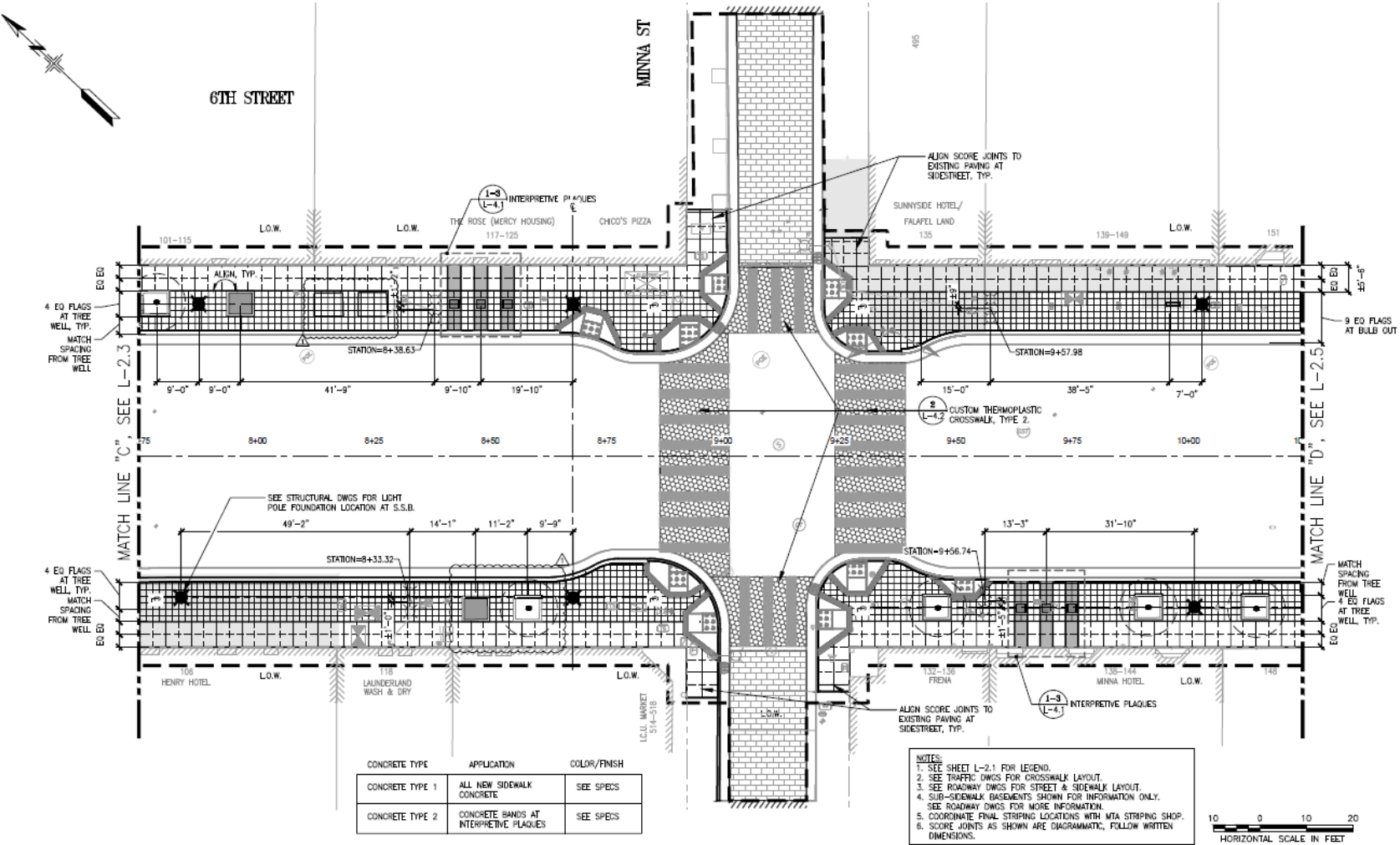


Decorative Elements

Community Identity Plaques

- Transgender District
- SOMA Pilipinas District
- Lodging House District

Project Streetscape Improvements – coming up



Decorative Elements

Raised and Decorative Crosswalks

Project Background

- **On January 17, 2022**, a Notice-to-Proceed was issued to direct Esquivel Grading & Paving, Inc. to start construction and reach final completion 918 days later.
- **The Project is currently on schedule and on budget.** The Project sponsor, the San Francisco Municipal Transportation Agency (SFMTA), has requested that the project limits be extended to include two additional intersections: Folsom Street and Harrison Street. Improvements to these intersections will include civil roadway work, sidewalk work (bulbouts), sewer work, lighting improvements, and traffic routing improvements.

Current Project Status

Construction started:
January 17, 2022

Original total contract duration:
918 calendar days

Original Final Completion Date:
July 23, 2024

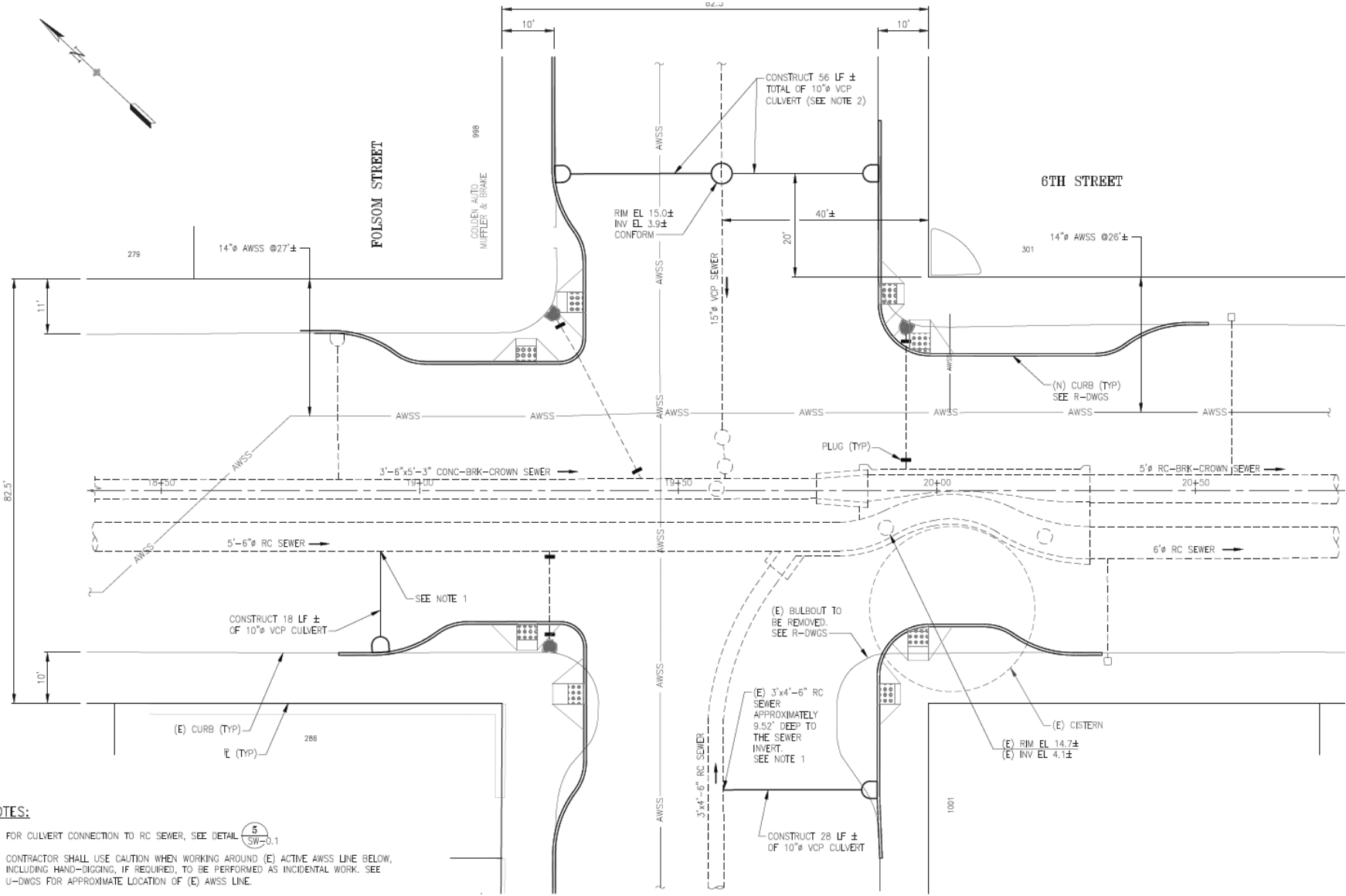
Approximate completion to date:
80%


Identified additional time needed:
Six (6) months

Reason:
**Addition of Folsom and Harrison St
Intersections**

Current projected final completion:
January 2025

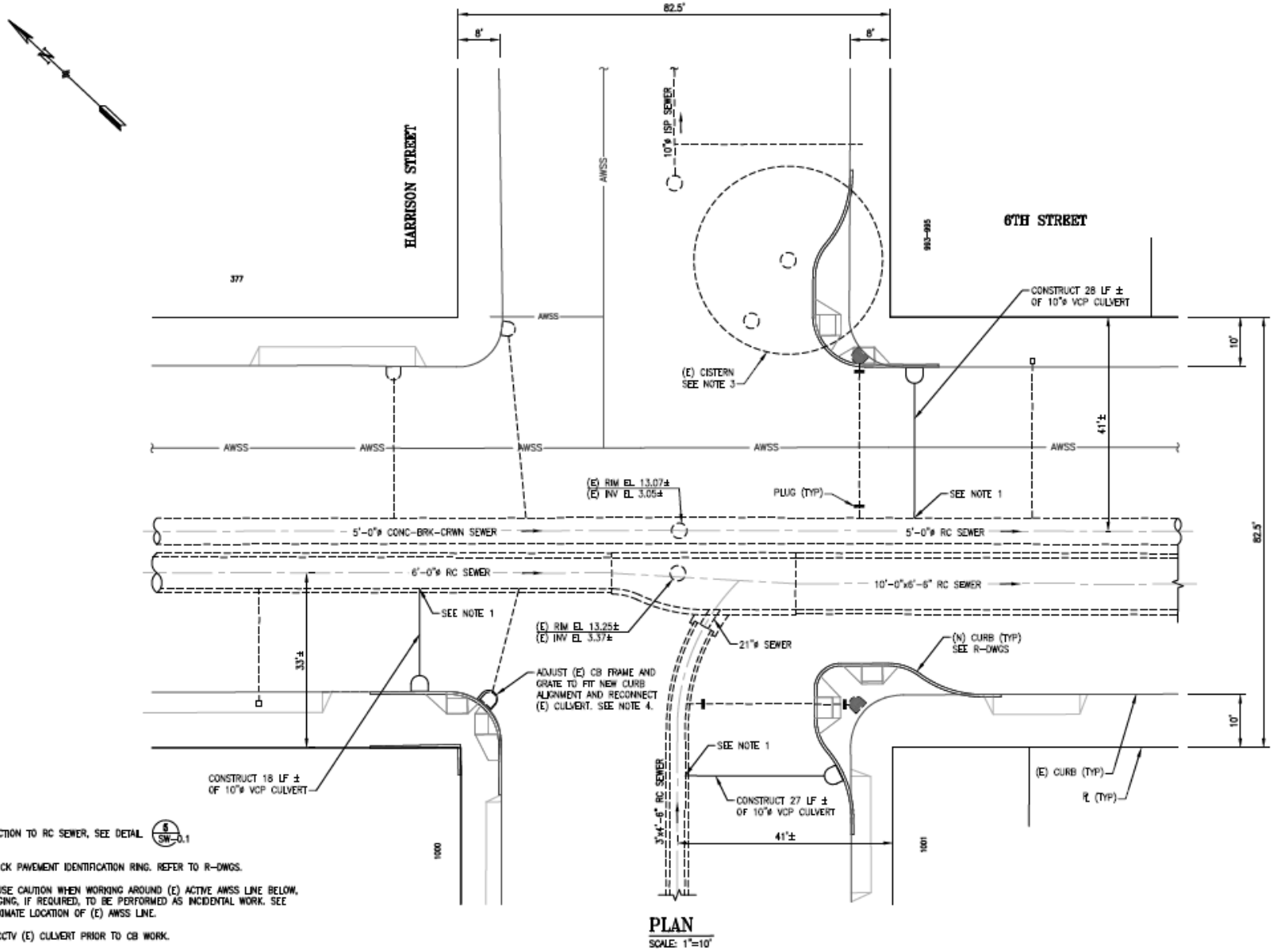
Reason for Modifications



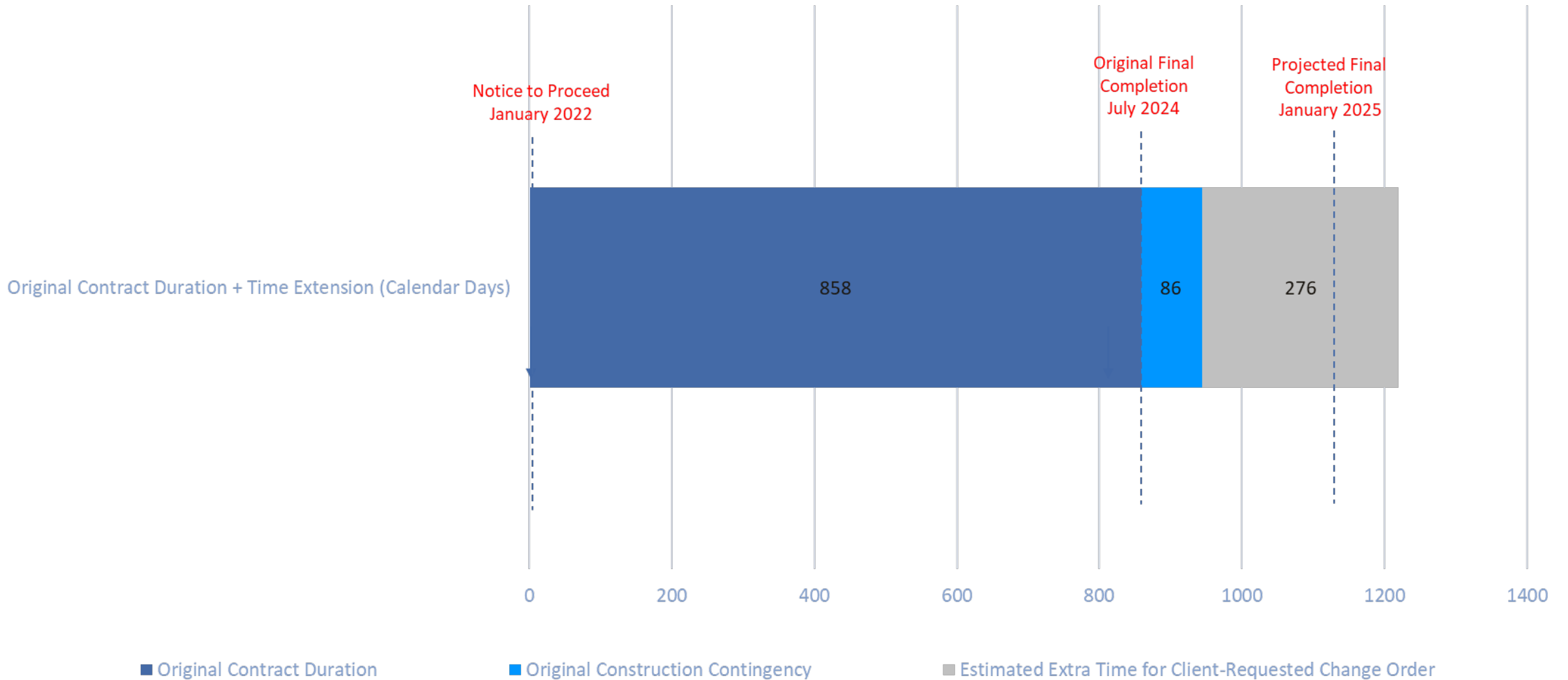
- NOTES:**
1. FOR CULVERT CONNECTION TO RC SEWER, SEE DETAIL 
 2. CONTRACTOR SHALL USE CAUTION WHEN WORKING AROUND (E) ACTIVE AWSS LINE BELOW, INCLUDING HAND-DIGGING, IF REQUIRED, TO BE PERFORMED AS INCIDENTAL WORK. SEE U-DWGS FOR APPROXIMATE LOCATION OF (E) AWSS LINE.

PLAN
SCALE: 1" = 10'

Reason for Modifications



Contract Schedule with Time Extension



6th Street Pedestrian Safety Project

Recommend Commission:

Approve a contract modification to increase the contract cost contingency by \$2,017,601.00 and contract duration contingency by 276 calendar days.

And Recommend Commission:

Authorize the Public Works Director to approve future contract modifications for a total contract cost of up to \$13,114,406.55 and a total contract duration of up to 1286 consecutive calendar days

Original Contract Amount:

\$10,088,005.05

Original Construction Duration:

918 consecutive calendar days

Contractor:

Esquivel Grading & Paving, Inc.

Reason:

Extending project limits to include two additional intersections of work



QUESTIONS



SAN FRANCISCO PLANNING DEPARTMENT

Final Negative Declaration

Date: August 30, 2017; amended on October 23, 2017 (deletions to the Preliminary Negative Declaration/Initial Study are shown in ~~striketrough~~ and additions are shown in double underline)

Case No.: **2014.1010E**

Project Title: **Sixth Street Pedestrian Safety Project**

Project Sponsor: Charles Ream
San Francisco Municipal Transportation Agency
Sustainable Street Division, Livable Streets Program
(415) 701-4695

Lead Agency: San Francisco Planning Department

Staff Contact: Christopher Espiritu - (415) 575-9022
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PROJECT DESCRIPTION:

The City's Vision Zero program sets forth the goal of eliminating all traffic-related fatalities in San Francisco by 2024. Program efforts identified the Sixth Street corridor as having the highest concentration of severe and fatal pedestrian injuries in the city. Between 2005 and 2009, pedestrian collision rates along the Sixth Street corridor were ranked among the highest in the city, with the Market Street/Sixth Street/Taylor Street/Golden Gate Avenue, Howard Street/Sixth Street, and Mission Street/Sixth Street intersections ranking first, second, and third, respectively, in the Civic Center and Tenderloin neighborhoods. Under the direction of the San Francisco Municipal Transportation Agency (the project sponsor), the Sixth Street Pedestrian Safety Project (proposed project) would implement multi-modal changes to Sixth Street between Market and Brannan Streets with the intent to improve safety and access for pedestrians, bicyclists, transit, and drivers. The primary safety goals of the proposed project are to:

- Calm motor vehicle traffic and reduce speed;
- Reduce pedestrian collisions;
- Improve pedestrian crossings at all intersections;
- Improve safety and comfort for people on bicycles; and
- Create a safe and inviting public space.

The proposed project features the removal of one northbound and one southbound vehicle travel lane from Market to Bryant Streets; sidewalk expansions and associated streetscape changes between Market and Howard Streets; the removal of peak-period tow-away lane designations between Howard and Brannan Streets; streetscape changes between Howard and Brannan Streets; new roadway striping introducing right-lane-must-turn-right restricted lanes, left-turn pockets, right-turn pockets, and a center turning lane at various locations; the installation of two new traffic signals; and upgrades to the traffic signal system. The proposed project would also establish northbound and southbound Class II bicycle lanes between

Market and Folsom Streets. In conjunction with changes to the traffic circulation patterns, corner bulb-outs and ADA-compliant curb ramps would be installed at all intersections between Market and Howard Streets (except on the south side of Howard Street) and at Folsom and Harrison Streets; raised crosswalks would be installed at the entrances to the alleys between Market and Howard Streets and at Clementina Street; new and replacement infill street trees (between Market and Howard Streets) would be planted; and other installments would include pedestrian-scale light fixtures, new trash receptacles, new bicycle racks, and landscaping in the street furniture zone and at corner bulb-outs.

Construction of the proposed project would take approximately 12 months, starting in fall 2018. Construction operations would likely be focused on one block at a time (e.g., Sixth Street between Market and Mission Streets), with durations for each block varying from a high of 8 to 10 weeks per block from Market to Howard Streets (to implement the more intensive streetscape changes proposed on those blocks) to a low of 4 to 6 weeks for less-intensive sections from Howard to Brannan Streets.

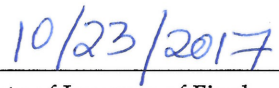
FINDING:

This project could not have a significant effect on the environment. This finding is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15064 (Determining Significant Effect), 15065 (Mandatory Findings of Significance), and 15070 (Decision to prepare a Negative Declaration), and the following reasons as documented in the Initial Evaluation (Initial Study) for the project, which is attached.

In the independent judgement of the Planning Department, there is no substantial evidence that the project could have a significant effect on the environment.



Lisa Gibson
Environmental Review Officer



Date of Issuance of Final
Negative Declaration

cc: Charles Ream, San Francisco Municipal Transportation Agency
Supervisor Jane Kim
Master Decision File
Distribution List

INITIAL STUDY TABLE OF CONTENTS

Sixth Street Pedestrian Safety Project

<u>Section</u>	<u>Page</u>
ACRONYMS AND ABBREVIATIONS	III
A. PROJECT DESCRIPTION	1
B. PROJECT SETTING	35
C. COMPATIBILITY WITH EXISTING ZONING AND PLANS	52
D. SUMMARY OF ENVIRONMENTAL EFFECTS	54
E. EVALUATION OF ENVIRONMENTAL EFFECTS	56
E.1. LAND USE AND LAND USE PLANNING— Would the project:.....	56
E.2. AESTHETICS—Would the project:.....	59
E.3. POPULATION AND HOUSING— Would the project:	65
E.4. CULTURAL RESOURCES—Would the project:.....	67
E.5. TRANSPORTATION AND CIRCULATION— Would the project:.....	77
E.6. NOISE—Would the project:.....	102
E.7. AIR QUALITY—Would the project:	121
E.8. GREENHOUSE GAS EMISSIONS— Would the project:	137
E.9. WIND AND SHADOW—Would the project:.....	144
E.10.RECREATION—Would the project:	147
E.11.UTILITIES AND SERVICE SYSTEMS— Would the project:	151
E.12.PUBLIC SERVICES— Would the project:.....	158
E.13.BIOLOGICAL RESOURCES— Would the project:	164
E.14.GEOLOGY AND SOILS— Would the project:.....	168
E.15.HYDROLOGY AND WATER QUALITY— Would the project:	176
E.16.HAZARDS AND HAZARDOUS MATERIALS— Would the project:	184
E.17.MINERAL AND ENERGY RESOURCES—Would the project:	199
E.18.AGRICULTURE AND FOREST RESOURCES:	202
E.19.MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:.....	203
F. MITIGATION MEASURES AND IMPROVEMENT MEASURES	205
G. PUBLIC NOTICE AND COMMENT	206
H. DETERMINATION	207
I. INITIAL STUDY PREPARERS	208

<u>List of Figures</u>	<u>Page</u>
Figure 1: Project Location	3
Figure 2: Market Street to Howard Street – Existing and Proposed Street Sections (Looking South)7	7
Figure 3: Howard Street to Folsom Street – Existing and Proposed Street Sections (Looking South).....	8
Figure 4: Folsom Street to Bryant Street – Existing and Proposed Street Sections (Looking South)..9	9
Figure 5: Bryant Street to Brannan Street – Existing and Proposed Street Sections (Looking South).....	10
Figure 6: Existing Pedestrian Hazards.....	12
Figure 7: Existing Bicycle Facilities.....	13
Figure 8: Existing Transit Facilities.....	16
Figure 9: Proposed Project Features (Market to Howard Streets)	21
Figure 10: Proposed Project Features (Howard to Harrison Streets).....	22
Figure 11: Proposed Project Features (Harrison to Brannan Streets).....	23
Figure 12: Cumulative Projects.....	45
Figure 13: Background Noise Levels	108
Figure 14: San Francisco Land Use Compatibility Chart for Community Noise.....	109

<u>List of Tables</u>	<u>Page</u>
Table 1: Existing Turn Restrictions along Sixth Street.....	14
Table 2: Existing Parking Supply along Sixth Street	17
Table 3: Existing Loading Supply along Sixth Street	19
Table 4: Proposed Parking Supply along Sixth Street	30
Table 5: Proposed Loading Supply along Sixth Street	32
Table 6: Cumulative Projects in the Project Vicinity.....	42
Table 7: Summary of Parking and Loading Occupancy with Implementation of the Proposed Project.....	88
Table 8: Typical Sound Levels Measured in the Environment	105
Table 9: Typical Construction Noise Levels	111
Table 10: Vibration Levels for Construction Equipment.....	113
Table 11: Summary of Existing and Existing Plus Project Traffic Noise Levels	115
Table 12: Summary of Cumulative Traffic Noise Levels.....	119
Table 13: Criteria Air Pollutant Significance Thresholds	123
Table 14: Estimated Average Daily Construction Emissions.....	131
Table 15: Estimated Average Daily Regional Emissions under Existing Conditions	133
Table 16: Estimated Average Daily Regional Emissions under Cumulative (2040) Conditions	136
Table 17: Sea Level Rise Estimates for San Francisco Bay Relative to the Year 2000	181
Table 18: Summary of Permitted Hazardous Materials Uses.....	189
Table 19: Fuel-Related and Identified Historic Hazardous Material Use Sites.....	190
Table 20: Environmental Cases	193

ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
AIRS	Aerometric Information Retrieval System
ALS	advanced life support
APEZ	Air Pollutant Exposure Zone
ARB	Air Resources Board
AWSS	auxiliary water supply system
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
<i>Better Streets Plan</i>	<i>San Francisco Better Streets Plan</i>
bgs	below ground surface
BLS	basic life support
Blue Book	<i>Parking and Traffic Regulations for Working in San Francisco Streets</i>
BMPs	best management practices
BMSP	Better Market Street Project
BSM	Bureau of Street Use and Mapping
C-3-G	Downtown General Commercial (zoning district)
C-3-S	Downtown Support Commercial (zoning district)
CalEEMod	California Emissions Estimator Model
California EPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CCA	Clean Air Act
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFG Code	California Fish and Game Code
CHMIRS	California Hazardous Material Incident Report System
City	City and County of San Francisco
CMP	Congestion Management Program
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
CSO	combined sewer overflow
dB	decibel
dBA	decibel (A-weighted)
DBI	Department of Building Inspection
DEM	digital elevation model
DPH	Department of Public Health
DPM	diesel particulate matter
DPR	Department of Park and Recreation
DTSC	Department of Toxic Substances Control
ECHO	Enforcement & Compliance History Information

EIR	Environmental Impact Report
EMI	Emissions Inventory Data
EO	Executive Order
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FFIS	Federal Facilities Information System
FHWA	Federal Highway Administration
FINDS	Facility Index System/Facility Registry System
ft/sec	feet per second
FTA	Federal Transit Administration
FURS	Federal Underground Injection Control
g	gravity
<i>General Plan</i>	<i>San Francisco General Plan</i>
GHG	greenhouse gas
gsf	gross square feet
HCM	Highway Capacity Manual
in/sec	inches per second
I-80	Interstate 80
I-280	Interstate 280
IPCC	Intergovernmental Panel on Climate Change
LEED	Leadership in Energy and Environmental Design
LiDAR	Light Detection and Ranging
LOS	Level of Service
LPI	Leading Pedestrian Interval
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
mg/kg	milligram per kilogram
mg/L	milligram per liter
MHHW	Mean Higher High Water
Mid-Market Height District	Mid-Market Arts and Arts Education Special Height District
Mid-Market SUD	Mid-Market Arts and Arts Education Special Use District
mph	miles per hour
MRZ-4	Mineral Resource Zone 4
MSTL District	Market Street Theatre and Loft National Register Historic District
MSW	municipal solid waste
MTCO ₂ E	metric tons of carbon dioxide equivalents
MTS	Metropolitan Transportation System
MUG	Mixed Use-General (zoning district)
Muni	San Francisco Municipal Railway
MUR	Mixed Use-Residential (zoning district)
Mw	moment magnitude
NAVD88	1988 North American Vertical Datum
NCT	Neighborhood Commercial Transit (zoning district)
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NFRAP	No Further Action Planned
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
NOP	Notice of Preparation

NPDES	National Pollutant Discharge Elimination System
NRC	National Research Council
NRHP	National Register of Historic Places
NSR	New Source Review
OCII	Office of Community Investment and Infrastructure
OPR	Office of Planning and Research
P	Public (zoning district)
PAHs	polynuclear aromatic hydrocarbons
PCBs	polychlorinated biphenyls
PCS	Permit Compliance System
PDR	production, distribution, and repair
PG&E	Pacific Gas & Electric
Planning Code	San Francisco Planning Code
PM	particulate matter
PM _{2.5}	“fine” particulate matter (made of particulates that are 2.5 microns or less in diameter)
PM ₁₀	“coarse” particulate matter (made of particulates that are 10 microns or less in diameter)
ppm	parts per million
PPV	peak particle velocity
proposed project	Sixth Street Pedestrian Safety Project
RCRA	Resource Conservation and Recovery Act
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SALI	Service/Arts/Light Industrial (zoning district)
SFBAAB	San Francisco Bay Area Air Basin
SFCTA	San Francisco County Transportation Authority
SFD	San Francisco City Datum
SFFD	San Francisco Fire Department
SFMTA	San Francisco Municipal Transportation Agency
SFPD	San Francisco Police Department
SFPUC	San Francisco Public Utilities Commission
SFPW	San Francisco Public Works
SFRPD	San Francisco Recreation and Park Department
SFUSD	San Francisco Unified School District
SMP	site mitigation plan
SO ₂	sulfur dioxide
SoMa	South of Market
SQG	Small Quantity Generator
SRO	single room occupancy
STLC	soluble threshold limit concentration
SUD	Special Use District
TACs	toxic air contaminants
TASC	Transportation Advisory Staff Committee
TCLP	toxicity characteristic leaching procedure
TDM	Transportation Demand Management
TIS	Transportation Impact Study
TSDF	Treatment, Storage, and Disposal Facility
TSP	Transportation Sustainability Program

TTLC	total threshold limit concentration
UCMP	University of California Museum of Paleontology
U.S. 101	U.S. Highway 101
US EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VDECS	Verified Diesel Emissions Control Strategies
VMT	vehicle miles traveled

Initial Study
Sixth Street Pedestrian Safety Project
Planning Department Case File No. 2014.1010E

A. PROJECT DESCRIPTION

Introduction

The Sixth Street Pedestrian Safety Project (proposed project) is intended to make multi-modal changes to Sixth Street between Market and Brannan Streets to improve safety and access for pedestrians, bicyclists, and transit as well as drivers. The proposed project consists of a variety of changes to the Sixth Street corridor that are proposed by the project sponsor, the San Francisco Municipal Transportation Agency (SFMTA). The proposed changes include:

- A reduction in the number of vehicle travel lanes on Sixth Street between Market and Bryant Streets (from four lanes to two lanes – a reduction of one lane in each direction);
- The widening of the sidewalks on both sides of Sixth Street between Market and Howard Streets from the current width of 11.5 feet to a new width of 15.5 feet on the east side and from the current width of 12 feet to a new width of 16 feet on the west side;
- The installation of new curb bulb-outs at all Sixth Street intersections between Market and Howard Streets (except on the south side of Howard Street) and at Folsom and Harrison Streets;
- The installation of raised crosswalks at the alley entrances along Sixth Street between Market and Howard Streets and at Clementina Street;
- The installation of new traffic signals on Sixth Street at Stevenson and Natoma Streets, including new crosswalks across Sixth Street;
- The striping of a new crosswalk across Sixth Street at the north leg of the intersection of Sixth and Minna Streets (a crosswalk across the south leg is currently provided at this signalized intersection);
- The establishment of new bicycle lanes on both sides of Sixth Street between Market and Folsom Streets;
- The removal of peak-period tow-away lane designations on Sixth Street between Howard and Brannan Streets and restoration of full-time parking;
- The application of new roadway striping at various locations along Sixth Street, as described under “Roadway Changes” starting on p. 24;
- The incorporation of signal timing modifications at various locations along Sixth Street, as described under “Traffic Signalization” starting on p. 25; and
- The installation of streetscape changes along and near Sixth Street such as street trees, pedestrian-scale lighting fixtures, and other streetscape components (e.g., fire hydrants and bicycle racks).

The Sixth Street corridor is shown on Figure 1: Project Location. The proposed project's background, existing conditions on the Sixth Street corridor, and the specific features of the proposed project are described in detail in the sections that follow.

Background

On December 20, 2010, the Mayor issued Executive Directive 10-03 - Pedestrian Safety in San Francisco, which called on the City and County of San Francisco (City) to reduce fatal and serious injuries to pedestrians by 25 percent by 2016 and 50 percent by 2021 (compared to a 2008 baseline), to reduce pedestrian injury inequities among neighborhoods, to increase walking trips, to develop an interagency pedestrian strategy with measurable goals, and to identify funding sources for implementation for the mid- and long-term planning horizons. This directive resulted in the development of an existing conditions report through the City's WalkFirst pedestrian safety initiative, an interagency collaboration among the San Francisco Planning Department, the San Francisco Department of Public Health (DPH), the SFMTA, and the San Francisco County Transportation Authority (SFCTA). This effort also resulted in the development of the San Francisco Pedestrian Strategy (April 2013) and the Pedestrian Safety Capital Improvement Program, a set of high-priority projects and programs identified for implementation over a five-year cycle to address pedestrian safety issues on the City's High Injury Network – streets and intersections that represent just 6 percent of San Francisco's street miles but account for 60 percent of severe and fatal injuries.

The proposed project was developed in response to recommendations from the City's WalkFirst pedestrian safety initiative, which identified the Sixth Street corridor as having the highest concentration of severe and fatal pedestrian injuries in the city. Between 2005 and 2009, pedestrian collision rates along the Sixth Street corridor were ranked among the highest in the city, with the Market Street/Sixth Street/Taylor Street/Golden Gate Avenue, Howard Street/Sixth Street, and Mission Street/Sixth Street intersections ranking first, second, and third, respectively, in the Civic Center and Tenderloin neighborhoods.¹

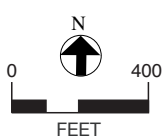
The proposed project represents the latest in a series of pedestrian safety improvements and community enhancements in and around the Sixth Street corridor, most of which were identified and funded through the Redevelopment Plan for the South of Market Redevelopment Project Area, as amended in December 2005.² The proposed project would further these previous efforts to enhance pedestrian safety along and near Sixth Street.

¹ San Francisco Municipal Transportation Agency (SFMTA), *6th Street Improvements Community Meeting #1*, February 19, 2013. Available online at <http://sfmta.com/sites/default/files/projects/6thStreetImprovementMeeting1.pdf>. Accessed May 12, 2016.

² City and County of San Francisco Office of Community Investment and Infrastructure, *South of Market Redevelopment Plan Area and South-of-Market Alleyways Improvement Project*. Available online at <http://sfocii.org/south-market>. Accessed May 12, 2016.



SOURCE: SWCA/Turnstone Consulting



- Project Corridor
- Elevated Freeway
- Freeway On/Off-ramps
- Parks
- Transit Stop
- Market Street Theatre and Loft Historic District
- Sixth Street Lodginghouse Historic District

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 1: PROJECT LOCATION

Project Location

The project site encompasses the 82.5-foot-wide public right-of-way, including the street and sidewalks, along the entire length of Sixth Street between Market and Brannan Streets, extending from one parcel property line to the facing parcel property line across Sixth Street. The project site extends approximately 0.7 mile (or six blocks) from the southern edge of San Francisco's Downtown/Civic Center neighborhood on the north side of Market Street through the South of Market (SoMa) neighborhood to Brannan Street and the Interstate 280 (I-280) on- and off-ramps (see Figure 1 on p. 3). As shown on Figure 1, the block structures to the north and south of Market Street are defined by offset street grids, where the streets south of Market Street do not directly align with the streets north of Market Street. Streets in SoMa are generally parallel or perpendicular to Market Street, which is oriented at approximately 44 degrees off true north. However, in this document streets parallel to Market Street are generally described as "east-west" streets, while streets perpendicular to Market Street are generally described as "north-south" streets.

The topography of the Sixth Street corridor and surrounding area is relatively flat. There is a slight north-to-south slope from approximately 30 feet San Francisco City Datum (SFD) in the north near Market Street to approximately -5 feet SFD at Sixth and Brannan Streets on the south.³

Sixth Street is a north-south Major Arterial with two travel lanes in each direction and on-street parking on both sides of the street.⁴ It is designated a Neighborhood Commercial Street between Market and Folsom Streets and the *San Francisco General Plan (General Plan)* indicates that walking, bicycling, and mass transit should be given priority.⁵ It serves as a connector to various San Francisco neighborhoods, including the Civic Center/Tenderloin, Downtown, Eastern SoMa, and Western SoMa, and is used as a route for I-280 traffic with northbound and southbound drivers entering or exiting the freeway at the Sixth Street on- and off-ramps at Brannan Street. The Sixth Street corridor does not have any overhead wires and related transit infrastructure or dedicated bicycle facilities. Except for Market Street (between Franklin and Steuart Streets) and Mission Street, which are classified as Transit Conflict Streets and Primary Transit Streets- Transit Oriented in the *General Plan*, the major east-west streets between Market Street and the I-280 on- and off-ramps – Howard, Folsom, Harrison, Bryant, and Brannan Streets – are classified as Major

³ San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 11.35 feet above the 1988 North American Vertical Datum.

⁴ City and County of San Francisco, *San Francisco General Plan*, Transportation Element, Map 6: Vehicular Street Map and Table 1: Classification of Elements in Vehicle Circulation Plan. Major Arterials are cross-town thoroughfares whose primary function is to link districts within the city and to distribute traffic from and to the freeways; these are routes generally of citywide significance and of varying capacity depending on the travel demand for the specific direction and adjacent land uses.

⁵ City and County of San Francisco, *San Francisco General Plan*, Transportation Element, Map 12: Neighborhood Pedestrian Streets and Table 6: Pedestrian Network Streets and Design Guidelines.

Arterials.⁶ In addition, the *San Francisco Better Streets Plan (Better Streets Plan)* identifies Market Street as a Ceremonial (Civic) Street.⁷ The minor east-west streets between Market and Brannan Streets – Stevenson, Jessie, Minna, Natoma, Tehama, Clementina, Shipley, and Clara Streets and Ahern Way – are classified as Local Streets in the *General Plan* but are generally called alleys in City documents such as the *Downtown Streetscape Plan*.⁸ These SoMa alleys are narrower than the surrounding streets, carry limited traffic, and serve various land uses on the interior of the blocks as well as functioning as service alleys for properties with frontages along Market, Mission, and Howard Streets.

Existing Conditions

Sixth Street is surrounded by various urban land uses including residential, commercial, retail, and light industrial uses. The northern portion of the corridor is characterized by mid- to high-rise buildings (up to 15 stories), while the middle and southern portions are characterized by low- to mid-rise buildings (predominately two to four stories). Sixth Street extends through the East SoMa Area Plan (part of the Eastern Neighborhoods Area Plans) and Western SoMa Area Plan areas and serves as the western boundary of the Central SoMa Plan Area.⁹ The Sixth Street corridor contains a mix of zoning districts including Downtown General Commercial (C-3-G), Downtown Support Commercial (C-3-S), SoMa Neighborhood Commercial Transit (NCT), Mixed Use-Residential (MUR), Public (P), Mixed Use-General (MUG), and Service/Arts/Light Industrial (SALD). Portions of the Sixth Street corridor are also within the SoMa Youth and Family Special Use District, the Market Street Theatre and Loft National Register Historic District (MSTL District), the Sixth Street Lodginghouse Historic District, and the SoMa Pilipinas-Filipino Cultural Heritage District.

⁶ City and County of San Francisco, *San Francisco General Plan*, Transportation Element, Map 6: Vehicular Street Map and Table 1: Classification of Elements in Vehicle Circulation Plan. Transit Conflict Streets are streets with a primary transit function that are not classified as major arterials but experience significant conflicts with automobile traffic. Map 9: Transit Preferential Streets and Table 4: Transit Preferential Street Classification System. Primary Transit Streets - Transit Oriented are not major arterials and exhibit either high transit ridership, high frequency of service, or surface rail.

⁷ City and County of San Francisco, *San Francisco Better Streets Plan*, December 7, 2010, Chapter 6: Streetscape Elements. Available online at http://www.sf-planning.org/ftp/BetterStreets/docs/FINAL_6_Streetscape_Elements.pdf. Accessed January 20, 2016.

⁸ City and County of San Francisco, *San Francisco General Plan*, Transportation Element, Table 1 Classification of Elements in Vehicle Circulation Plan. Local streets are all other streets intended for access to abutting residential and other land uses, rather than for through traffic; generally of lowest capacity.

⁹ The Central SoMa Plan was formerly called the Central Corridor Plan. Some of the Central SoMa Plan's proposed street improvements would extend west of Sixth Street. More information regarding this planning effort is available on the Planning Department web site for the Central SoMa Plan: <http://www.sf-planning.org/index.aspx?page=2557>. Accessed December 21, 2015.

The description of existing conditions presented below is organized by the type of feature, as follows: public right-of-way, including roadway alignment, parking lanes, travel lanes, and sidewalks; bicycle facilities; transit; on-street parking; on-street loading; and streetscape features, including street trees, bicycle racks, and street lights.

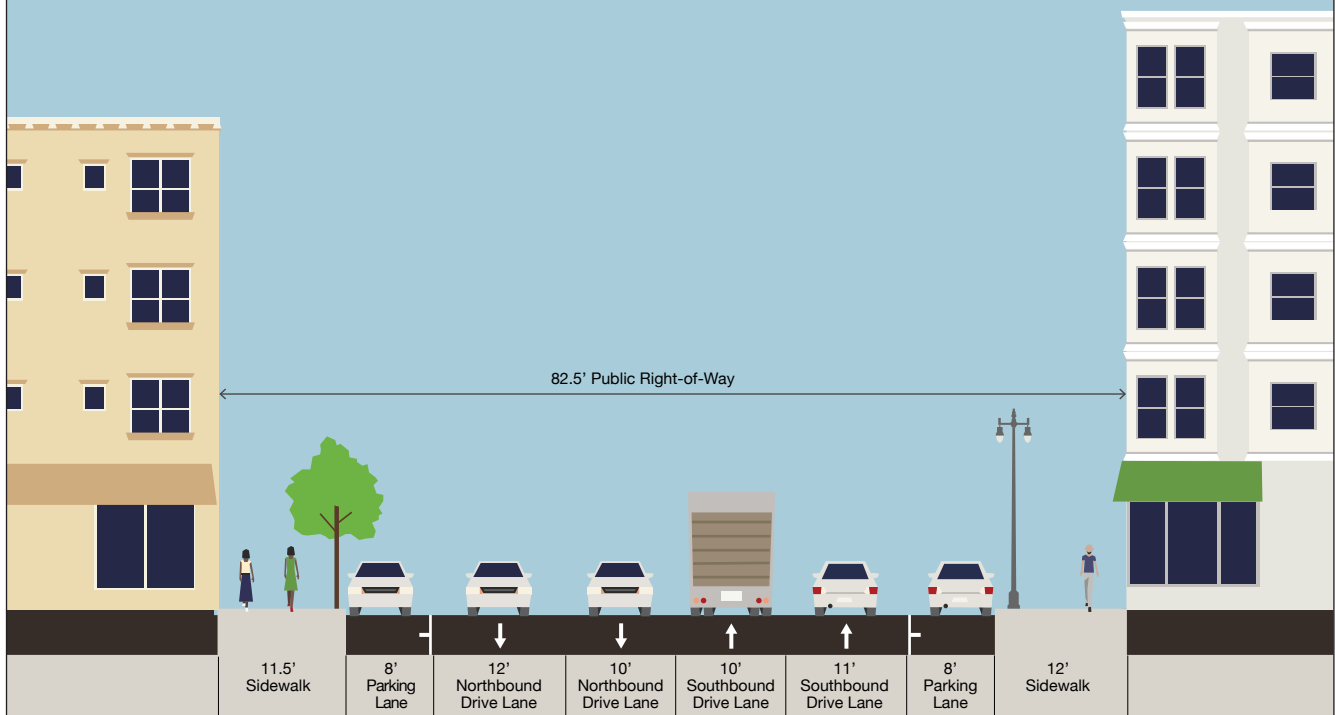
Public Right-of-Way

The Sixth Street corridor consists of four northbound and southbound travel lanes (two in each direction) with parallel parking lanes and sidewalks on each side of the street. Between Market and Howard Streets, the Sixth Street public right-of-way is 82.5 feet wide. The curb-to-curb right-of-way is 59 feet with (from east to west) an 8-foot-wide parking lane, a 12-foot-wide travel lane, two 10-foot-wide travel lanes, an 11-foot-wide travel lane, and an 8-foot-wide parking lane. The sidewalk widths on the east and west sides of the street are 11.5 feet and 12 feet, respectively. See Figure 2: Market Street to Howard Street – Existing and Proposed Street Sections (Looking South). There are existing curb bulb-outs at the northwest corners of the Mission Street/Sixth Street intersection and the Howard Street/Sixth Street intersection.

Between Howard and Brannan Streets, the public right-of-way is 82.5 feet wide with a curb-to-curb right-of-way of 62.5 feet and 10-foot-wide sidewalks on each side of the street. The curb-to-curb right-of-way includes (from east to west) a 10.5-foot-wide parking/travel lane, a 10-foot-wide travel lane, two 10.75-foot-wide travel lanes, a 10-foot-wide travel lane, and a 10.5-foot-wide parking/travel lane. There are existing curb bulb-outs at the northwest and southwest corners of the Folsom Street/Sixth Street intersection. Between Howard and Folsom Streets, the westernmost parking lane, starting 300 feet south of the Howard Street/Sixth Street intersection, is designated as a peak-period tow-away lane from 7 to 9 a.m. and from 3 to 7 p.m. See Figure 3: Howard Street to Folsom Street – Existing and Proposed Street Sections (Looking South). Between Folsom and Brannan Streets, the parking lanes on each side of the street are designated as peak-period tow-away lanes from 7 to 9 a.m. and from 3 to 7 p.m. See Figure 4: Folsom Street to Bryant Street – Existing and Proposed Street Sections (Looking South), and Figure 5: Bryant Street to Brannan Street – Existing and Proposed Street Sections (Looking South).

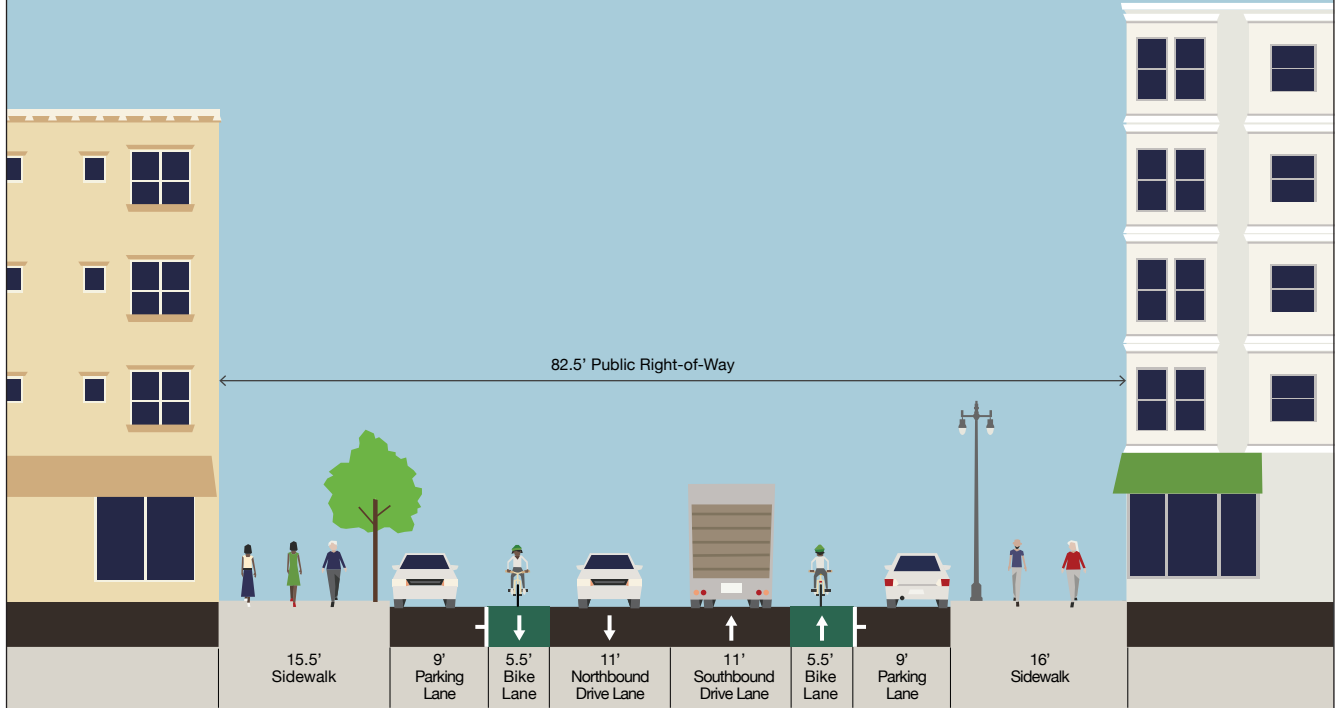
The Sixth Street corridor features eight signalized intersections at Market, Mission, Minna, Howard, Folsom, Harrison, Bryant, and Brannan Streets. Between Market and Bryant Streets, there are nine alleys: Stevenson, Jessie, Minna, Natoma, Tehama, Clementina, Shipley, and Clara Streets and Ahern Way. Except for Minna Street, each of these intersections is unsignalized. The alleys between Market and Howard Streets – Stevenson, Jessie, Minna, and Natoma Streets – are four-legged intersections, while the alleys between Howard and Bryant Streets – Tehama, Clementina, Shipley, and Clara Streets and Ahern Way – are three-legged intersections (or T-intersections).

MARKET STREET TO HOWARD STREET



Existing Street Section (Looking South)

MARKET STREET TO HOWARD STREET



Proposed Street Section (Looking South)

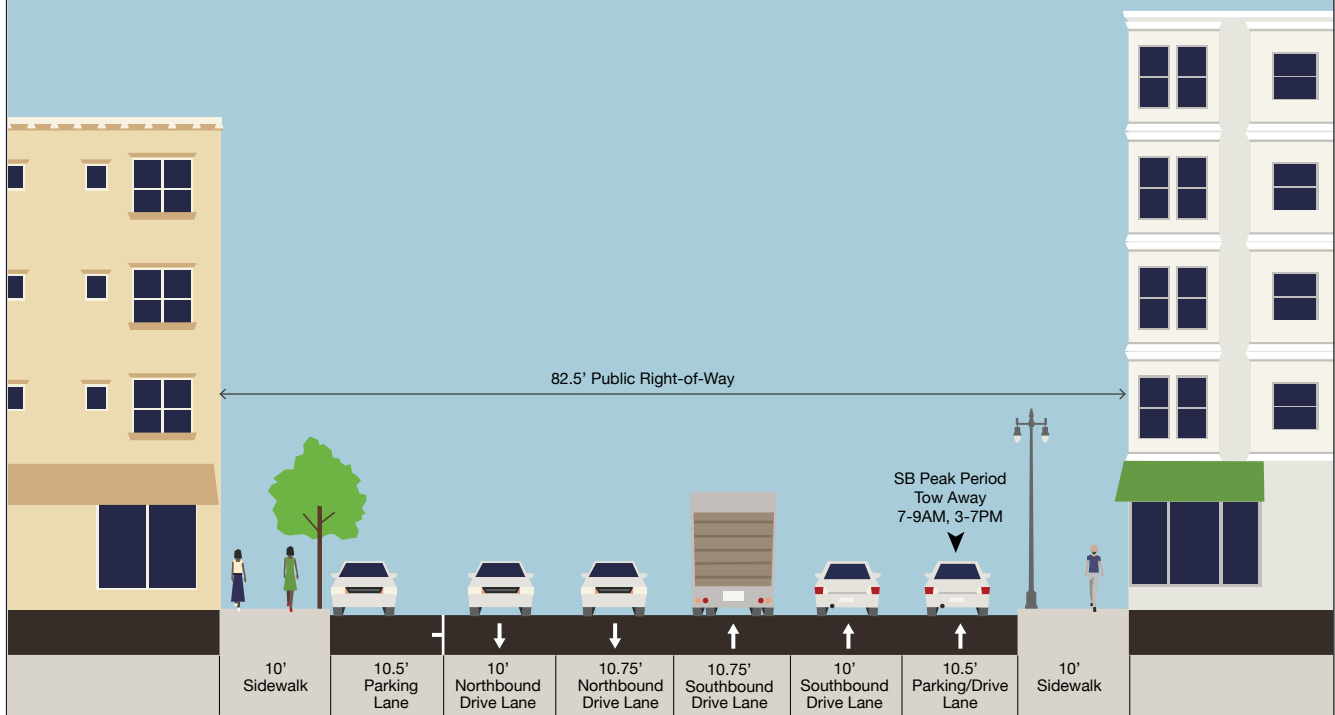
SOURCE: SFMTA; SWCA/Turnstone Consulting

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

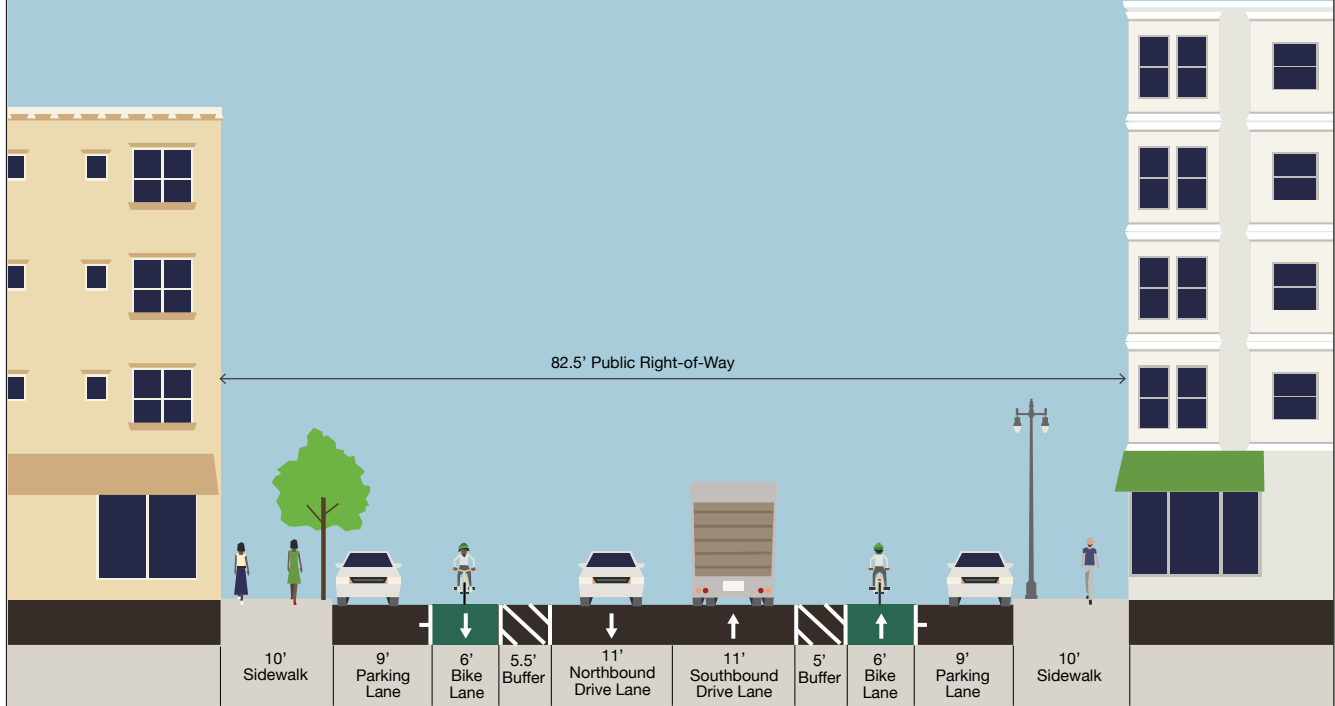
FIGURE 2: MARKET STREET TO HOWARD STREET - EXISTING AND PROPOSED STREET SECTIONS (LOOKING SOUTH)

HOWARD STREET TO FOLSOM STREET



Existing Street Section (Looking South)

HOWARD STREET TO FOLSOM STREET



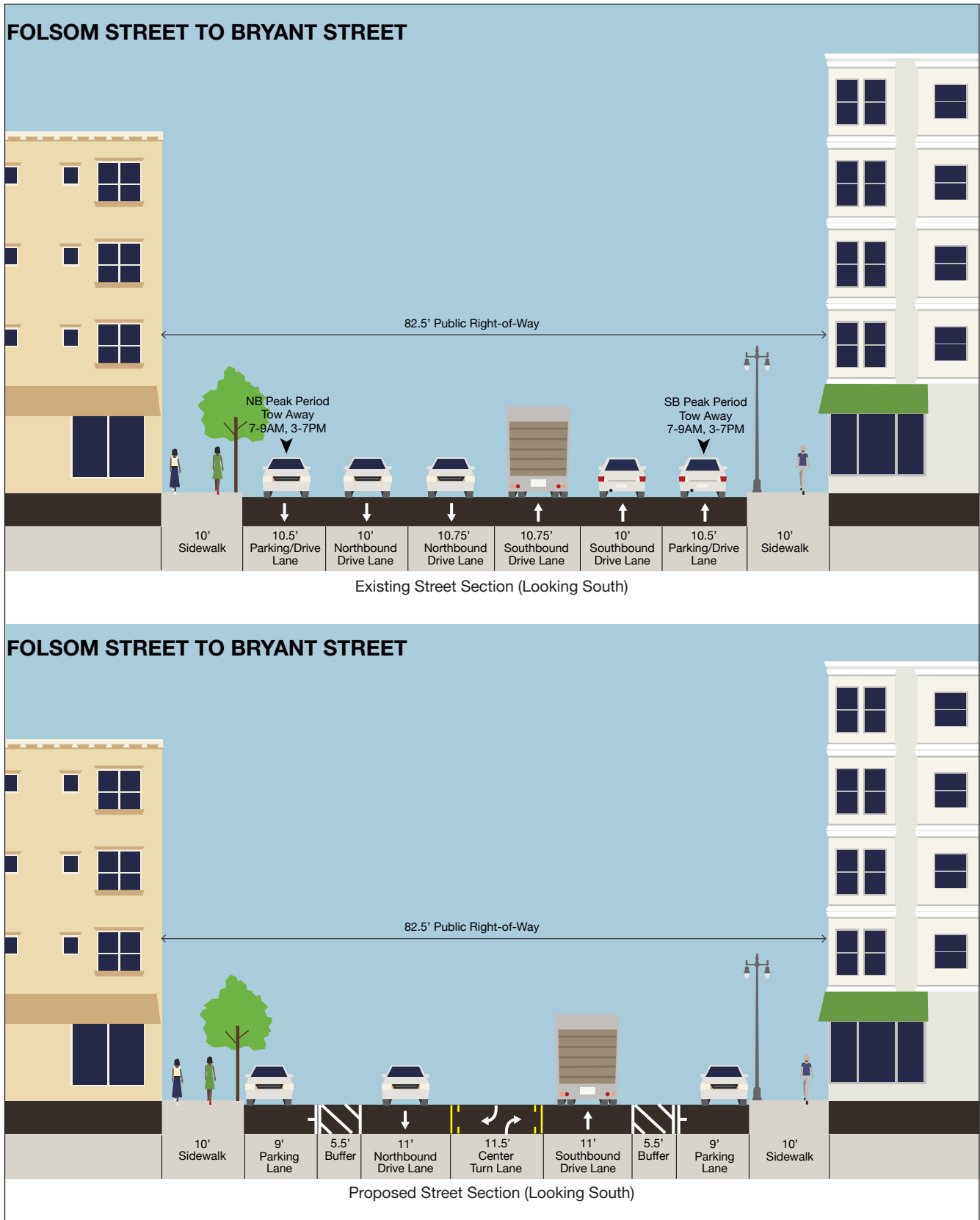
Proposed Street Section (Looking South)

SOURCE: SFMTA; SWCA/Turnstone Consulting

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 3: HOWARD STREET TO FOLSOM STREET - EXISTING AND PROPOSED STREET SECTIONS (LOOKING SOUTH)



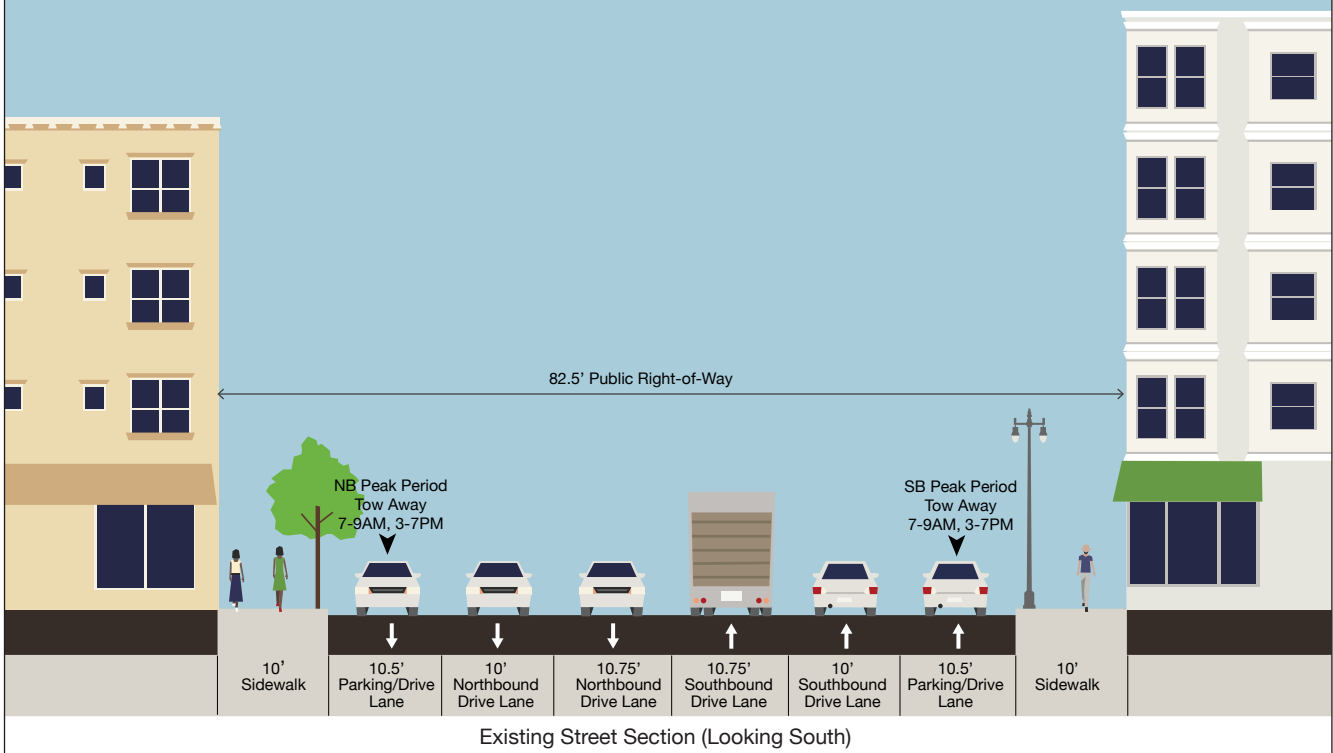
SOURCE: SFMTA; SWCA/Turnstone Consulting

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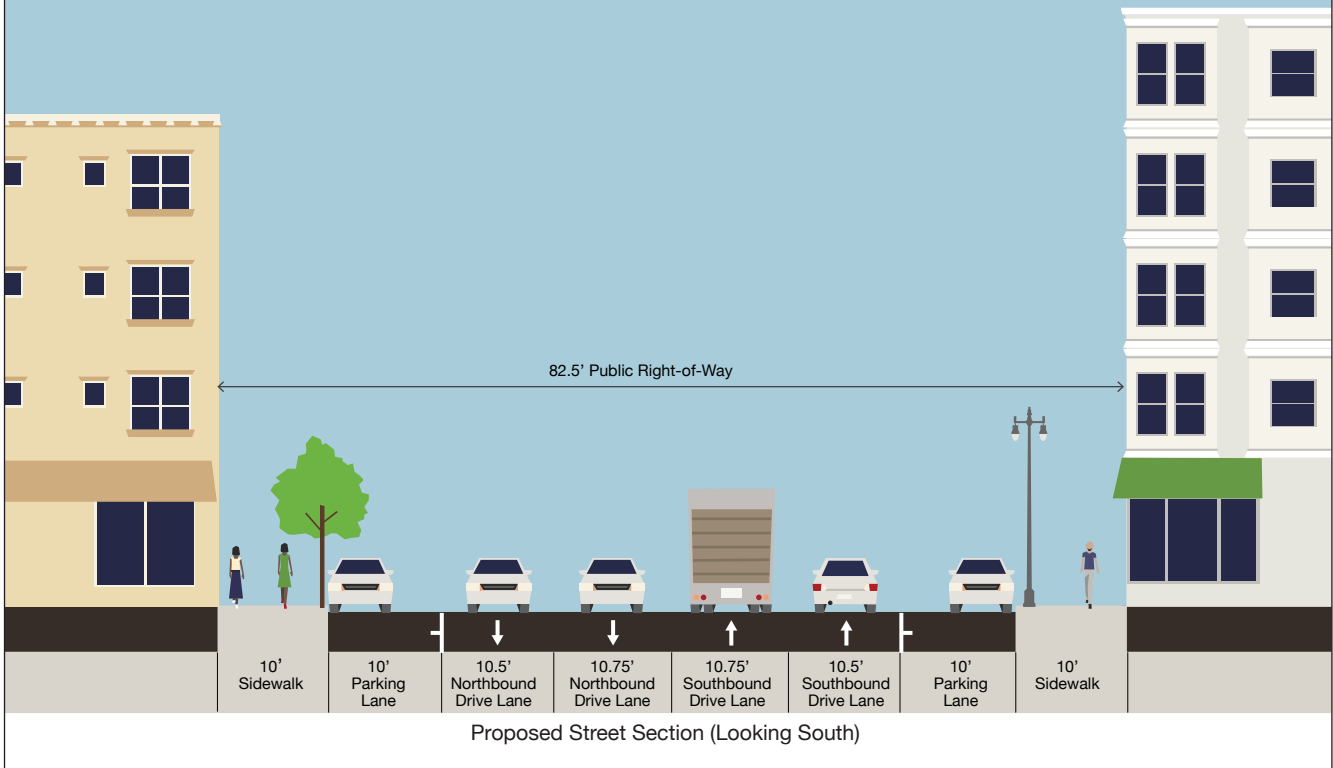
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FIGURE 4: FOLSOM STREET TO BRYANT STREET - EXISTING AND PROPOSED STREET SECTIONS (LOOKING SOUTH)

BRYANT STREET TO BRANNAN STREET



BRYANT STREET TO BRANNAN STREET



SOURCE: SFMTA; SWCA/Turnstone Consulting

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 5: BRYANT STREET TO BRANNAN STREET - EXISTING AND PROPOSED STREET SECTIONS (LOOKING SOUTH)

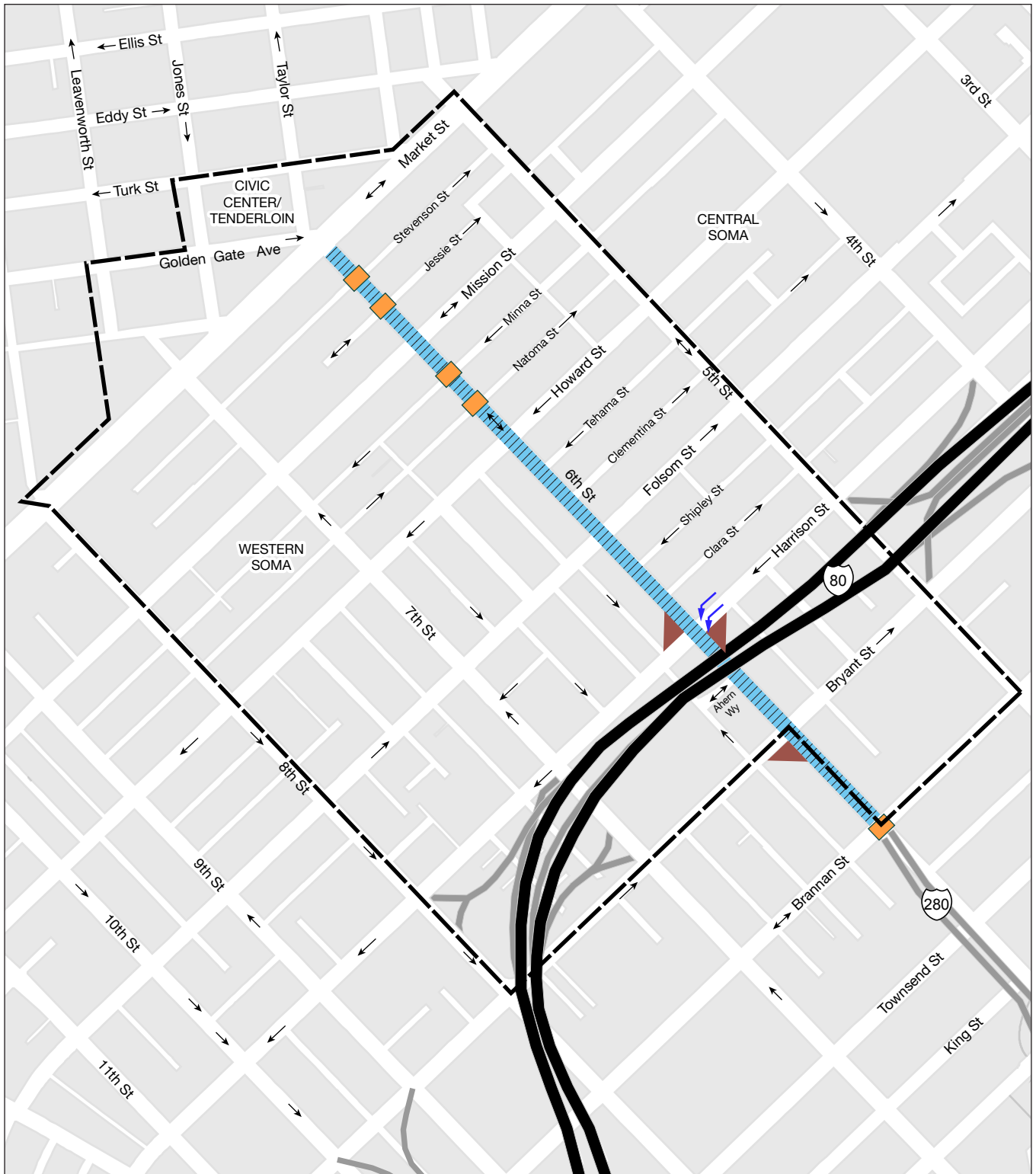
There is a crosswalk at Minna Street (crossing Sixth Street on the south side of the intersection), and there are raised crosswalks crossing Natoma Street (east side only) and Tehama, Shipley, and Clara Streets. Leading Pedestrian Intervals (LPIs) are provided at Mission Street (south- and north-side crosswalks), Minna Street (south-side crosswalk), Howard Street (all crosswalks), Folsom Street (south- and north-side crosswalks), and Harrison Street (south- and north-side crosswalks). LPIs typically give pedestrians a three- to five-second head start when entering an intersection, with a corresponding green signal in the same direction of travel. They also enhance the visibility of pedestrians in the intersection and reinforce their right-of-way over turning vehicles, especially in locations with a history of conflict. See Figure 6: Existing Pedestrian Hazards for locations where curb ramps and crosswalks are currently missing and for intersections with multiple turn lanes.

Existing turn restrictions along the Sixth Street corridor are identified in Table 1: Existing Turn Restrictions along Sixth Street, below on p. 14. There are no left-turn or right-turn vehicle pockets on Sixth Street, except for a northbound right-turn pocket at Folsom Street.

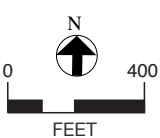
Bicycle Facilities

The Sixth Street corridor does not include any pavement markings or dedicated bicycle facilities;¹⁰ however, several citywide bicycle routes connect to, parallel, or intersect with Sixth Street (see Figure 7: Existing Bicycle Facilities). A separated, one-way Class II bikeway runs southeast on Golden Gate Avenue between Polk and Market Streets. A Class III bikeway (shared travel lane and sharrows) runs east-west on McAllister Street between Market Street and Masonic Avenue. A Class II/III bikeway runs east-west on Market Street between The Embarcadero and Twin Peaks and consists of dedicated bicycle lanes and green-painted sharrows in shared travel lanes. It runs as a Class III bikeway (shared travel lane and sharrows) east of Eighth Street and as a Class II and separated Class II bikeway (bicycle lane) west of Eighth Street. A Class II bikeway runs east-west in separated bicycle lanes on Howard Street (westbound) and Folsom Street (eastbound) and forms a bicycle network couplet from The Embarcadero to 11th Street. A Class III bikeway runs north-south on Fifth Street between Market and Townsend Streets and includes green-painted sharrows. A Class II bikeway runs north-south in bicycle lanes on Seventh Street (northbound) and Eighth Street (southbound with a buffer) and forms a bicycle network couplet between Market and Townsend Streets.

¹⁰ Bikeways are typically classified as Class I, Class II, Class III, or Class IV facilities. Class I bikeways are bicycle paths with exclusive right-of-way for use by bicyclists. Class II bikeways are bicycle lanes striped within the paved areas of roadways and established for the preferential use of bicycles, while Class III bikeways are signed bicycle routes that allow bicycles to share the travel lane with vehicles. Class IV bikeways are separated from vehicular traffic by grade separation, flexible posts, inflexible physical barriers, or on-street parking. Bicycle facilities are defined by the State of California in the California Streets and Highway Code Section 890.4. Available online at <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=00001-01000&file=890-892>. Accessed January 29, 2016.



SOURCE: Fehr & Peers



- Project Corridor
- Study Area Boundary
- Curb Ramp not Present
- Crosswalk Not Striped on at Least one Leg
- Elevated Freeway
- Freeway On/Off-ramps
- Multiple Turn Lanes Conflict with Pedestrian Crossing Signal Phase

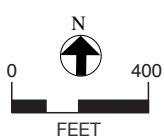
SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 6: EXISTING PEDESTRIAN HAZARDS



SOURCE: Fehr & Peers



- Project Corridor
- Study Area Boundary
- Bicycle Path - Class I
- Separated Bicycle Lane - Class II
- Bicycle Lane - Class II
- Bicycle Route - Class III
- One-Way Bicycle Facility

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 7: EXISTING BICYCLE FACILITIES

Table 1: Existing Turn Restrictions along Sixth Street

Cross Street	Direction			
	Northbound	Southbound	Eastbound	Westbound
Market Street / Taylor Street / Golden Gate Avenue / Sixth Street	No Right Turn except Buses, Taxis, Trucks, and Bikes; No Left Turn	No Right Turn except Buses, Taxis, Trucks, and Bikes; No Left Turn except Muni	No Through Traffic except Buses, Taxis, Trucks, and Bikes; No Left Turn	No Left Turn
Stevenson Street ^a	--	--	--	na
Jessie Street ^b	--	--	--	na
Mission Street ^d	No Left Turn except Muni (7 a.m. to 7 p.m.)	No Left Turn except Muni	No Left Turn except Muni	No Left Turn except Muni
Minna Street ^c	--	--	na	--
Natoma Street ^a	--	--	--	na
Howard Street ^c	No Left Turn (7 a.m. to 7 p.m., Monday through Friday)	No Left Turn	na	--
Tehama Street ^c	--	--	na	--
Clementina Street ^a	--	--	--	na
Folsom Street ^a	--	--	--	na
Shipley Street ^c	--	--	na	--
Clara Street ^a	--	--	--	na
Harrison Street ^c	--	No Left Turn	na	
Ahern Way ^d	No Left Turn (3 to 7 p.m., Monday through Friday)	--	--	--
Bryant Street ^a	--	--	--	na
Brannan Street / Interstate 280 ^d	No Left Turn	--	No Left Turn	--

Notes: **na** indicates that vehicles cannot travel in that direction due to designation as a one-way street.
Muni = San Francisco Municipal Railway
^a One-way street; eastbound only travel.
^b One-way street; eastbound only travel east of Sixth Street; two-way street dead-end segment west of Sixth Street.
^c One-way street; westbound only travel.
^d Two-way street.

Source: SFMTA, December 2015

Transit

The existing San Francisco Municipal Railway (Muni) bus routes along Sixth Street are the 14X Mission Express (inbound and outbound), the 27 Bryant (inbound only), and the 8BX Bayshore B Express (inbound only).¹¹ There are two inbound and outbound stops on Sixth Street that serve the Muni 14X and the 27 Bryant bus routes. The inbound stop, located on the east side of Sixth Street immediately north of Bryant Street, is a farside stop shared by the Muni 14X and 27 bus routes.¹² This inbound bus stop is a designated 100-foot-long, red-striped curbside bus

¹¹ Inbound transit service on Sixth Street is north toward Market Street, and outbound transit service is south toward Brannan Street.

¹² Farside transit stops are stops located at the second or farthest side of the intersection after a transit vehicle passes through an intersection.

zone where parking is prohibited at all times. The outbound stop, located on the west side of Sixth Street immediately north of Harrison Street, is a nearside stop for the Muni 14X bus route.¹³ This outbound bus stop is a signed flag stop (without a designated curbside bus zone) where the bus stops within the peak-period tow-away lane.

The inbound Muni 14X bus exits the I-280 freeway onto Sixth Street at Brannan Street, stops once on Sixth Street at the shared stop just north of Bryant Street, turns right onto Mission Street, stops at the farside stop just east of Sixth Street, and continues downtown. The outbound Muni 14X bus turns left onto Sixth Street from westbound Mission Street, stops once on Sixth Street just north of Harrison Street, turns right onto Harrison Street, and enters Interstate-80 (I-80) westbound at the on-ramp at Seventh and Harrison Streets. I-80 merges with southbound U.S. Highway 101 (U.S. 101) at the Central Freeway juncture. The inbound Muni 27 bus turns left onto Sixth Street from Bryant Street, stops once on Sixth Street at the shared stop just north of Bryant Street, turns right onto Folsom Street, stops at the farside stop just east of Sixth Street, and continues downtown. The inbound Muni 8BX bus exits the I-280 freeway onto Sixth Street at Brannan Street but does not stop on Sixth Street before turning right onto Bryant Street. There is a farside stop on Bryant Street (just east of Sixth Street) that serves the Muni 8BX bus route as well as the Muni 8 Bayshore, 8AX Bayshore A Express, and 47 Van Ness bus routes.

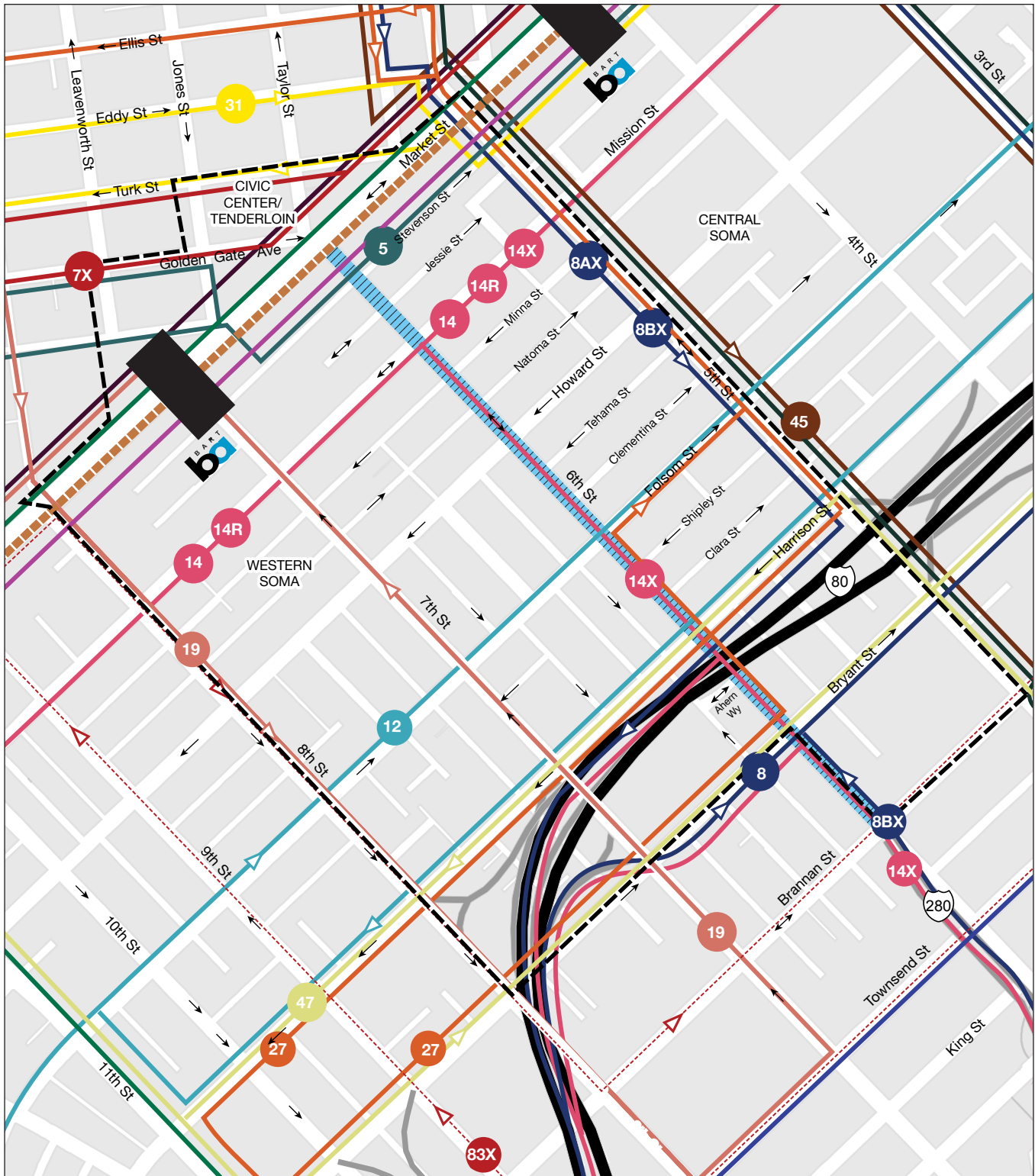
See Figure 8: Existing Transit Facilities for Muni and regional transit service¹⁴ on Sixth Street and other streets in the study area. Additionally, in January 2012, the SFMTA temporarily rerouted the southbound 30 Stockton, 45 Union-Stockton, and 8 Bayshore, 8AX/8BX Bayshore Express buses from Fourth Street to Fifth Street to accommodate the Central Subway construction. (The northbound route was not revised.) These routes are expected to shift back to Fourth Street in 2018-2019 upon completion of the Central Subway construction on Fourth Street.

On-Street Parking

On-street curb parking is provided along both sides of Sixth Street between Market and Brannan Streets. As shown in Table 2: Existing Parking Supply along Sixth Street, there are approximately 160 on-street vehicle parking spaces on Sixth Street. They consist of 55 general metered spaces between Market and Folsom Streets, including one short-term (green) metered space in the west-side parking lane between Mission and Howard Streets, and 105 non-metered spaces between Folsom and Brannan Streets. In addition, there is a red-painted curb space reserved for police

¹³ Nearside stops are stops located at the first or nearest side of intersection before a transit vehicle passes through an intersection.

¹⁴ Service to and from the East Bay is provided by Bay Area Rapid Transit (BART), AC Transit, and ferries; service to and from the North Bay is provided by Golden Gate Transit buses and ferries; service to and from the Peninsula and South Bay is provided by SamTrans, BART, and Caltrain.



SOURCE: Fehr & Peers

- | | | | |
|---------------------|------------------|---------------------|------------------------|
| Project Corridor | Muni Metro | 2 Clement | 31 Balboa |
| Study Area Boundary | Caltrain Station | 3 Jackson | 38/38L Geary |
| BART Station | BART Station | 5 Fulton | 22 Fillmore |
| | | 6 Parnassus | 27 Bryant |
| | | 8/8AX/8BX Bayshore | 30 Stockton |
| | | 9/9R San Bruno | 30X Marina Express |
| | | 45 Union-Stockton | 81X Caltrain Express |
| | | 47 Van Ness | 82X Levi Plaza Express |
| | | 10 Townsend | 83X Mid-Market Express |
| | | 12 Folsom-Pacific | |
| | | 14/14R/14X Mission | |
| | | 7X Noriega Express | |
| | | 19 Polk | |
| | | 21 Hayes | |
| | | 49 Mission/Van Ness | |
| | | 7/7R Haight-Noriega | |

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 8: EXISTING TRANSIT FACILITIES

vehicles south of Jessie Street in the west-side parking lane, an Americans with Disabilities Act (ADA)-compliant parking space south of Jessie Street in the west-side parking lane, and an ADA-compliant parking space in the west-side parking lane between Howard and Folsom Streets.¹⁵

Table 2: Existing Parking Supply along Sixth Street

Sixth Street corridor (Segment)	Parking Inventory and Supply Type	
	General Metered ^a	General Non-Metered
	Existing	Existing
Market Street to Mission Street		
east side	7	0
west side ^{b,c}	2	0
Mission Street to Howard Street		
east side	7	0
west side ^d	11	0
Howard Street to Folsom Street		
east side	12	0
west side ^b	16	0
Folsom Street to Harrison Street		
east side	0	13
west side	0	18
Harrison Street to Bryant Street		
east side	0	22
west side	0	19
Bryant Street to Brannan Street		
east side	0	12
west side	0	21
Sixth Street Subtotal by Side of Street		
<i>east side</i>	26	47
<i>west side</i>	29	58
Sixth Street Totals	55	105
<i>Notes:</i>		
^a Includes general parking meters and short-term (green) parking meters.		
^b There are two blue Americans with Disabilities Act (ADA)-compliant spaces on Sixth Street on the west side of Sixth Street: one between Market and Mission Streets and one between Howard and Folsom Streets.		
^c The red-painted curb space on the west side of Sixth Street south of Jessie Street is reserved for police vehicles.		
^d There is one green-metered short-term parking space on the west side of Sixth Street.		

Sources: SFMTA, June 2016; LCW Consulting, June 2016

As described above, between Folsom and Brannan Streets and on the west side of Sixth Street starting 300 feet south of Howard Street, parking lanes are designated as peak-period tow-away lanes with parking restricted from 7 to 9 a.m. and from 3 to 7 p.m. Between Folsom and Brannan Streets, non-metered parking has two-hour limits between 9 a.m. and 3 p.m. To the east and west of Sixth Street, general metered parking spaces are provided along Mission, Howard, and Folsom Streets; both metered and general non-metered parking spaces are provided on Harrison, Bryant, and Brannan Streets; and general non-metered parking spaces are provided on the east-west alleys – Stevenson, Jessie, Minna, Natoma, Tehama, Clementina, Shipley, and Clara Streets and Ahern Way.

¹⁵ On-street ADA-compliant parking spaces are designated with a blue-painted curb.

On-Street Loading

As shown in Table 3: Existing Loading Supply along Sixth Street, there are 32 commercial loading spaces along the Sixth Street corridor (28 metered spaces between Market and Folsom Streets and 4 non-metered spaces between Folsom and Brannan Streets). The four non-metered spaces are subject to the a.m. and p.m. peak-period tow-away restrictions along that stretch of Sixth Street. Commercial loading spaces in metered areas are designated with a yellow-painted curb and red- or yellow-capped meters, while those in non-metered areas are designated with a yellow-painted curb only. Metered and non-metered commercial loading spaces along Sixth Street range from 20 to 26 feet in length and are reserved for loading and unloading activities during weekdays, typically 7 a.m. to 6 p.m. Adjacent commercial loading spaces form commercial loading zones in which larger trucks may use more than one stall. Commercial loading spaces are reserved for use by freight vehicles with San Francisco commercial permit stickers or similar commercial trucks. Commercial vehicles are limited to 30 minutes in the commercial loading spaces, while passenger vehicles are limited to 3 minutes for loading passengers or materials and must be attended.

In addition to commercial loading spaces, there are six designated passenger loading zones along Sixth Street between Market and Folsom Streets (see Table 3). Passenger loading zones are not metered, are designated with a white-painted curb, and may accommodate one or more vehicles depending on the loading zone's length. Passenger loading zones on Sixth Street range in length from 22 to 58 feet. Passenger loading zones are reserved for five-minute passenger or material loading and unloading activities and vehicles must be attended. Passenger loading zones provide a place to load and unload passengers for adjacent businesses and residences and require a permit to be issued by the SFMTA that must be renewed annually. Long-term parking is prohibited within these designated zones.

Streetscape Features

Street Trees

Between Market and Brannan Streets, there are approximately 108 street trees of varying maturity levels and varying species types planted in sidewalk tree wells. Street trees are located on both sides of Sixth Street between Market and Bryant Streets and on the west side of Sixth Street between Bryant and Brannan Streets. Some street tree wells are empty. There are no landmark trees along the Sixth Street corridor.¹⁶

¹⁶ San Francisco Department of the Environment, Landmark Trees in San Francisco, October 2014. Available online at <http://sfenvironment.org/download/list-of-landmark-trees-updated-oct-2014-0>. Accessed January 29, 2016.

Table 3: Existing Loading Supply along Sixth Street

Sixth Street Corridor (Segment)	Loading Supply by Type		
	Commercial Loading Spaces		Passenger Loading Zones ^a
	Metered	Non-Metered	
Market Street to Mission Street			
east side	6	0	1 (44 feet); 1 (22 feet)
west side	10	0	1 (58 feet)
Mission Street to Howard Street			
east side	7	0	1 (44 feet)
west side	4	0	0
Howard Street to Folsom Street			
east side	1	0	1 (22 feet)
west side	0	0	1 (45 feet)
Folsom Street to Harrison Street			
east side	0	0	0
west side	0	3	0
Harrison Street to Bryant Street			
east side	0	0	0
west side	0	0	0
Bryant Street to Brannan Street			
east side	0	0	0
west side	0	1	0
Sixth Street Subtotal by Side of Street			
east side	14	0	4
west side	14	4	2
Sixth Street Totals	28	4	6
<i>Notes:</i>			
^a Number in parentheses indicates the approximate length in feet of the passenger loading zone.			

Sources: SFMTA, June 2016; LCW Consulting, June 2016

Street Lights

Sixth Street is lit by a system of street light fixtures made up of decorative light standards consistently spaced along both sides of Sixth Street between Market and Harrison Streets and cobra-style light fixtures between Harrison and Brannan Streets.¹⁷ Cobra-style light fixtures are also located at the corner of each intersection and at the entrance to each alley. The decorative light standards are approximately 30 feet tall and are composed of a dual head decorative cross arm, pendant-style tear drop luminaires, an octagonal fluted tapered pole, and an octagonal pole base cover. The decorative light standards between Market and Harrison Streets were installed in 2006, among other pedestrian safety improvements, as part of a joint effort of the OCII and SFPW.

Other Features

Other sidewalk features on Sixth Street between Market and Brannan Streets include granite curbs between Market and Howard Streets, bicycle racks, fire hydrants (both regular hydrants connected

¹⁷ San Francisco's street lighting system is maintained by the San Francisco Public Utilities Commission.

to the City's potable water supply and blue-topped hydrants connected to the City's auxiliary water supply system), parking meters, utility boxes, and utility poles.

Proposed Project Characteristics

The proposed project features the removal of one northbound and one southbound vehicle travel lane from Market to Bryant Streets; sidewalk expansions and associated streetscape changes between Market and Howard Streets; the removal of peak-period tow-away lane designations; streetscape changes between Howard and Brannan Streets; new roadway striping introducing right-lane-must-turn-right restricted lanes, left-turn pockets, right-turn pockets, and a center turning lane at various locations; the installation of two new traffic signals; and upgrades to the traffic signal system. The proposed project would also establish northbound and southbound Class II bicycle lanes from Market to Folsom Streets. In conjunction with changes to the traffic circulation patterns, corner bulb-outs and ADA-compliant curb ramps would be installed at all intersections between Market and Howard Streets (except on the south side of Howard Street) and at Folsom and Harrison Streets; raised crosswalks would be installed at the entrances to the alleys between Market and Howard Streets and at Clementina Street; new and replacement infill street trees (between Market and Howard Streets) would be planted; and other installments would include pedestrian-scale light fixtures, new trash receptacles, new bicycle racks, and landscaping in the street furniture zone and at corner bulb-outs.¹⁸

The proposed changes to the Sixth Street corridor between Market and Brannan Streets are illustrated on Figure 9: Proposed Project Features (Market to Howard Streets), Figure 10: Proposed Project Features (Howard to Harrison Streets), and Figure 11: Proposed Project Features (Harrison to Brannan Streets). The detailed description of the proposed changes is organized by the type of project feature, as follows: public right-of-way, including roadway alignment, travel lanes, traffic signalization, and sidewalks; bicycle facilities; transit facilities; on-street parking; on-street loading; and streetscape changes.

¹⁸ City and County of San Francisco, *San Francisco Better Streets Plan*, December 7, 2010. As defined in the *Better Streets Plan*, the street furniture zone is the portion of the sidewalk used for street trees, landscaping, transit stops, street lights, and site furnishings. It is located between the edge (or curb) and the pedestrian throughway zone. Available online at <http://www.sfbetterstreets.org/design-guidelines/sidewalk-zones/>. Accessed December 21, 2015.

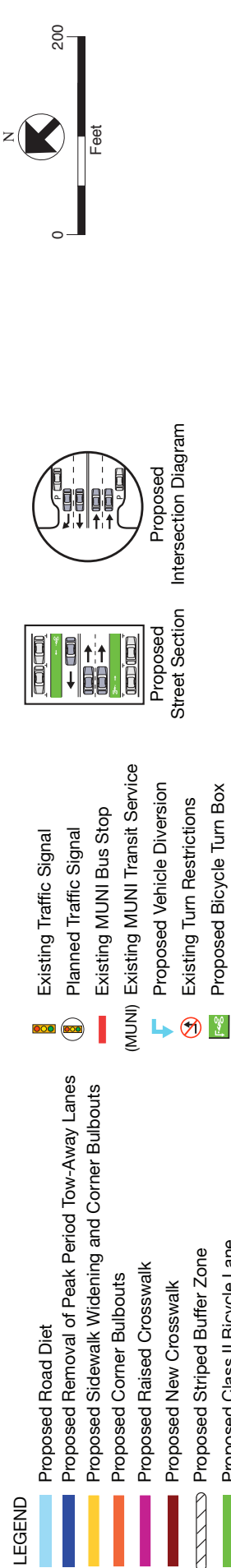
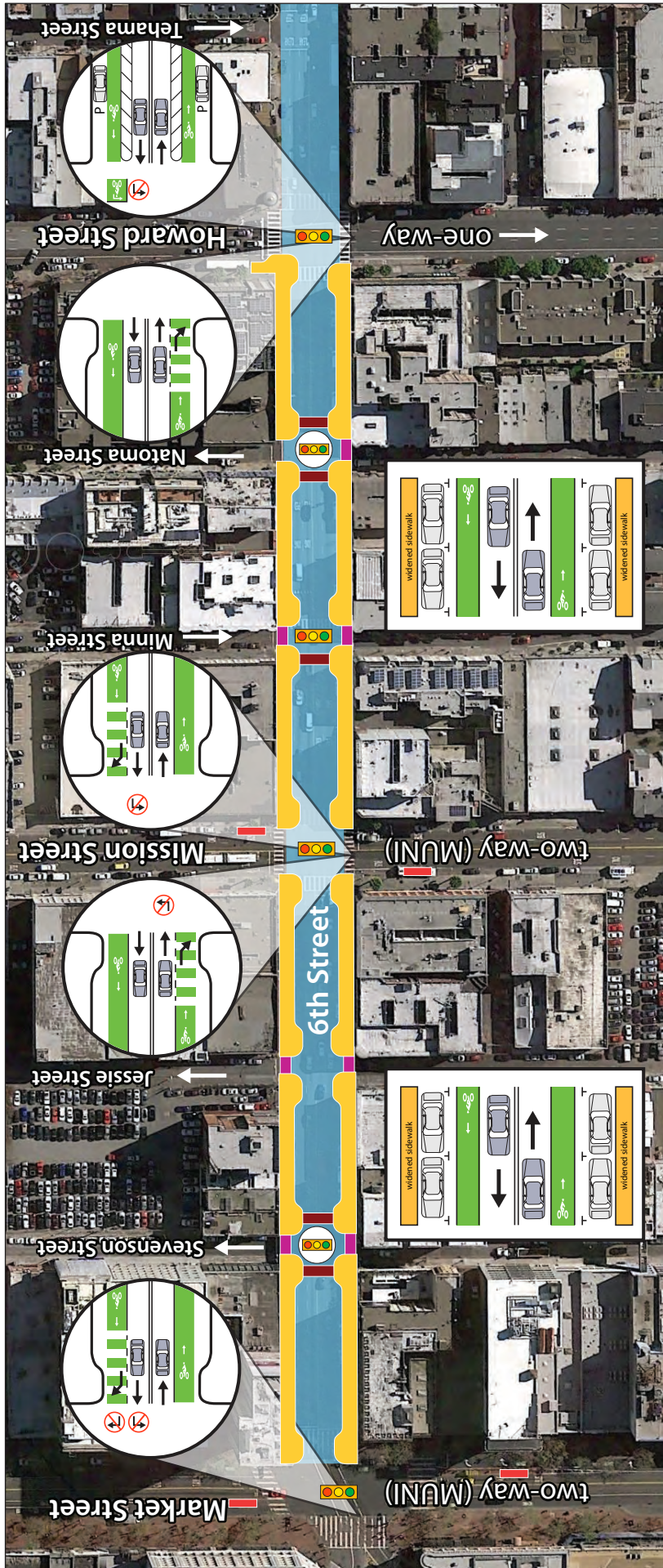


FIGURE 9: PROPOSED PROJECT FEATURES (MARKET TO HOWARD STREETS)

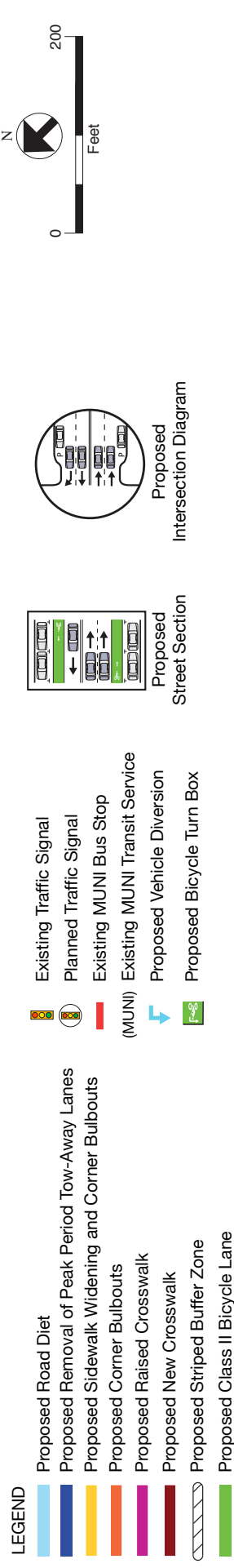
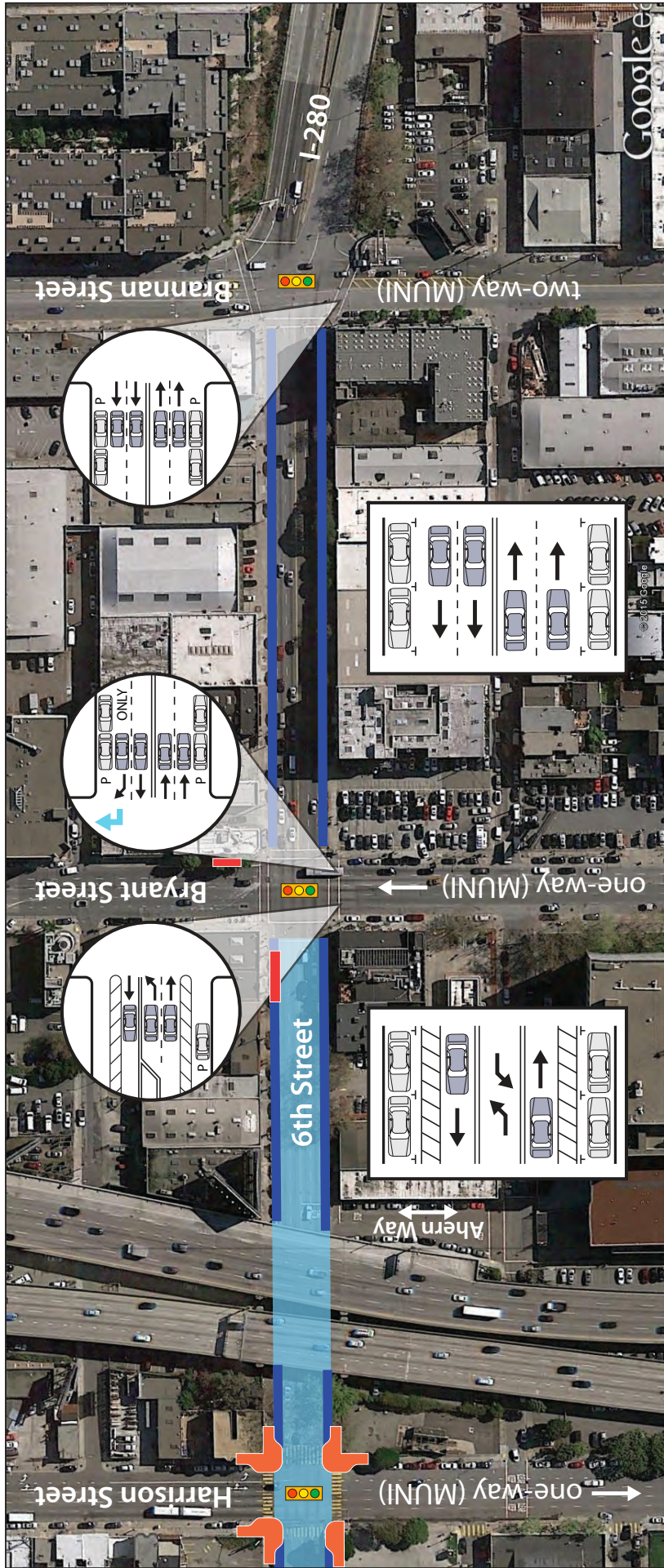


FIGURE 10: PROPOSED PROJECT FEATURES (HOWARD TO HARRISON STREETS)



SOURCE: SFMTA; SWCA/Turnstone Consulting

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 11: PROPOSED PROJECT FEATURES (HARRISON TO BRANNAN STREETS)

Public Right-of-Way

Roadway Changes

The proposed project would remove one northbound and one southbound travel lane along Sixth Street between Market and Bryant Streets. Between Howard and Brannan Streets, the peak-period tow-away lane designation (7 to 9 a.m. and 3 to 7 p.m.) would be rescinded and full-time parking would be restored in the parking lane where currently restricted: on the west side of Sixth Street between Howard and Folsom Streets (starting 300 feet south of Howard Street) and on both sides of Sixth Street between Folsom and Brannan Streets (see proposed street sections on Figure 3, Figure 4, and Figure 5 on pp. 8, 9, and 10).

The proposed project would introduce right-turn-only lane designations between Folsom and Brannan Streets. Right-turn-only lanes would be designated through a combination of new roadway striping and new signage on utility poles. In order to divert northbound traffic off Sixth Street, the easternmost northbound travel lane from Brannan to Bryant Streets would be signed with “Right Lane Must Turn Right” lettering and directional arrows for the length of the block (see Figure 11). In addition, between Harrison and Folsom Streets, the single northbound lane would expand into two northbound lanes from Shipley to Folsom Streets to create an approximately 170-foot-long right-turn-only northbound travel lane, which would be signed with “Right Lane Must Turn Right” lettering and directional arrows (see Figure 10).

To further facilitate vehicle movement along Sixth Street, the proposed project would introduce a new approximately 11.5-foot-wide center turn lane between Shipley and Bryant Streets (see Figure 4 on p. 9 and Figures 10 and 11). At the intersection of Sixth and Bryant Streets, the proposed center turn lane would end short of the intersection to accommodate a proposed approximately 60-foot-long southbound left-turn pocket for vehicles turning onto Bryant Street. Between Bryant and Harrison Streets, the proposed center turn lane would provide access to Ahern Way for northbound vehicles traveling on Sixth Street during periods when left turns are not restricted, as well as access to commercial and parking land uses on both sides of Sixth Street.¹⁹ At the intersection of Sixth and Harrison Streets, the proposed center turn lane would end short of the intersection to accommodate a proposed approximately 60-foot-long northbound left-turn pocket for vehicles turning onto Harrison Street. Between Harrison and Folsom Streets, the proposed center lane would provide access to Clara Street for southbound vehicles as well as commercial and parking land uses on both sides of Sixth Street. The proposed center turn lane would narrow to a painted median strip in order to accommodate the proposed right-turn-only lane for northbound vehicles on Sixth Street turning onto Folsom Street (described above).

¹⁹ Left turns for northbound vehicles are, and would continue to be, restricted Monday through Friday between 3 and 7 p.m.

Vehicle turning pockets would be added at key locations to facilitate vehicle movement along Sixth Street. The locations of the vehicle turning pockets are illustrated on Figures 9 through 11. The locations and approximate lengths of the proposed vehicle turning pockets would be as follows:

- Sixth and Market Streets: 60-foot-long right-turn pocket for northbound commercial vehicles, buses, taxis, and bicycles on Sixth Street turning right onto Market Street.
- Sixth and Mission Streets: 60-foot-long right-turn pocket for southbound vehicles on Sixth Street turning right onto Mission Street.
- Sixth and Mission Streets: 60-foot-long right-turn pocket for northbound vehicles on Sixth Street turning right onto Mission Street.
- Sixth and Howard Streets: 60-foot-long right-turn pocket for southbound vehicles on Sixth Street turning right onto Howard Street.
- Sixth and Folsom Streets: 60-foot-long left-turn pocket for southbound vehicles on Sixth Street turning left onto Folsom Street.
- Sixth and Harrison Streets: 60-foot-long left-turn pocket for northbound vehicles on Sixth Street turning left onto Harrison Street.
- Sixth and Bryant Streets: 60-foot-long left-turn pocket for southbound vehicles on Sixth Street turning left onto Bryant Street.

The proposed project would not implement any new turning restrictions, and the existing turning restrictions identified in Table 1 on p. 14 would remain the same. In addition to the above roadway changes, one-way westbound Harrison Street would be modified. One combined through/left-turn lane would be restriped as a through-only lane, leaving four through lanes and one left-turn-only lane on westbound Harrison Street approaching Sixth Street.

Traffic Signalization

New traffic signals would be installed at the intersections of Sixth Street with Stevenson Street and with Natoma Street. LPIs for pedestrians crossing Sixth Street would be installed for the north- and south-side crosswalks at the newly signalized intersections. An LPI would be added for the proposed north-side crosswalk and the existing south-side crosswalk at the intersection of Sixth and Minna Streets. At all existing signalized intersections except Market Street, traffic signal timing cycles would be modified from 60-second-long cycles to 90-second-long cycles.²⁰ Additionally, all traffic signals would be evaluated to ensure that pedestrian crossing signal times meet the City standard of 2.5 feet per second (ft/sec).²¹ New separated left-turn arrows would be added to the existing traffic signal hardware where Sixth Street intersects Folsom Street, Harrison

²⁰ Prior to implementation of the proposed project, the signal timing cycle at the Market Street/Sixth Street intersection was modified from a 60-second-long to a 90-second-long timing cycle as a separate set of signal timing cycle changes along Market Street.

²¹ SFMTA, Pedestrian Signal Guidelines Memorandum, May 6, 2009. A copy of this memorandum is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Street, and Bryant Street. The arrows would accommodate vehicles turning left onto Harrison Street from northbound Sixth Street, turning left onto Folsom Street from southbound Sixth Street, and turning left onto Bryant Street from southbound Sixth Street. These changes would accompany the installation of left-turn pockets at these locations, and signal timing at these locations would be modified to include a separated left-turn phase for northbound and southbound left-turning vehicles.

Sidewalk Widening, Curb Bulb-Outs, and Raised Crosswalks

Between Market and Howard Streets, the Sixth Street sidewalks would be widened at the mid-block by four feet – from 11.5 to 15.5 feet on the east side and from 12 to 16 feet on the west side – and corner bulb-outs would be constructed at each intersection (see proposed street section on Figure 2 on p. 7 and Figure 9 on p. 21). The parking lane on each side of Sixth Street between Market and Howard Streets would be retained at the mid-block, with the proposed corner bulb-outs extending an additional six feet into the Sixth Street curb-to-curb right-of-way to further minimize the crossing distance for pedestrians. The locations of the corner bulb-outs are illustrated on Figure 9 as part of the proposed sidewalk widening. The approximate lengths and the locations of the proposed bulb-outs along Sixth Street between Market and Howard Streets would be as follows:

- An 80-foot-long bulb-out at the southeast corner of Sixth and Market Streets;
- An 80-foot-long bulb-out at the southwest corner of Sixth and Market Streets;
- A 20-foot-long bulb-out at the northeast corner of Sixth and Stevenson Streets;
- A 20-foot-long bulb-out at the northwest corner of Sixth and Stevenson Streets;
- A 20-foot-long bulb-out at the southeast corner of Sixth and Stevenson Streets;
- A 20-foot-long bulb-out at the southwest corner of Sixth and Stevenson Streets;
- A 30-foot-long bulb-out at the northeast corner of Sixth and Jessie Streets;
- A 25-foot-long bulb-out at the northwest corner of Sixth and Jessie Streets;
- A 20-foot-long bulb-out at the southeast corner of Sixth and Jessie Streets;
- A 20-foot-long bulb-out at the southwest corner of Sixth and Jessie Streets;
- A 30-foot-long bulb-out at the northeast corner of Sixth and Mission Streets;
- A 40-foot-long bulb-out at the northwest corner of Sixth and Mission Streets;
- A 60-foot-long bulb-out at the southeast corner of Sixth and Mission Streets;
- A 20-foot-long bulb-out at the southwest corner of Sixth and Mission Streets;
- A 20-foot-long bulb-out at the northeast corner of Sixth and Minna Streets;
- A 20-foot-long bulb-out at the northwest corner of Sixth and Minna Streets;
- A 20-foot-long bulb-out at the southeast corner of Sixth and Minna Streets;
- A 20-foot-long bulb-out at the southwest corner of Sixth and Minna Streets;

- A 35-foot-long bulb-out at the northeast corner of Sixth and Natoma Streets;
- A 25-foot-long bulb-out at the northwest corner of Sixth and Natoma Streets;
- A 25-foot-long bulb-out at the southeast corner of Sixth and Natoma Streets;
- A 30-foot-long bulb-out at the southwest corner of Sixth and Natoma Streets;
- A 25-foot-long bulb-out at the northeast corner of Sixth and Howard Streets;
- A 20-foot-long bulb-out (extending east) at the northeast corner of Howard and Sixth Streets; and
- A 30-foot-long bulb-out at the northwest corner of Sixth and Howard Streets.

Unless otherwise noted, the corner bulb-outs listed above would extend to the north or south along Sixth Street. At the Howard Street intersection, the proposed bulb-out at the northeast corner would also extend east approximately 20 feet, as noted above.

As part of the proposed roadway configuration changes for the blocks south of Howard Street, corner bulb-outs are also proposed at each intersection between Howard and Harrison Streets. The proposed bulb-outs would extend approximately six feet into the Sixth Street curb-to-curb right-of-way. As shown on Figures 10 and 11 on pp. 22 and 23, the approximate lengths and the locations of the proposed bulb-outs along Sixth Street between Howard and Harrison Streets would be as follows:

- A 25-foot-long bulb-out at the northeast corner of Sixth and Folsom Streets;
- A 25-foot-long bulb-out at the northwest corner of Sixth and Folsom Streets;
- A 30-foot-long bulb-out at the southeast corner of Sixth and Folsom Streets;
- A 20-foot-long bulb-out at the southwest corner of Sixth and Folsom Streets;
- A 45-foot-long bulb-out (extending east) at the northeast corner of Folsom and Sixth Streets;
- A 25-foot-long bulb-out at the northeast corner of Sixth and Harrison Streets;
- A 60-foot-long bulb-out at the northwest corner of Sixth and Harrison Streets;
- A 30-foot-long bulb-out at the southeast corner of Sixth and Harrison Streets;
- A 30-foot-long bulb-out at the southwest corner of Sixth and Harrison Streets;
- A 20-foot-long bulb-out (extending east) at the northeast corner of Harrison and Sixth Streets;
- A 20-foot-long bulb-out (extending east) at the southeast corner of Harrison and Sixth Streets; and
- A 30-foot-long bulb-out (extending west) at the southwest corner of Harrison and Sixth Streets.

Unless otherwise noted, the corner bulb-outs listed above would extend to the north or south along Sixth Street. At the Folsom Street intersection, the proposed bulb-out at the northeast corner would

also extend east approximately 45 feet, while at the Harrison Street intersection the corner bulb-outs would extend approximately 20 feet to the east on the north and south sides and approximately 30 feet to the west on the south side, as noted above.

As part of the sidewalk expansion between Market and Howard Streets and the curb bulb-out construction south of Howard Street, raised crosswalks would be constructed at the entrances to Stevenson, Jessie, Minna, Natoma (west side only), and Clementina Streets where they intersect Sixth Street. The existing brick paving at the alleyway entrances to Minna and Natoma Streets from Sixth Street would be retained and incorporated into the design of the raised crosswalks, which would be striped concrete.

Bicycle Facilities

A new Class II bikeway with 5.5-foot-wide to 6-foot-wide green-painted bicycle lanes in the northbound and southbound directions would be provided on Sixth Street between Market and Folsom Streets (see proposed street sections on Figures 2 and 3 on pp. 7 and 8). Along the segment of Sixth Street between Howard and Folsom Streets, the new bicycle lanes would be separated from vehicle traffic by a painted 5.25-foot-wide to 5.5-foot-wide striped buffer zone. The proposed Class II bikeway would be added to the bicycle network, extending the Golden Gate Avenue southbound-only bicycle lane across Market Street into the SoMa neighborhood. The proposed Sixth Street bicycle lanes would connect with existing east-west bicycle facilities on Market Street, Howard Street, and Folsom Street. A green-painted, two-stage left-turn box would be provided at the Howard Street/Sixth Street intersection for northbound cyclists turning left, and a green-painted, two-stage left-turn box would be provided at the Folsom Street/Sixth Street intersection for southbound cyclists turning left (see Figures 9 and 10 on pp. 21 and 22).²² New way-finding signage would be installed on existing utility poles to indicate the bicycle lane start and end locations as well as connections to the existing intersecting bicycle facilities on Market, Howard, and Folsom Streets.

Transit

The proposed project would not include any changes to transit service. However, the proposed approximately 60-foot-long curb bulb-out on the west side of Sixth Street north of Harrison Street would serve as a boarding area for the outbound Muni 14X bus route. No other transit changes would be implemented along Sixth Street as part of the proposed project.

²² Two-stage bicycle turn boxes facilitate left or right turns by bicyclists from a bikeway on the right or left sides of the street, respectively, thereby avoiding the need for bicyclists to merge with motor vehicle traffic. On a green light, bicyclists travel straight across the intersection from the left- or right-hand bicycle lane to the marked turn box, where they can turn to their left and right and wait until the light changes to proceed with the cross-street traffic along their route. The bicycle box is outside the path of travel for through-moving bicyclists and is separate from the pedestrian crosswalk.

On-Street Parking

As shown in Table 4: Proposed Parking Supply along Sixth Street, the proposed sidewalk expansion between Market and Howard Streets and the construction of corner bulb-outs at most of the alley and major street intersections between Market and Harrison Streets would result in the loss of 17 general metered spaces between Market and Folsom Streets and 11 general non-metered spaces between Folsom and Brannan Streets. Thus, with implementation of the proposed project, the parking supply along Sixth Street would be reduced by 28 general metered and non-metered spaces – from 160 to 132 spaces.

The proposed removal of the a.m. and p.m. peak-period tow-away lane designations along the west side of Sixth Street from 300 feet south of Howard Street and on both sides of Sixth Street between Folsom and Brannan Streets would restore full-time parking (110 spaces, with 105 general non-metered spaces between Folsom and Brannan Streets and approximately 5 general metered spaces on the west side of Sixth Street between Howard and Folsom Streets). However, construction of the proposed corner bulb-outs at the northwest, southeast, and southwest corners of the Folsom Street/Sixth Street intersection and at the northeast, southeast, and southwest corners of the Harrison Street/Sixth Street intersection, in conjunction with the proposed conversion of three general non-metered parking spaces to non-metered commercial loading spaces (immediately south of Folsom Street in the west-side parking lane), would result in the loss of approximately 2 general metered and 11 general non-metered parking spaces. In addition to the parking loss along Sixth Street, a total of four general non-metered spaces would be lost on the east-west streets and alleys. The construction of corner bulb-outs that extend to the east and west at the intersections of Howard Street/Sixth Street (northeast corner) and Harrison Street/Sixth Street (northeast, southeast, and southwest corners) would result in the loss of two general metered spaces and two general non-metered spaces, while the proposed relocation of two metered commercial loading spaces from Sixth Street (between Market and Howard Streets) to Stevenson and Minna Streets would result in the loss of two general non-metered spaces on those alleys.

On-Street Loading

As shown in Table 5: Proposed Loading Supply along Sixth Street, implementation of the proposed sidewalk widening between Market and Howard Streets would result in the loss of 10 metered commercial loading spaces on Sixth Street and the relocation of 2 commercial loading spaces from Sixth Street to the adjacent alleys. There would be no change to the number, or general location, of non-metered commercial loading spaces or passenger loading zones along Sixth Street; however, their specific locations on block faces may shift or dimensions may be slightly reduced, e.g. the non-metered commercial loading spaces on the west side of Sixth Street south of Folsom Street and the commercial loading zone on the east side of Sixth Street between Market and Stevenson Streets.

Table 4: Proposed Parking Supply along Sixth Street

Sixth Street Corridor (Segment)	Parking Inventory and Supply Type	
	General Metered ^{a,b}	General Non-Metered
Market Street to Mission Street		
east side	3 (-4)	0
west side ^{c,d}	0 (-2)	0
Mission Street to Howard Street		
east side	3 (-4)	0
west side ^e	7 (-4)	0
Howard Street to Folsom Street^f		
east side	11 (-1)	0
west side ^e	14 (-2)	0
Folsom Street to Harrison Street^f		
east side	0	12 (-1)
west side ^g	0	12 (-6)
Harrison Street to Bryant Street^f		
east side	0	19 (-3)
west side	0	18 (-1)
Bryant Street to Brannan Street^f		
east side	0	12
west side	0	21
<i>Sixth Street Totals</i>	38 (-17)	94 (-11)
<i>Net Loss on Sixth Street</i>	17 spaces	11 spaces
<i>Loss on Stevenson and Minna Streets^{h,i}</i>	0 spaces	2 spaces
<i>Loss on Howard and Harrison Streets^j</i>	2 spaces	2 spaces
<i>Total Parking Loss</i>	19 spaces	15 spaces
<p><i>Notes:</i></p> <p>^a Includes general parking meters and short-term (green) parking meters.</p> <p>^b Number in parentheses indicates number of lost spaces.</p> <p>^c There are two blue Americans with Disabilities Act (ADA)-compliant spaces on Sixth Street on the west side of Sixth Street: one between Market and Mission Streets and one between Howard and Folsom Streets. No ADA-compliant parking spaces would be removed with implementation of the proposed project; however, the ADA-compliant space between Market and Mission Streets would be relocated within the same block. The relocation would include the loss of one metered commercial loading space.</p> <p>^d The red-painted curb space on the west side of Sixth Street south of Jessie Street is reserved for police vehicles.</p> <p>^e There is one green-metered short-term parking space on the west side of Sixth Street.</p> <p>^f With implementation of the proposed project, the 7 to 9 a.m. and 3 to 7 p.m. peak-period tow-away lane designations along Sixth Street from Folsom to Brannan Streets and on the west side of Sixth Street from 300 feet south of Howard Street to Folsom Street would be rescinded and on-street parking would be permitted at all times.</p> <p>^g On the west side of Sixth Street between Folsom and Harrison Streets, the loss of six parking spaces would include the conversion of three general parking spaces to commercial loading spaces and the elimination of three general parking spaces.</p> <p>^h With implementation of the proposed project, one metered commercial loading space on the east side of Sixth Street between Market and Mission Streets would be relocated to Stevenson Street, east of Sixth Street. On Stevenson Street, this proposed relocation would result in the loss of one general non-metered parking space.</p> <p>ⁱ With implementation of the proposed project, one metered commercial loading space on the west side of Sixth Street between Mission and Howard Streets would be relocated to Minna Street, west of Sixth Street. On Minna Street, this proposed relocation would result in the loss of one general non-metered parking space.</p> <p>^j The proposed bulb-outs at the northeast corner of Sixth Street/Howard Street and the southwest corner of Sixth Street/Harrison Street would remove two general non-metered parking spaces – one on Howard Street, east of Sixth Street, and one on Harrison Street, west of Sixth Street. The proposed bulb-outs at the northeast and southeast corners of Sixth Street/Harrison Street would remove two general non-metered parking spaces from Harrison Street (one for each bulb-out).</p>		

Sources: SFMTA, June 2016; LCW Consulting, June 2016

As described above under “On-Street Parking,” the proposed relocation of two metered commercial loading spaces from the east and west sides of Sixth Street between Market and Howard Streets to Stevenson Street (east of Sixth Street) and Minna Street (west of Sixth Street) would result in the elimination of two general non-metered parking spaces on Stevenson and Minna Streets. The proposed project would also result in the restoration of full-time parking on both sides of Sixth Street between Folsom and Brannan Streets, as well as the west side of Sixth Street starting 300 feet south of Howard Street. However, this proposed change would not alter the existing number of commercial loading spaces on Sixth Street between Folsom and Brannan Streets (four), because the three existing commercial loading spaces on the west side of Sixth Street between Folsom and Harrison Streets would replace three general non-metered parking spaces directly to the south.

Streetscape Changes

The proposed streetscape changes between Market and Howard Streets are intended to promote pedestrian safety, enhance the pedestrian experience, and support commercial activity. As part of the proposed sidewalk expansion and curb bulb-out construction between Market and Howard Streets, the existing streetscape features (i.e., traffic signal infrastructure, street lights, bicycle racks, parking meters, fire hydrants, utility boxes, utility poles, and other streetscape elements) would be relocated to the newly extended portions of the sidewalk and proposed curb bulb-outs. Between Market and Howard Streets, existing street trees (including the existing palm trees on the north and south sides of the Sixth Street/Mission Street intersection) would likely be retained in their current locations, and new street trees would be added where there are none. Relocation of large and healthy street trees to the newly extended portions of the sidewalk may not be feasible due to the difficulty (and likely mortality) and cost related to such an intervention. Although no street trees are planned for removal, trees in poor condition or that are hazardous would be replaced following procedures specified in the City’s Urban Forestry Ordinance and in accordance with the guidelines in the *Better Streets Plan*.^{23,24}

South of Howard Street, streetscape changes would be limited to the intersections of Sixth Street/Folsom Street and Sixth Street/Harrison Street. At these locations, existing streetscape elements would be relocated if necessary as part of the construction of the proposed bulb-outs. In addition to the proposed relocation of existing bicycle racks to the extended portions of the sidewalk between Market and Howard Streets, two additional bicycle racks would be added to the sidewalks

²³ City and County of San Francisco, Article 16 of the San Francisco Public Works Code. Prior to construction, the SFPW Bureau of Urban Forestry would conduct an assessment of the existing street trees along Sixth Street. Any trees that are determined to be hazardous or in poor condition would be removed and replaced.

²⁴ City and County of San Francisco, *San Francisco Better Streets Plan*, December 7, 2010, Chapter 6: Streetscape Elements. Available online at http://www.sf-planning.org/ftp/BetterStreets/docs/FINAL_6_Streetscape_Elements.pdf. Accessed January 20, 2016.

Table 5: Proposed Loading Supply along Sixth Street

Sixth Street Corridor (Segment)	Loading Supply by Type		
	Commercial Loading Spaces		Passenger Loading Zones ^a
	Metered ^b	Non-Metered	
Market Street to Mission Street			
east side ^c	5 (-1)	0	1 (44 feet); 1 (22 feet)
west side ^d	5 (-5)	0	1 (58 feet)
Mission Street to Howard Street			
east side	4 (-3)	0	1 (44 feet)
west side ^e	3 (-1)	0	0
Howard Street to Folsom Street			
east side	1	0	1 (22 feet)
west side	0	0	1 (45 feet)
Folsom Street to Harrison Street			
east side	0	0	0
west side ^f	0	3	0
Harrison Street to Bryant Street			
east side	0	0	0
west side	0	0	0
Bryant Street to Brannan Street			
east side	0	0	0
west side	0	1	0
<i>Sixth Street Totals</i>	18 (-10)	4	6
<i>Net Loss on Sixth Street</i>	10 spaces	0 spaces	0 zones
<i>Relocated</i>	2 spaces	0 spaces	0 zones
<p><i>Notes:</i></p> <p>^a Number in parentheses indicates the approximate length in feet of the passenger loading zone.</p> <p>^b Number in parentheses indicates lost spaces.</p> <p>^c With implementation of the proposed project, one commercial loading space removed from the east side of Sixth Street between Market and Mission Streets would be relocated to Stevenson Street, east of Sixth Street. Relocation of the commercial loading space from Sixth Street would result in the elimination of one general non-metered parking space on Stevenson Street.</p> <p>^d With implementation of the proposed project, the Americans with Disabilities Act (ADA)-compliant space on the west side of Sixth Street between Market and Mission Streets would be relocated within the same block. The relocation would result in the loss of one metered commercial loading space.</p> <p>^e With implementation of the proposed project, one commercial loading space removed from the west side of Sixth Street between Mission and Howard Streets would be relocated to Minna Street, west of Sixth Street. Relocation of the commercial loading space from the west side of Sixth Street would result in the elimination of one general non-metered parking space on Minna Street.</p> <p>^f With implementation of the proposed project, the three commercial loading spaces on the west side of Sixth Street between Folsom and Harrison Streets would be relocated to general non-metered parking spaces directly to the south of the three existing commercial loading spaces. There would be no net reduction in the number of commercial loading spaces.</p>			

Sources: SFMTA, June 2016; LCW Consulting, June 2016

on each side of Sixth Street between Market and Folsom Streets, adding approximately 24 bicycle parking spaces for a total count of 52 Class 2 spaces between Market and Brannan Streets. The proposed project would not add any BikeShare stations on the Sixth Street corridor.

New and/or relocated street lighting, street trees, and other streetscape elements such as trash receptacles and benches would be developed and installed in accordance with the guidelines in the *Better Streets Plan*.

Project Construction

The proposed changes to the Sixth Street corridor described above would require the demolition of the existing sidewalks, curbs, and concrete gutters and excavation to a depth of approximately three feet to provide foundations for the new sidewalks and curb bulb-outs. Where possible, the granite curbs between Market and Howard Streets would be salvaged and reused. Traffic signals and related hardware would require excavation of an approximately three-foot-wide hole to a depth of approximately six feet. The total volume of excavated soils would be approximately 2,400 cubic yards.

Construction Schedule

Construction of the proposed project would take approximately 12 months, anticipate to start in the fall of 2018, and would have an estimate construction cost of approximately \$7 million. SFPW anticipates construction operations to be focused on one block at a time (e.g., Sixth Street between Market and Mission Streets). Construction durations for each block would vary from a high of 8 to 10 weeks per block from Market to Howard Streets, to take into account the more intensive streetscape changes proposed on those blocks, to a low of 4 to 6 weeks for less-intensive sections from Howard to Brannan Streets. Typical construction operations would include:

- Catch basin and culvert construction and relocation;
- Curb ramp construction;
- Parking strip and sidewalk bulb-out construction;
- Electrical wire and irrigation piping installation;
- Curb construction and sidewalk widening;
- Traffic signal conduit and equipment installation;
- Road grinding and repaving;
- Landscape installation; and
- Parking meter, street furniture, lighting, and signage installations.

Construction-related activities would typically occur Monday through Friday, between 7 a.m. and 4 p.m. Construction is not anticipated to occur on Saturdays, Sundays, or major legal holidays, but may occur on these days on an as-needed basis. The hours of construction would be stipulated by SFPW, and the contractor would be required to comply with the San Francisco Noise Ordinance. Holiday restrictions would apply to the section of Sixth Street from Market to Folsom Streets, as well as other areas with 50 percent or more commercial frontage. No work would be allowed during the holiday moratorium (from the day after Thanksgiving to January 1, 24 hours per day, seven days per week).

Construction Workers

There would be an average of about 25 construction workers per day at the project site, with a greater number during peak periods of construction. Construction staging and vehicle and equipment storage would likely occur along the side streets nearest the particular segment under construction.

Haul Trips and Routes

During construction of the proposed project, there would be a flow of construction-related trucks into and out of the site, with an average of one haul truck and one vendor delivery truck per day (four one-way trips) traveling to the site on a daily basis.

Lane Closures

Construction of the proposed project would require the temporary closure of travel lanes and sidewalks, as well as the temporary removal of on-street parking. The duration of the temporary travel lane and sidewalk closures would range from a maximum of 8 to 10 weeks between Market and Howard Streets where the most intensive streetscape changes are proposed to 4 to 6 weeks between Howard to Brannan Streets where the proposed work would be less extensive. In some instances, construction may require temporary street closures and rerouting of traffic and transit; however, full street closures are not anticipated. Parking and travel lane and sidewalk closures are subject to review and approval by the City's Transportation Advisory Staff Committee, which consists of representatives of the SFMTA, SFPW, and the Fire, Police, and Planning Departments. This review takes into consideration other construction projects in the vicinity.

Construction Equipment

The construction equipment used for the proposed project would include an excavator, a loader, a backhoe, a skid steer, a roller, a saw-cutting machine, paving equipment (grinder), a paver, an asphalt/concrete supply truck, a concrete mixer truck, a demolition dump truck, a materials delivery truck, and a roadway striping vehicle. The duration of use for each type of equipment would vary between two and eight hours per day and the number of days it would operate over the 240-day construction duration would range between 4 and 120 days.

Required Project Approvals

The proposed project would require the following approvals (listed in the order they are expected to occur):

- SFMTA Board of Directors approval of the proposed project, which would include removal of travel lanes; changes to parking, passenger loading zones, and commercial loading zones; establishment of bike lanes on Sixth Street from Market to Folsom Streets;

introduction of new left-turn pocket locations and “Right Lane Must Turn Right” signs at right-turn pocket locations; removal of peak-period tow-away lane designations between Howard and Brannan Streets; changes to traffic signal timing; and new traffic signals at Stevenson and Natoma Streets;

- SFMTA approval of a Special Traffic Permit in instances where work would not comply with Blue Book²⁵ regulations or traffic routing specifications in a City contract;
- SFPW Director’s Order and public hearing for removal of existing trees and new tree plantings;
- San Francisco Public Utilities Commission (SFPUC) approval of an erosion and sediment control plan before construction begins; and
- San Francisco Board of Supervisors approval of legislation for sidewalk widening.

Approval Action: Approval of the project by the SFMTA Board of Directors is the Approval Action for the proposed project for the purposes of a CEQA appeal. The Approval Action date would establish the start of the 30-day appeal period for appeal of the Final Negative Declaration to the Board of Supervisors pursuant to Section 31.04(h) of the San Francisco Administrative Code.

B. PROJECT SETTING

Existing Land Uses

Overview

The Sixth Street corridor extends six blocks between Market and Brannan Streets (approximately 0.7 mile) and is located in the SoMa area. Portions of Sixth Street are located in the Downtown Area Plan (Market Street to Stevenson Street), the East SoMa Area Plan (Stevenson Street to Harrison Street), and the Western SoMa Area Plan (Harrison Street to Brannan Street) areas. Sixth Street also serves as the western boundary of the Central SoMa Plan Area; this plan is currently undergoing environmental review. The Central SoMa Plan Area includes portions of the former Yerba Buena Redevelopment Plan area and the East SoMa and Western SoMa Area Plan areas. Sixth Street traverses a mix of zoning districts – C-3-G, C-3-S, SoMa NCT, P, MUR, MUG, SALI – along its six-block length and is within the SoMa Youth and Family Special Use District, which is generally bounded by Natoma Street on the north, Harrison Street on the south, Fourth Street on the east, and Seventh Street on the west. Sixth Street is within the MSTL District, generally between Stevenson and Market Streets (see Figure 1 on p. 3). The MSTL District contains motion picture theaters, loft and office buildings, and small commercial buildings on both sides of Market Street, with two prominent intersections at Sixth Street/Taylor Street/Golden Gate Avenue/Market Street and Jones Street/McAllister Street/Market Street resulting from the meeting of the street

²⁵ SFMTA, *Parking and Traffic Regulations for Working in San Francisco Streets*, 8th Edition. Available online at <http://www.sfmta.com/services/streets-sidewalks/construction-regulations>. Accessed December 1, 2016.

grids to the north and south of Market Street. South of the MSTL District, the Sixth Street Lodginghouse Historic District begins slightly north of Stevenson Street and extends south to Tehama Street. This historic district consists of mid-rise residential hotels and a few low-rise commercial buildings built from 1906 to 1913. Sixth Street also includes a portion of the SoMa Pilipinas-Filipino Cultural Heritage District, which is bounded by Market Street to the north, Second Street to the east, Brannan Street to the south, and 11th Street to the west.

Sixth Street is surrounded by land uses and urban forms that reflect SoMa's development time period as well as the diversity of more recent development allowed under the various zoning districts and height and bulk districts. Land uses include residential, in the forms of single room occupancy (SRO) residential hotels, apartment buildings, and multi-family buildings (e.g., duplexes, triplexes, etc.). Other land uses include commercial; office; light industrial; production, distribution, and repair (PDR); religious; non-profit; community-serving; educational; entertainment; and public. Height and bulk districts within three blocks of the Sixth Street corridor range from 30-X to 160-F. The scale of development along the Sixth Street corridor and its immediate vicinity varies from 1-story to 15-story buildings. In general, building heights are tallest on the north end of the project corridor near downtown, trending downward to the south away from downtown and into the Western SoMa neighborhood. At 202 feet tall, the existing 15-story 995-997 Market Street building, at the southeast corner of Market and Sixth Streets, is the tallest building along the project corridor and in its immediate vicinity.

In general, residential uses in the SoMa neighborhoods form residential enclaves interspersed with commercial, retail, office, PDR, and light industrial uses. In the immediate vicinity of the project corridor, there are residential clusters along narrow alleys such as Minna, Natoma, Clementina, Shipley, and Clara Streets, as well as along major streets (Market, Mission, Howard, and Folsom Streets). Vacant lots and surface parking lots are also scattered throughout the project corridor and its vicinity. Market, Sixth, Mission, Howard, and Folsom Streets contain stretches of moderate- to high-density mixed-use residential and commercial establishments that generate pedestrian traffic and contribute to the character of the area.

Land Uses Between Market and Folsom Streets

On Sixth Street between Market and Folsom Streets, SRO residential hotels, tourist hotels, and hostels predominate. Several of these are designated historic buildings, e.g., the Seneca Hotel at 32 Sixth Street, the Henry Hotel at 106 Sixth Street, and the Orlando Hotel at 201 Sixth Street, among others. There are also several mid-rise apartment buildings and low-rise commercial buildings along this segment of Sixth Street. The ground-floor and stand-alone commercial and retail uses that characterize this portion of Sixth Street include restaurants, nightclubs, convenience stores, adult entertainment, dry cleaners, self-service laundry, banks, automotive repair shops, professional services, and community-serving uses such as the San Francisco Police Department's Central Market Safety Hub at Jessie and Sixth Streets.

Land Uses Between Folsom and Brannan Streets

Between Folsom and Harrison Streets, land uses on the east side of the street include auto service, surface parking, and light industrial uses, with a vacant lot that formerly contained a gas station. On the west side of the street, uses include single-story commercial and automotive repair buildings, three- to five-story multi-family residential buildings, and a gas station. Between Harrison and Bryant Streets, land uses on the east side of the street include a mix of low- to mid-rise commercial and light industrial uses and an entertainment use at the southeast corner of Sixth and Harrison Streets. Land uses on the west side include single-story-commercial and auto service buildings, surface parking lots beneath the I-80 overpass, a three-story residential building with ground-floor commercial uses, and a three-story commercial building at the northwest corner of Sixth and Bryant Streets. Between Bryant and Brannan Streets land uses on both sides of the street are predominantly low- to mid-rise commercial buildings, most notably the San Francisco Flower Mart at the northeast corner of Sixth and Brannan Streets. There is a five-story residential building at the northwest corner of Sixth and Brannan Streets.

General Land Use Patterns

As noted above, residential uses in SoMa are located along the major east-west streets such as Mission, Howard, Folsom, Harrison, Bryant, and Brannan Streets and along alleys south of Mission Street such as Minna, Natoma, Clementina, Shipley, and Clara Streets. The major east-west streets are characterized by a variety of moderate- to high-density mixed use residential and commercial developments. Along Mission, Howard, and Folsom Streets, the nearby land uses to the east and west begin to change from the downtown commercial and retail character to a greater proportion of residential, neighborhood-serving commercial, and PDR uses. Along Harrison, Bryant, and Brannan Streets, predominant land uses include low- to mid-rise light industrial and PDR work spaces with interspersed residential and commercial uses such as the live/work residential building at 767 Bryant Street (Villa dei Fiori). Land uses along the alleys are primarily low- to mid-rise multi-family residential uses interspersed with one- to two-story commercial and community-serving uses such as the South of Market Health Center (551 Minna Street) and surface parking lots. Stevenson and Jessie Streets (between Market and Mission Streets) are service alleys used for commercial loading associated with the commercial and retail uses in buildings that front either Market or Mission Streets. There are also a limited number of commercial uses such as restaurants and surface parking lots along these two alleys, as well as a few mid-rise residential uses (near Mint Plaza toward Fifth Street).

Public Facilities

Public facilities along or near the project corridor include the following:

- Gene Friend Recreation Center, located on the northwest corner of Sixth and Folsom Streets;

- Victoria Manalo Draves Park, located between Folsom and Harrison Streets and Sherman Street and Columbia Square, approximately 350 feet west of the project corridor;
- Bessie Carmichael Elementary School, located at 375 Seventh Street, approximately 600 feet west of the project corridor; and
- San Francisco Hall of Justice and County Jail, located at 850 Bryant Street, approximately 250 feet west of the project corridor.

Existing Roadway Network

Overview

The SoMa neighborhood (originally planned as the city’s industrial base) was constructed along a regular grid of mostly rectangular blocks with larger arterial streets intersected by local streets or alleys. The SoMa blocks were originally laid out on a very large scale (550 by 825 feet) and are four times as large as the blocks north of Market Street.²⁶ The two street grids meet at Market Street. The description of the roadway network covers a study area generally bounded by Fifth Street to the east, Brannan Street to the south, Eighth Street to the west, and Golden Gate Avenue, Leavenworth Street, Turk Street, and Jones Street to the north.²⁷ The primary roadways that intersect or parallel Sixth Street, i.e., Mission, Howard, Folsom, Harrison, Bryant, Brannan, Fifth, Seventh, and Eighth Streets, are relatively wide, with curb-to-curb rights-of-way ranging from 53 feet at Mission Street to 66 feet at Bryant Street. Most of these streets accommodate up to four lanes of traffic (in addition to one or two parking lanes) and have sidewalks widths ranging from 8 feet along Harrison and Bryant Streets to 15 feet along Mission Street. Market Street, at the northern end of the project corridor, is the city’s widest street, with a 120-foot-wide right-of-way; it has 25- to 30-foot-wide sidewalks, functions as the backbone of San Francisco’s public transportation system, and is a major regional destination. I-280, at the southern end of the corridor, provides a regional freeway connection to the Peninsula and the South Bay. Regional access is also provided via I-80 and U.S. 101 at on- and off-ramps located at Fifth, Seventh, Eighth, Ninth, and Tenth Streets.

Sixth Street is a four-lane, north-south roadway that provides access to and from the I-280 on- and off-ramps at Brannan Street. North of Market Street, Sixth Street continues as Taylor Street (a one-way northbound street). South of Market Street, it serves as the continuation of Golden Gate Avenue (a one-way eastbound street). Sixth Street serves as a connector to the East SoMa and Western SoMa neighborhoods as well as Market Street and neighborhoods to the north such as the Tenderloin, Civic Center/Downtown, and Financial District. As previously described, Sixth Street between Market and Brannan Streets has two travel lanes in each direction and parallel parking on

²⁶ City and County of San Francisco Planning Department, South of Market Area San Francisco California Historic Context Statement (prepared by Page & Turnbull), June 30, 2009, pp. 2-3. Available online at <http://sf-planning.org/Modules/ShowDocument.aspx?documentid=372>. Accessed May 25, 2016.

²⁷ This defined area encompasses the study area for assessing the traffic-related effects of the removal of two mixed use travel lanes on Sixth Street.

both sides of the street. The public right-of-way between Market and Brannan Streets is 82.5 feet wide, with a curb-to-curb right-of-way of 59 feet between Market and Howard Streets and 62.5 feet between Howard and Brannan Streets. Peak-period tow-away lane designations (7 to 9 a.m. and 3 to 7 p.m.) are in effect along both the east- and west-side parking lanes on Sixth Street between Folsom and Brannan Streets and along the west-side parking lane between Howard and Folsom Streets, starting 300 feet south of Howard Street.

In the *General Plan*, Sixth Street is designated as a Major Arterial between Market and Brannan Streets in the Congestion Management Program (CMP) Network and a Neighborhood Commercial Street between Market and Folsom Streets, and is part of the Metropolitan Transportation System (MTS) Network. In the *Better Streets Plan*, it is identified as a Downtown Commercial Street between Market and Mission Streets, as a Commercial Throughway between Mission and Folsom Streets, and as a Mixed-Use Street south of Folsom Street.

Intersecting and Parallel Roadways

The general characteristics of the intersecting and parallel roadways near Sixth Street are as follows:

- Market Street is a two-way, four-lane roadway with center-running transit-only lanes between Gough and Third Streets. In the eastbound direction, there are forced-right turns for private vehicles at Tenth and Sixth Streets. Market Street is classified in the *General Plan* as a Transit Conflict Street between The Embarcadero and Gough Street. Between The Embarcadero and 17th Street it is classified as a Primary Transit Street (Transit Oriented), a Citywide Pedestrian Network Street, and a Neighborhood Commercial Pedestrian Street. It is part of the CMP Network. A Class II/Class III bikeway runs east-west on Market Street between The Embarcadero and Castro Streets. The *Better Streets Plan* identifies Market Street as a Ceremonial (Civic) Street.
- Mission Street is a two-way, four-lane roadway with two travel lanes in each direction and curbside lanes designated as transit-only lanes during the commute period, from 11th to Beale Streets in the eastbound direction (7 to 9 a.m.) and from Main to 11th Streets in the westbound direction (4 to 6 p.m.). Mission Street is classified in the *General Plan* as a Transit Conflict Street, a Primary Transit Street (Transit Oriented), a Citywide Pedestrian Network Street, and a Neighborhood Commercial Pedestrian Street. It is part of the CMP Network.
- Howard Street is a one-way, east-west roadway with three westbound-only travel lanes and a separated Class II bicycle lane on the north side of the street. Howard Street forms a couplet with Folsom Street. Howard Street is classified in the *General Plan* as a Major Arterial and part of the MTS Network.
- Folsom Street is a one-way, east-west roadway with three eastbound-only travel lanes and a separated Class II bicycle lane on the south side of the street. Folsom Street forms a couplet with Howard Street. Folsom Street is classified in the *General Plan* as a Major Arterial and part of the MTS Network.
- Harrison Street is a one-way, east-west roadway with four westbound-only travel lanes. Harrison Street forms a couplet with Bryant Street. Harrison Street is a primary route to

the I-80 freeway, with on-ramps at the First Street and Essex Street intersections, and to U.S. 101 southbound, with an on-ramp at Fourth Street. Harrison Street is classified in the *General Plan* as a Major Arterial, a Primary Transit Street (Transit Important) between Fourth and Seventh Streets, a Secondary Transit Street between Seventh and 11th Streets, and a Neighborhood Commercial Pedestrian Street between Fourth and 16th Streets, and is part of the MTS Network.

- Bryant Street is a one-way, east-west roadway with three to four eastbound-only travel lanes. Bryant Street forms a couplet with Harrison Street. Bryant Street is classified in the *General Plan* as a Major Arterial, a Primary Transit Street (Transit Important) between Fourth and Seventh Streets, and a Secondary Transit Street between Seventh and 11th Streets, and is part of the MTS Network.
- Brannan Street is a two-way, east-west roadway with two travel lanes in each direction. At the I-280 on- and off-ramps, Brannan Street has two westbound travel lanes and two left-turn only pockets (for access to the I-280 on-ramp) and two eastbound travel lanes and a right-turn only lane (for access to the I-280 on-ramp). Brannan Street is classified in the *General Plan* as a Major Arterial and is part of the MTS Network.
- Fifth Street is a two-way north-south roadway with two travel lanes in each direction with Class III bicycle lanes (green-painted sharrows in shared travel lanes) and parking on both sides of the street. It provides access into and out of downtown for East Bay traffic via the eastbound I-80 on-ramp at Bryant Street/Fifth Street and the westbound I-80 off-ramp at Harrison Street/Fifth Street. Fifth Street is also an access route (via Brannan Street) to and from I-280 via the Brannan Street/Sixth Street on- and off-ramps. Fifth Street is the only other major two-way, north-south roadway that traverses Central SoMa (the other being Sixth Street). Fifth Street is classified in the *General Plan* as a Major Arterial and is part of the MTS Network.
- Seventh Street is a one-way, north-south roadway with three to four northbound-only travel lanes, a Class II bicycle lane on the east side of the street, and parking on both sides of street. Seventh Street forms a couplet with Eighth Street. Seventh Street is classified in the *General Plan* as a Major Arterial between Market and Bryant Streets and is part of the MTS Network.
- Eighth Street is a one-way, north-south roadway with three southbound-only travel lanes, a parking-protected Class II green-painted bicycle lane on the west side of the street, bus boarding islands on the west side of street, curb parking on the east side of the street, and a buffered parking lane on the west side street. Eighth Street is classified in the *General Plan* as a Major Arterial between Market and Bryant Streets and is part of the MTS Network.
- Golden Gate Avenue is a one-way, two- to three-lane roadway ending at the intersection of Sixth/Market/Taylor/Golden Gate. Golden Gate Avenue provides two through lanes, an eastbound separated bicycle lane (Class II) between Polk and Market Streets, and parking on both sides of the street. The segment between Jones and Market Streets has two travel lanes: one through lane that continues onto southbound Sixth Street and one left-turn-only lane onto northbound Taylor Street. Golden Gate Avenue is classified in the *General Plan* as a Major Arterial and is part of the MTS Network. In the *Better Streets Plan* it is identified as a Neighborhood Commercial Street and Downtown Residential Street.

The minor east-west streets between Market and Brannan Streets – Stevenson, Jessie, Minna, Natoma, Tehama, Clementina, Shipley, and Clara Streets and Ahern Way – are classified as Local Streets in the *General Plan*. The intersecting alleyways are predominantly one-way alleys with eastbound-only travel on Stevenson Street and Jessie Street (east of Sixth Street). West of Sixth Street, Jessie Street is two-way street; however, this segment is a dead-end. Minna and Natoma Streets (between Mission and Howard Streets) are one-way alleys with westbound-only travel on Minna Street, and eastbound-only travel on Natoma Street. Tehama and Clementina Streets (between Howard and Folsom Streets) are one-way alleys that terminate on the west at Sixth Street, with westbound-only travel on Tehama Street and eastbound-only travel on Clementina Street. Shipley and Clara Streets are one-way alleys that terminate on the west at Sixth Street, with westbound-only travel on Shipley Street and eastbound-only travel on Clara Street. Sidewalk widths on the alleys range from 6 to 10 feet.

Cumulative Setting

Past, present, and reasonably foreseeable cumulative development projects within a ¼-mile radius of the Sixth Street corridor are listed in Table 6: Cumulative Projects in the Project Vicinity on pp. 42-44 and shown on Figure 12: Cumulative Projects on p. 45. The cumulative development projects are either under construction or the subject of an Environmental Evaluation Application on file with the Planning Department. In addition to the cumulative development projects listed in Table 6, citywide transit, bicycle, and pedestrian plans and programs, along with local area plans and transportation infrastructure projects, are also considered part of the cumulative setting. The local area plans and transportation infrastructure projects are shown on Figure 12 and described in detail below and on pp. 41-52.

Safer Market Street Plan

Market Street is the location of four of the top 20 intersections for pedestrian injury collisions citywide, and the top two intersections for bicycle injury collisions. This project (which is underway) aims to further Vision Zero efforts and consists of the extension of transit-only lanes, the introduction of turn restrictions for private automobiles between Third and Eighth Streets at Market Street, and the development of supplemental safety treatments. On August 11, 2015, the turn restrictions between Third and Eighth Streets were implemented. The extension of the transit-only lanes and supplemental safety treatments are expected to be completed by winter of 2016.

Seventh Street Road Diet

This project would reduce the number of travel lanes on Seventh Street between Market and Brannan Streets from four lanes to three lanes. Seventh Street has an existing bicycle lane that would be preserved and upgraded to a parking-protected bicycle facility.

Taylor Street Road Diet

This project would reduce the number of travel lanes on Taylor Street between Market and Sutter Streets from three lanes to two lanes.

Jessie Street Signalization Project (Map Key A)

This project would add a traffic signal at the intersection of Sixth and Jessie Streets.

Howard Street Signalization Project (Map Key B)

This project would modify the traffic signal at Sixth and Howard Streets to include a protected left-turn phase on westbound Howard Street to southbound Sixth Street, would restripe one travel lane from a shared westbound through/left lane to a westbound through-only lane, and install curb bulb-outs at the southeast and southwest corners of the intersection.

Table 6: Cumulative Projects in the Project Vicinity

Map Key	Project Name (Case Number)	Description
North of Market Street		
5	168 Eddy Street/210 Taylor Street (2007.1342E)	Construction of an 8-story, 90-foot-tall, 116,100-gsf building (103 affordable residential units and 5,500 gsf of ground-floor retail space) on an existing surface parking lot.
1	181 Turk Street/180 Jones Street (2005.0267E)	Construction of an 8-story building (up to 37 residential units and 2,700 sq. ft. of ground-floor retail space) on an existing surface parking lot.
12	19-25 Mason Street & 2-16 Turk Street (2012.0678E)	Construction of a 12-story, 114,118-gsf mixed-use building (up to 155 residential units, 68 off-street parking spaces, and 2,825 gsf of ground-floor retail space) on two adjoining parking lots.
6	229 Ellis Street (2009.0343E)	Interior structural improvements and addition of three stories to an existing 3-story building with 18 residential units and 5,704 gsf of retail space.
27	1 Jones Street ^a (2011.0167E)	Renovation of the Hibernia Bank Building (categorical exemption issued and Certificate of Appropriateness granted in 2012).
Along Market Street		
2	935-965 Market Street ^b (2005.1074E)	Construction of a new 5-story, 90-foot-tall, 367,000-sq.-ft. retail center.
20	950 Market Street (2013.1049E)	Demolition of five structures and construction of a mixed-use complex with up to 75,000 gsf of performing arts space, 316 residential units, 310 hotel rooms, 24,000 gsf of office space, 15,000 gsf of retail space, and 198 below-grade parking spaces.
31	1028 Market Street (2014.0241E)	Demolition of a 2-story commercial building and construction of a 13-story, 120-foot-tall building with 186 residential units, 9,675 gsf of retail space, and 42 below-grade parking spaces.
23	1053-1055 Market Street (2014.0408E)	Demolition of an existing commercial building and construction of a 10-story, 90-foot-tall hotel with 155 rooms and 4,000 gsf of ground-floor retail/restaurant space.

Map Key	Project Name (Case Number)	Description
17	1066 Market Street (2013.1753E)	Demolition of a 2-story commercial building and construction of a 14-story, 120-foot-tall building with up to 330 residential units, 1,885 sq. ft. of retail space, 2,678 sq. ft. of commercial space, and 112 below-grade parking spaces.
19	1075 Market Street (2013.1690E)	Demolition of an existing commercial building and construction of an 8-story, 90-foot-tall mixed-use building with up to 90 residential units, 9,000 gsf of retail space, and 24 parking spaces.
26	1095 Market Street ^a (2014-000803PRJ)	Change of use from office to hotel and restaurant/nightclub (202 hotel rooms and 3,992 gsf of ground-floor retail space), and interior renovations to accommodate the change of use and the addition of one story atop the existing structure.
16	1100 Market Street ^a (2012.1123E)	Renovation of existing Renoir Hotel (interior renovation and top floor addition).
21	1125 Market Street (2013.0511E)	Construction of a 12-story hotel with up to 140 rooms, 9,500 gsf of retail/restaurant space, and 21,800 gsf of office space.
South of Market Street		
9	527 Stevenson Street (2010.0948)	Conversion of a vacant, 42,600-sq.-ft., 4-story industrial building to a residential use with 67 residential units, 210 sq. ft. of ground-floor commercial space, and 8 tandem off-street parking spaces.
3	570 Jessie Street (2005.1018E)	Demolition of an existing 15,000-sq.-ft. office/printing shop and construction of an 80-foot-tall, 31,135-sq.-ft. building with 47 residential units and 26 parking spaces.
8	925 Mission Street (5M) (2011.0409E)	Retention and renovation/rehabilitation of two buildings (901-933 Mission Street and 447-449 Minna Street), demolition of six existing buildings, and construction of four new buildings ranging from approximately 50 to 470 feet tall. Two project options consider varying residential and office compositions.
4	1036-1040 Mission Street (2007.1464E)	Construction of 9-story, 90-foot-tall building with 83 affordable residential units and 963 gsf of ground-floor retail space.
11	119 Seventh Street (2012.0673E)	Construction of an 8-story building with 39 residential units, one below-grade parking level for 14 parking spaces, and approximately 2,000 gsf of ground-floor retail space.
14	280 Seventh Street (2016-004946ENV)	Demolition of an existing commercial building and construction of 6-story building with up to 29 residential units and 4,000 gsf of ground-floor retail space.
25	475 Minna Street (2014.1442ENV)	Construction of a 9-story, 84-foot-tall, 15,240-sq.-ft. residential building (15 residential units) on an existing surface parking lot.
38	214 Sixth Street (2013.0538E) ^b	Demolition of an existing 144-room hotel building and construction of a 9-story, 85-foot-tall building with up to 67 affordable residential units and 2,845 sq. ft. of retail space.
29	861-899 Howard Street & 235 Fifth Street (2015-009141ENV)	Conversion of approximately 86,166 gsf of vacant educational/institutional space in the existing buildings at 875 and 899 Howard Street to general office.
10	909-921 Howard Street & 206 Fifth Street (2012.1047E)	Demolition of two existing buildings and development of a mixed-use building with up to 60 affordable residential units, 112 market-rate residential units, and 9,895 gsf of ground-floor retail space.
28	1025 Howard Street (2015-005200ENV)	Demolition of an existing building and construction of an 8-story hotel with ground-floor retail space and below-grade parking.
33	1076 Howard Street (2015-015152ENV)	Change of use from PDR uses to office and a vertical addition of one story.

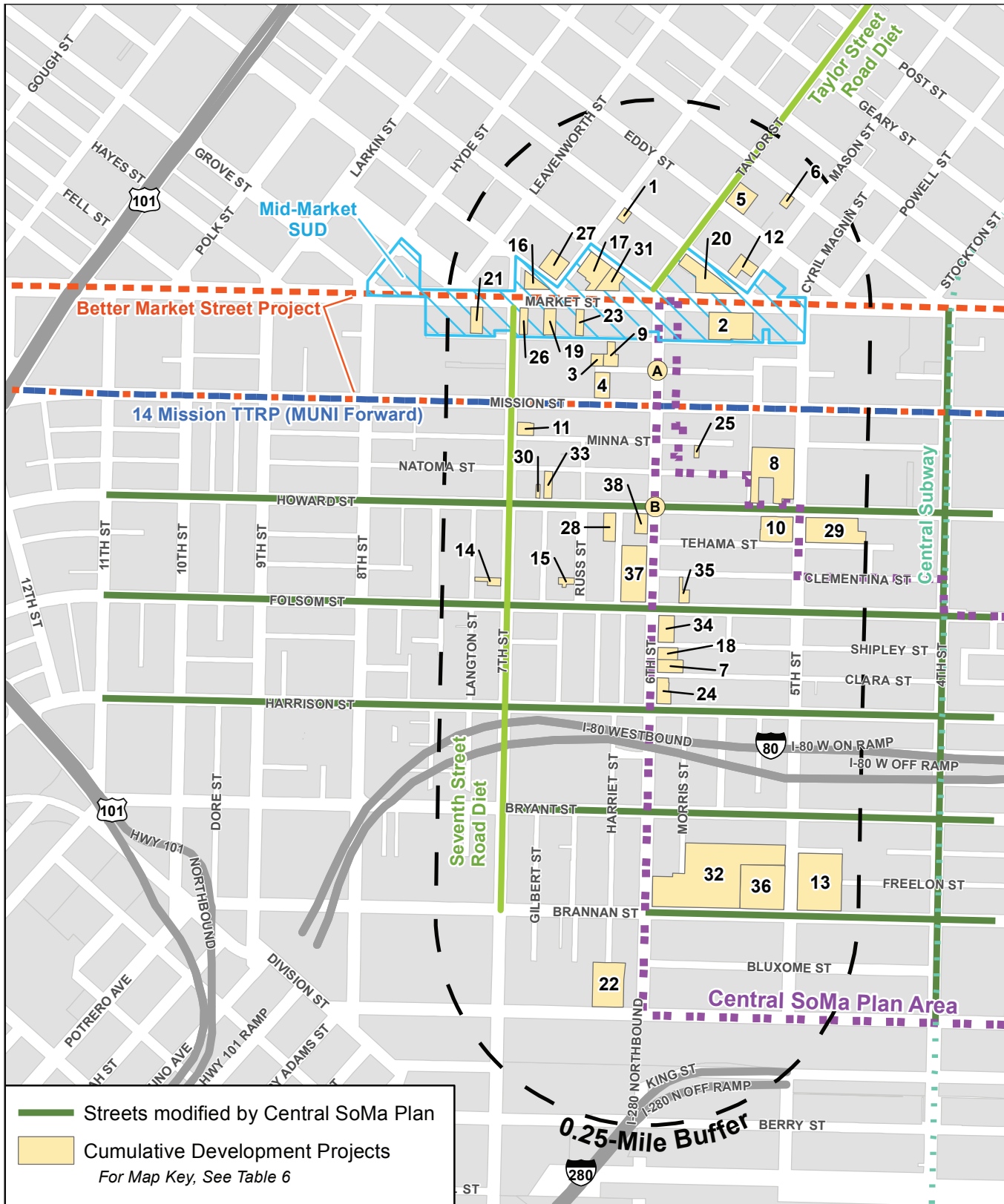
Map Key	Project Name (Case Number)	Description
30	1082 Howard Street (2015-010371ENV)	Demolition of an existing 2-story commercial building and construction of a 9-story, 83-foot-tall, multi-family residential building with on-site parking and ground-floor active space (lobby).
37	Gene Friend Recreation Center Improvement Project	Feasibility study and concept design for the center's renovation, being prepared for San Francisco Recreation and Parks and The Trust for Public Land.
15	190 Russ Street (2013.0350E)	Demolition of an existing building and construction of a 64-foot-tall building with nine residential units.
34	301 Sixth Street (2013.0538E)	Demolition of an auto detailing shop and construction of a 7-story building with 84 residential units, ground-floor commercial space, and 46 off-street parking spaces.
18	345 Sixth Street (2013.1773E)	Construction of an 8-story building with 89 SRO units and 3,090 gsf of ground-floor retail space.
7	363 Sixth Street (2011.0586E)	Construction of a 9-story building with 103 residential units.
24	377 Sixth Street (2014.0832E)	Demolition of a gas station and construction of an 8-story, 85-foot-tall building with 116 residential units, 4,820 sq. ft. of ground-floor commercial space, and 87 parking spaces.
35	980 Folsom Street (2013.0977E)	Demolition of a one-story auto repair building and construction of a building with 34 residential units, 765 gsf of ground-floor retail, and 21 at-grade stacked parking spaces.
13	598 Brannan Street (2012.0640E)	Demolition of existing buildings and construction of two, 11-story, 160-foot-tall buildings with a total of 700,460 gsf of office space.
36	610-620 Brannan Street (2014.0416E)	Removal of a paved lot and three existing single-story buildings and construction of an approximately 160-foot-tall, 620,000-gsf office building with public open space, PDR uses, street-facing retail, and a subsurface parking garage.
32	630-698 Brannan Street (2015-001903 / 2015-004256)	Demolition of existing San Francisco Flower Mart buildings and adjoining surface parking lots and construction of up to 2,269,980 sq. ft. of above-grade buildings for office, retail, restaurant, and wholesale flower market (new San Francisco Flower Mart) uses; 458,523 sq. ft. of below-grade parking and loading, and 40,612 sq. ft. of open space.
22	510-520 Townsend Street (2014.0679E)	Demolition of existing buildings and construction of a 7-story, 85-foot-tall building with 317,160 gsf of office space and underground parking equal to 7 percent of total floor area.

Notes: gsf = gross square feet; sq. ft. = square feet; -sq.-ft. = -square-foot; PDR = production, distribution, and repair; SRO = single room occupancy

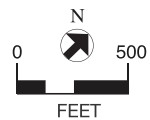
^a Under renovation.

^b Under construction.

Source: San Francisco Planning Department Property Information Database and Active Permits in My Neighborhood Map. Available online at <http://propertymap.sfplanning.org/?dept=planning> and <http://www.sf-planning.org/index.aspx?page=2575>. Accessed May 18, 2016.



SOURCE: SF Planning Department



SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 12: CUMULATIVE PROJECTS

Central SoMa Plan

The Central SoMa Plan (formerly the Central Corridor Plan) would establish a land use and transportation planning framework for the 230-acre Central SoMa Plan Area. The Plan Area encompasses 17 full and partial city blocks as well as area streets that in some cases extend beyond the boundaries of the Plan Area. The Plan Area is bounded by Second Street on the east, Townsend Street on the south, Sixth Street on the west, and an irregular border that generally jogs along Folsom, Howard and Stevenson Streets on the north. This plan proposes to rezone the area along the southern portion of the proposed Central Subway transit line along Fourth Street (described below on pp. 47-48) to increase the amount of allowable residential and commercial development by (1) removing land use restrictions to support a greater mix of uses, while also emphasizing office uses in the central portion of the Plan area; (2) increasing height limits on certain sites, primarily south of Harrison Street; and (3) modifying the system of streets and circulation to meet the needs and goals of a dense transit-oriented district. The Central SoMa Plan would also include public realm improvements; new open space; and policies to preserve neighborhood character, preserve historic structures, improve public amenities, and promote sustainability. The Central SoMa Plan recommends street network changes throughout the Plan Area, with specific designs for Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth Streets as follows:²⁸

- Howard Street (from Third to Eleventh Streets) would be reconfigured from four westbound travel lanes and a bicycle lane to two westbound travel lanes and a two-way cycle track^{29,30} along the south side of the street. On-street parking would remain on both sides of the street, with a peak-period tow-away travel lane on the north side during commute hours.

If converted to two-way traffic, Howard Street would be redesigned for two travel lanes in each direction and bicycle lanes in each direction. On-street parking would be provided on one side of the street between Fourth and Sixth Streets. Between Sixth and Eleventh Streets, on-street parking would be provided on both sides of the street, and these curb lanes would be used as peak-period tow-away travel lanes.

- Folsom Street (from Second to Eleventh Streets) would be reconfigured from four eastbound travel lanes and a bicycle lane to two eastbound travel lanes and a two-way cycle track along the north side of the street. On-street parking would be retained along both sides of the street, with a peak-period tow-away travel lane on the south side during commute hours.

If converted to two-way traffic, Folsom Street would be redesigned for one travel lane in both directions and one-way cycle tracks (raised or buffered) in both directions from The Embarcadero to Eleventh Street. On-street parking would be provided on one side of the street between Second and Eleventh Streets and on both sides of the street between Second

²⁸ San Francisco Planning Department, Central SoMa Plan Draft EIR, December 14, 2016 (Case File No. 2011.1356E). Available online at http://sfmea.sfplanning.org/CentralSoMaPlanDEIR_2016-12-14.pdf. Accessed January 28, 2017.

²⁹ Only three travel lanes west of Sixth Street.

³⁰ A cycle track is an exclusive bicycle facility that is physically separated from motor traffic and is distinct from the sidewalk for the exclusive use of bicycles.

Street and The Embarcadero. Between Second and Fourth Streets, Folsom Street would also include one eastbound transit-only lane. During peak periods, westbound auto traffic would be required to turn right onto Third Street and eastbound auto traffic would be required to turn right onto Fourth Street.

- Harrison Street (from Second to Tenth Streets) would be reconfigured from five one-way (westbound) travel lanes to three westbound travel lanes. On-street parking would be retained, but this area would be signed as a peak-period tow-away travel lane on the south side of the street and as a day-time transit-only lane on the north side of the street.
- Bryant Street (from Second to Seventh Streets) would be reconfigured from five one-way (eastbound) travel lanes to three eastbound travel lanes. On-street parking would be retained, but this area would be signed as a peak-period tow-away travel lane on the north side of the street and as a day-time transit-only lane on the south side of the street.
- Brannan Street (from Second to Sixth Streets) would be reconfigured from four travel lanes (two eastbound and two westbound) to two travel lanes (one in each direction). One-way cycle tracks would be installed on the north and south sides of the street, sidewalks would be widened, and new street furnishings would be installed.

The Planning Department published a Notice of Preparation (NOP) of an Environmental Impact Report (EIR) on the Central SoMa Plan on April 24, 2013, an Initial Study on February 12, 2014, and a Draft EIR on December 12, 2016.

Central Subway

The Central Subway represents the second phase of the T Third Street light rail service, extending service along a 1.7-mile alignment (including 1.5 miles underground) from the Caltrain terminal at Fourth and King Streets north along Fourth and Stockton Streets through Central SoMa/Yerba Buena Center and Union Square to Chinatown. Four new stations would be built:³¹

- Fourth and Brannan Station, a surface (street-level) station located at Fourth and Brannan Streets;
- Yerba Buena/Moscone Station, an underground station located at Fourth and Folsom Streets;
- Union Square/Market Street Station, an underground station located on Stockton Street at Union Square; and
- Chinatown Station, an underground station located at Stockton and Washington Streets.

Tunneling work was completed in June 2014, but construction will continue until 2018, with an opening scheduled for 2019.³²

The light rail operating plan calls for three distinct services for the T Third Street:

³¹ SFMTA, *Project Overview* (web site). Available online at <http://www.centralsubwaysf.com/content/project-overview>. Accessed June 2, 2016.

³² SFMTA, *Information: Central Subway* (info sheet). Available online at http://centralsubwaysf.com/sites/default/files/CentralSubway_InfoSheet.pdf. Accessed June 2, 2016

- A “long” service between the southern terminus at Sunnydale Station in Visitacion Valley and the Fourth and King/Berry Station, continuing in the Central Subway to its northern terminus in Chinatown. This plan would move the existing T Third Street service from The Embarcadero into the Central Subway.
- A “short” service between Mission Bay and Chinatown, with southbound trains turning around via the Mission Bay Loop (Third Street to 18th Street, Illinois Street, 19th Street, and back to Third Street).
- A “very short” service between the Fourth and King/Berry Station and Chinatown.

Each service would operate at 6-minute headways in the peak period and 10-minute headways during the midday, with the exception of the “short” service.

To optimize transit service in the Central Subway corridor, bus service would also be restructured. The proposed changes to bus service include the elimination of the “short” line service on the Muni 30 Stockton operating between the Caltrain terminal (Fourth Street/Townsend Street) and Fort Mason/Aquatic Park (Van Ness Avenue/North Point Street), as well as minor adjustments to frequency on the Muni 30 Stockton “long” line between the Caltrain terminal and Jefferson Loop (Broderick Street/Beach Street) and the Muni 45 Union/Stockton. As noted above, the SFMTA temporarily rerouted the southbound 30 Stockton, 45 Union-Stockton, and 8 Bayshore, 8AX/8BX Bayshore Express buses from Fourth Street to Fifth Street to accommodate the Central Subway construction. These routes are expected to shift back to Fourth Street in 2018-2019 upon completion of the Central Subway construction on Fourth Street.

Mid-Market Special Use District

The San Francisco Planning Department, in coordination with the general public and private groups, is currently working to establish a new Mid-Market Arts and Arts Education Special Use District (referred to as the “Mid-Market SUD”). The Mid-Market SUD generally encompasses all parcels fronting Market Street between Fifth and Eighth Streets. The proposed Mid-Market Arts and Arts Education Special Height District (“Mid-Market Height District”) includes parcels within the Mid-Market SUD; collectively these two components are referred to as the “Mid-Market SUD and Height District.”

With implementation of the Mid-Market SUD and Height District, parcels would continue to be subject to the controls of the existing zoning and height and bulk districts, but the proposed Mid-Market SUD and Height District would allow for specific exceptions to these controls. Based on the current development capacity of the Mid-Market SUD and Height District, there is a latent development potential of approximately 1.64 million square feet on parcels within the boundaries of the proposed Mid-Market SUD under existing zoning. The proposed Mid-Market Height District would increase this development potential to approximately 2.22 million square feet, resulting in a net development potential of approximately 576,000 square feet. In order to maximize development potential under the Mid-Market SUD and Height District, however,

33 percent of all new development potential would need to be arts and arts education uses, resulting in approximately 190,000 square feet of arts and arts education uses and 386,000 square feet of other (i.e., non-arts) uses.³³ The cumulative analyses for the Sixth Street Pedestrian Safety Project account for this potential growth.

Better Market Street Project

A coordinated multi-agency City effort is currently underway to redesign San Francisco's main thoroughfare under the Better Market Street Project (BMSP). The goal of the BMSP is to redesign, revitalize, and reestablish Market Street as San Francisco's main thoroughfare and its cultural, civic, and economic center. The project envisions a new Market Street that is more beautiful and green, has enlivened public plazas and sidewalks with cafés, showcases public art and performances, provides dedicated bicycle facilities, and delivers efficient and reliable transit. The BMSP area encompasses Market Street from Octavia Boulevard to The Embarcadero and potentially Mission Street between Valencia Street and The Embarcadero. The BMSP includes three alternatives, with two design options:³⁴

- Alternative 1 would restrict private vehicles on Market Street between Steuart Street and Van Ness Avenue in the westbound direction and between 10th and Main Streets in the eastbound direction. This alternative would not allow commercial or passenger loading on Market Street, with the exception of paratransit users, and loading zones along Market Street would be relocated to on-street zones along adjacent side streets or parallel alleys.
- Alternative 2 would place fewer restrictions on private vehicles traveling on Market Street and allow private vehicles on more sections of Market Street than Alternative 1. Under Alternative 2, fewer loading zones would be removed.
- Alternative 3 would provide the same modifications to Market Street as Alternative 1 under Design Option A (described below) but would also reconfigure Mission Street to include a new protected cycle track in each direction and one vehicular travel lane in each direction (with right-turn pockets where feasible). To connect Mission Street with Market and Valencia Streets, new protected cycle tracks would be provided on McCoppin and 10th Streets, and a new eastbound contra-flow bicycle lane would be provided on Otis Street. Alternative 3 also would relocate existing transit services provided on Mission Street west of the new Transbay Transit Center to Market Street.

Alternatives 1 and 2 include two designs for the bicycle facilities on Market Street, Design Option A and Design Option B. Under Design Option A, an enhanced version of the existing shared vehicle and bicycle lane with painted sharrows (shared lane pavement markings) would be provided at locations where a dedicated bicycle facility is not already present. Under Design Option B, a

³³ Detailed information about the Mid-Market SUD and Height District development potential is subject to review by the San Francisco Planning Department and is subject to change.

³⁴ San Francisco Planning Department, Notice of Preparation of an Environmental Impact Report and Initial Study, March 30, 2016. Available online at http://sfmea.sfplanning.org/2014.0012E_BMS_Initial%20Study%20document-Final.pdf. Accessed April 4, 2016.

new raised cycle track would be provided along the entire length of Market Street, except at locations where the BART/Muni Metro station entrances or other obstructions would not allow it.

The Planning Department published a Notice of Preparation of an Environmental Impact Report for the BMSP on January 14, 2015 and an Initial Study on March 30, 2016. Environmental review of the BMSP is proceeding.

Muni Forward Implementation Plan (Muni Forward)

Muni Forward (formerly the Transit Effectiveness Project) presents a thorough review of San Francisco's public transit system, initiated by the SFMTA in collaboration with the City Controller's Office. Muni Forward is aimed at improving reliability, reducing travel times, providing more frequent service, and updating Muni bus routes and rail lines to better match current travel patterns. The SFMTA Board of Directors approved the Transit Effectiveness Project on March 28, 2014. Muni Forward components will be implemented based on funding and resource availability. The first group of service improvements were implemented in Fiscal Year 2015 and additional service improvements will be implemented in subsequent phases.³⁵ Muni Forward recommendations include new routes and route realignments, more service on busy routes, and elimination or consolidation of certain routes or route segments with low ridership. The following changes are planned under Muni Forward for routes in the vicinity of the project corridor:³⁶

- Minor frequency changes will be made to the F Market & Wharves, J Church, K Ingleside, T Third, L Taraval, M Ocean View, and N Judah.
- The 5R Fulton Rapid route will make local stops west of Eighth Avenue and limited stops between Eighth Avenue and Market Street, and will resume local stops on Market Street to the Transbay Terminal. The 5R Fulton Rapid will be supplemented by the 5 Fulton Short line with local service from Eighth Avenue to Downtown. Together, the 5/5R routes will serve all local stops between Ocean Beach and Downtown. The 5/5R routes will be maintained as an electric trolley coach service and bypass wires will be installed to allow limited stop buses to pass local buses between Eighth Avenue and Market Street. The midday frequency will change from 4.5 to 5 minutes. Measures identified in Transit Travel Time Reduction Proposal for the 5 Fulton (TTRP.5) will be implemented to reduce transit travel time along the corridor.
- The 6 Parnassus route will not be modified. Weekday a.m. and p.m. peak frequencies will change from 10 minutes to 12 minutes.
- The 7R Haight-Noriega Rapid, which operates only in the peak period and peak direction, replaces the 7 Haight-Noriega and provides all-day limited-stop service on Haight Street

³⁵ San Francisco Planning Department, Transit Effectiveness Project Final EIR, certified March 27, 2014, Case File No. 2011.0558E. Available online at <http://www.sf-planning.org/index.aspx?page=2970#downloads>. Accessed March 29, 2016.

³⁶ SFMTA, Transit Effectiveness Project Implementation Workbook, March 24, 2014. Note that the names of some routes have changed, e.g., Limited routes, designated with an "L," are now Rapid routes, designated with an "R." Available online at <http://www.sfmta.com/fr/news/project-updates/tep-implementation-workbook-outreach-summary-now-available>. Accessed March 29, 2016.

in both directions. The route makes local stops west of Stanyan Street and limited stops between Stanyan and Market Streets. The midday frequency will change from 12 to 10 minutes. Measures identified in TTRP.71 will be implemented to reduce transit travel time along the corridor.

- The 7X Noriega Express route (which currently stops at Fourth Street) will be extended to Market and Spear Streets in the Financial District.
- The 9 San Bruno/9R San Bruno Rapid routes will not be modified; however, measures identified in TTRP.9 will be implemented to reduce transit travel time along the corridor.
- The 10 Townsend will be rerouted, with a new alignment through Mission Bay and Potrero Hill. The 10 Townsend will be renamed the 10 Sansome.
- The new 11 Downtown Connector is planned to run on North Point Street, Powell Street, Columbus Avenue, Sansome Street, Second Street, and Folsom/Harrison Streets, and then extend into the Mission via the current 12 Folsom-Pacific route. As part of the Rincon Hill Transit Study, SFMTA staff have proposed an alternative route for the 11 Downtown Connector into Mission Bay. They are also evaluating community input to extend the route farther into Potrero Hill.
- The 12 Folsom-Pacific will be discontinued.
- For the 14 Mission/14R Mission Rapid, service will operate using motor coaches rather than trolley buses. Measures identified in TTRP.14 will be implemented to reduce transit travel time along the corridor.
- The 14X Mission Express route will not be modified. Measures identified in TTRP.14 will be implemented to reduce transit travel time along the corridor.
- The 19 Polk route will be modified in the Civic Center area to reduce travel times in both directions. The route will run from Seventh and McAllister Streets to Polk Street in the northbound direction, and from Polk and McAllister Streets to Hyde Street in the southbound direction. The 19 Polk will no longer run on Market Street (between Seventh and Ninth Streets), Larkin Street, Eddy Street, or Hyde Street (between Eddy and McAllister Streets), or on Geary Street between Larkin and Polk Streets.
- The 21 Hayes route will not be modified. Weekday a.m. peak frequency will change from 9 minutes to 8 minutes. Weekday p.m. peak frequency will change from 10 minutes to 9 minutes.
- The 30 Stockton route will not be modified. Service will operate using 60-foot-long articulated buses. Measures identified in TTRP.30 will be implemented to reduce transit travel time along the corridor.
- The 31 Balboa route will not be modified. Weekday p.m. peak frequency will change from 14 minutes to 12 minutes.
- The 47 Van Ness will have increased service frequency during the peak periods and will be rerouted from 11th, Harrison, and Bryant Streets to South Van Ness Avenue, 13th/Division Streets, and Townsend Street.

Muni Forward includes changes along Mission Street (TTRP.14 Moderate and Expanded). In SoMa, the TTRP.14 Moderate Alternative will extend the existing transit-only lane hours of 4 to 6 p.m. in both directions and 7 to 9 a.m. in the inbound direction to full-time for the segment of

Mission Street between Fourth and Eleventh Streets. In addition, the existing 7 a.m. to 6 p.m. hours of the Mission Street transit-only lanes between Fourth and Main Streets in the outbound direction and between Fourth and Beale Streets in the inbound direction will be extended to full-time. The TTRP.14 Expanded Alternative would relocate the existing side-running transit-only lanes between Fifth and First Streets in the outbound direction and between Sixth and First Streets in the inbound direction, so that they become center-running transit-only lanes, and transition the outbound transit-only lane back to its existing curbside configuration and rescind the inbound transit-only lane from Seventh to Sixth Streets. In the immediate vicinity of Sixth Street, Muni Forward improvements include a boarding island to be located on Mission Street west of Sixth Street with an eastbound transit-only lane beginning at the boarding island and extending eastward in the center lane. In the westbound direction, there will be a curbside transit-only lane.

Bay Area Bike Share System

In May 2015, Bay Area Bike Share announced a significant expansion of the existing pilot system in San Francisco. New bike share stations will be rolled out in phases through 2017 and are expected to be completed in 2018. There are currently six Bay Area Bike Share stations located in proximity of the Sixth Street corridor: at the northeast corner of Fifth and Howard Streets (15 bicycles/docks), at the southeast corner of Fifth and Folsom Streets (31 bicycles/docks), on the south side of Market Street between Sixth and Seventh Streets across from the Market Street/Jones Street/McAllister Street intersection (23 bicycles/docks), on the north side of Market Street between Cyril Magnin and Mason Streets near the Powell Street BART (19 bicycles/docks), at Victoria Manalo Draves Park near Folsom Street between Sixth and Seventh Streets (15 bicycles/docks), and on the south side of Bryant Street near the Hall of Justice (about 19 bicycles/docks).³⁷ The Bay Area Bike Share expansion project would include one new station in proximity of the Sixth Street corridor: on the south side of Folsom Street between Sixth and Seventh Streets. Phases 1 and 2 would also include additional stations throughout SoMa and north of Market Street.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	<i>Applicable</i>	<i>Not Applicable</i>
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

³⁷ Bay Area Bike Share. Existing and future station locations. Available online at <https://member.bayareabikeshare.com/stations> and https://www.bayareabikeshare.com/assets/pdf/SF_phase2.jpg. Accessed February 9, 2017.

SAN FRANCISCO PLANNING CODE AND ZONING MAP

Section 203 of the San Francisco Planning Code (Planning Code) states that the Planning Code shall not limit the construction, installation, or operations by any public agency of any street or transportation line, or of incidental appurtenances to any of the foregoing when located in a street, alley, or other right-of-way. The proposed changes to the sidewalks and streets along the Sixth Street corridor would be constructed within the existing public right-of-way and would not be subject to the Planning Code and would not require variances, special authorizations, or changes to the Planning Code or Zoning Map.

PLANS AND POLICIES

The proposed project was reviewed for its consistency with the following applicable plans and policies and no conflicts or inconsistencies were identified. The proposed project's compatibility with plans and policies that do not relate to physical environmental issues will be considered by decision-makers in choosing whether to approve, modify, or disapprove the proposed project. Any potential conflicts identified as part of the approval process would not alter the physical environmental effects of the proposed project.

The following is a list of applicable adopted plans against which the proposed project was reviewed for inconsistencies:

- *San Francisco General Plan;*
- Proposition M, Accountable Planning Initiative;
- Vision Zero;
- Transit First policy;
- Better Streets policy;
- Complete Streets policy;
- *San Francisco Bicycle Plan;*
- *San Francisco Better Streets Plan;*
- *San Francisco Bay Plan;*
- Muni Forward Implementation Plan (formerly the Transit Effectiveness Project);
- *Water Quality Control Plan for the San Francisco Bay Basin*
- San Francisco Congestion Management Program;
- *Bay Area 2010 Clean Air Plan;*
- *Eastern Neighborhoods Area Plan;* and
- *Western SoMa Community Plan.*

The plans listed above address programs and policies related to the implementation of projects and transportation network and streetscape changes to better manage and improve various transportation modes within the existing public right-of-way. Due to the constraints of the existing public right-of-way, the City balances the needs of all transportation modes that share the public right-of-way including bicycles, pedestrians, transit, and vehicles. Conflicts between plans that focus on a particular mode within the public right-of-way may arise; however, many of the plans and policies include some language that indicates that implementation of programs or capital improvements would be coordinated with Vision Zero, the *Better Streets Plan*, and the Transit First policy as well as area plans such as the *Eastern Neighborhoods Area Plan* and the *Western SoMa Community Plan*. Overall, the SFMTA staff have coordinated and will continue to coordinate implementation of pedestrian safety improvements with other transportation programs and projects for transit and non-transit modes. No conflicts with adopted plans or goals of the city and region were identified.

APPROVALS AND PERMITS

Approvals to implement the proposed project are described in detail on pp. 34-35 in Initial Study Section A, Project Description.

Within the City and County of San Francisco, approvals would be required by the SFMTA Board of Directors, SFPW, the SFPUC, and the San Francisco Board of Supervisors.

No other approvals from local jurisdictions or regional, state, or federal agencies have been identified.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

The proposed project could potentially affect the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

- | | | |
|---|--|---|
| <input type="checkbox"/> Land Use | <input type="checkbox"/> Air Quality | <input type="checkbox"/> Biological Resources |
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Geology and Soils |
| <input type="checkbox"/> Population and Housing | <input type="checkbox"/> Wind and Shadow | <input type="checkbox"/> Hydrology and Water Quality |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Recreation | <input type="checkbox"/> Hazards/Hazardous Materials |
| <input type="checkbox"/> Transportation and Circulation | <input type="checkbox"/> Utilities and Service Systems | <input type="checkbox"/> Mineral/Energy Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Public Services | <input type="checkbox"/> Agricultural and Forest Resources |
| | | <input type="checkbox"/> Mandatory Findings of Significance |

Overview

This Initial Study examines the proposed project to identify potential effects on the environment. For each item on the Initial Study checklist, the evaluation has considered the impacts of the proposed project both individually and cumulatively. All items on the Initial Study Checklist that have been checked “Less than Significant Impact,” “No Impact,” or “Not Applicable” indicate that, upon evaluation, staff has determined that the proposed project could not have a significant adverse environmental effect relating to that issue. A discussion is included for those issues checked “Less than Significant Impact” and for most items checked “No Impact” or “Not Applicable.” The identified improvement measure listed in Section F, Mitigation Measures and Improvement Measures, has been agreed to by the SFMTA and will be incorporated into the proposed project. For items checked “Not Applicable” or “No Impact,” the conclusions regarding potential significant environmental effects are based upon field observations, staff and consultant experience and expertise on similar projects, and/or standard reference materials available within the San Francisco Planning Department, such as the Department’s *Transportation Impact Analysis Guidelines for Environmental Review*, the California Natural Diversity Database and maps published by the California Department of Fish and Wildlife, the California Division of Mines and Geology Mineral Resource Zone designations, and the California Department of Conservation’s Farmland Mapping and Monitoring Program. For each checklist item, the evaluation has considered both individual and cumulative impacts of the proposed project.

Public Resources Code Section 21099 (Automobile Delay and Vehicle Miles Traveled Analysis)

California Environmental Quality Act (CEQA) Guidelines Section 21099(b)(1) requires that the Governor’s Office of Planning and Research (OPR) develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Guidelines Section 21099(b)(2) states that, upon certification of the revised guidelines for determining transportation impacts pursuant to CEQA Guidelines Section 21099(b)(1), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*³⁸ with a draft recommendation that transportation impacts for projects (especially auto delay) be measured using a vehicle miles traveled (VMT) metric, rather than a Level of Service (LOS) metric. On March 3,

³⁸ Governor’s Office of Planning and Research (OPR), *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, January 2016. Available online at https://www.opr.ca.gov/s_sb743.php. Accessed March 25, 2016.

2016, in anticipation of the future certification of the revised CEQA Guidelines, the San Francisco Planning Commission adopted a resolution (consistent with OPR’s recommendation) to use the VMT metric instead of automobile delay (as measured by LOS) to evaluate the transportation impacts of projects (Resolution 19579). (Note: The VMT metric does not apply to the analysis of impacts on non-automobile modes of travel such as riding transit, walking, and bicycling.)

Accordingly, this Initial Study does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided in Section E.5, Transportation and Circulation. The topic of automobile delay, nonetheless, may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project. Information about automobile delay and intersection vehicular level of service is provided in a separate memorandum prepared for the proposed project.³⁹

E. EVALUATION OF ENVIRONMENTAL EFFECTS

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.1. LAND USE AND LAND USE PLANNING—					
Would the project:					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impact LU-1: The proposed project would not physically divide an established community. (*Less than Significant*)

The proposed project encompasses the Sixth Street public right-of-way between Market and Brannan Streets (six blocks). The proposed transportation network and streetscape changes would be constructed within the public right-of-way over a 12-month period. Construction would focus on one block at a time, with a maximum construction duration of 10 weeks for the blocks between Market and Howard Streets and 6 weeks for the blocks between Howard and Brannan Streets. As described in Initial Study Section A, Project Description, the proposed changes would include the removal of two travel lanes between Market and Bryant Streets, widened sidewalks and corner

³⁹ Fehr & Peers and LCW Consulting, *Sixth Street Pedestrian Safety Project – Intersection Level of Service Analysis Documentation – Final Memorandum*, July 2017. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

bulb-outs between Market and Howard Streets and at Folsom and Harrison Streets, raised crosswalks at the entrances to alleyways, new traffic signals, and other features. The effects of the construction of the proposed changes would be temporary and would be scheduled to minimize disruption to businesses, residents, visitors, and the transportation system. Access to all buildings would be maintained throughout construction. Some temporary re-routing of bicycles, pedestrians, and vehicles would be needed.

The proposed project would not alter the established street grid or result in the permanent closure of any streets or sidewalks; thus, it would not create a physical barrier to neighborhood access or remove an existing means of access. Rather, the proposed transportation network and streetscape changes are intended to enhance the safety of pedestrian and bicycle travel along and across the Sixth Street public right-of-way. Implementation of the proposed changes would be expected to result in a redistribution of surface traffic from Sixth Street to adjacent and intersecting streets. However, neither construction of the proposed changes nor operational changes due to the modified roadway would be substantial enough to physically divide a community, interfere with or change the existing street network, or impede the passage of persons or vehicles.

For these reasons, the proposed project would not physically divide an established community and this impact would be less than significant. No mitigation measures are necessary.

Impact LU-2: The proposed project would not 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. (*Less than Significant*)

The proposed project includes construction within the Sixth Street public right-of-way. Construction in the public right-of-way is largely under the jurisdiction of SFPW and the SFMTA and is not regulated by the San Francisco Planning Code. The proposed project has been developed in coordination with the City's transportation-related plans and programs, including but not limited to Vision Zero, the *Better Streets Plan*, the *Bicycle Plan*, and the Transit First policy. As described in Section C, Compatibility with Existing Zoning and Plans, on pp. 52-54, the proposed project would not conflict with the *General Plan* or any of its adopted area plans. As further discussed in Section C, Compatibility with Existing Zoning and Plans, the proposed project would not conflict with other plans, policies, and regulations adopted for the purpose of avoiding or mitigating an environmental effect, such as the *Bay Area 2010 Clean Air Plan* and the *Water Quality Control Plan for the San Francisco Bay Basin*.

Based upon the nature of the physical environmental changes that would result from implementation of the proposed project, the proposed project would not conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project and adopted for the purpose of avoiding or mitigating an environmental effect. This impact would be less than significant and mitigation measures are not necessary.

Cumulative Impacts

Impact C-LU-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative land use or land use planning impact. (*Less than Significant*)

The geographic context for cumulative land use impacts is the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52. Most of the private projects would result in the redevelopment of underutilized sites, e.g., surface parking lots and vacant buildings, and others would replace existing structures with new residential, commercial, and retail uses. Some future public projects, e.g., the Better Market Street Project and Muni’s TTRP.14 along Mission Street, would maximize the capacity of the surface public transit system and improve the safety and comfort of pedestrians and bicyclists. Other future public projects, e.g., the Gene Friend Recreation Center Improvement Project, would expand on or improve existing public uses.

The character of Sixth Street and its immediate vicinity will change in the future as development occurs in accordance with the *General Plan*, the *Eastern Neighborhoods Area Plan*, the *Western SoMa Community Plan*, and the Central SoMa Plan (currently undergoing environmental review). As described above, the Central SoMa Plan involves rezoning of the area along the southern portion of the proposed Central Subway transit line along Fourth Street; increases in height limits on certain sites, primarily south of Harrison Street; and street network changes for Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth Streets. Some of the identified development projects would require modifications, variances, or exceptions to Planning Code requirements or *General Plan* land use designations. None of the reasonably foreseeable projects would physically divide an established community. However, these reasonably foreseeable projects could conflict with general plan policies adopted for the purpose of avoiding or mitigating an environmental effect.

The proposed project would improve the safety of pedestrian and bicycle travel along and across Sixth Street and support existing (and future) land uses through changes to the public realm. As described above under Impact LU-2, the proposed project would not result in a significant land use and land use planning impact because it would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental impact. Therefore, the proposed project, in combination with other past, present, and reasonably foreseeable projects, would not contribute considerably to a significant cumulative land use and land use planning impact. Mitigation measures are not necessary.

Topics:	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
E.2. AESTHETICS—Would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or which would substantially impact other people or properties?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Design and aesthetics are, by definition, subjective and open to interpretation by decision-makers and members of the public. In determining whether an impact is significant under the California Environmental Quality Act (CEQA), the question is whether a project would affect the environment of the public in general, not whether a project would affect individual persons or individual private properties. A proposed project would therefore be considered to have a significant adverse effect on visual quality under CEQA only if it would cause a substantial and demonstrable negative change in the physical environment that affects the public in one or more ways.

Impact AE-1: The proposed project would not have a substantial adverse effect on a scenic vista. (*Less than Significant*)

Distant street-level scenic vistas in densely developed San Francisco are typically defined, directed, and framed along view corridors created by streets. At the local level, the *General Plan* identifies the importance of protecting major views in the city with particular attention to views of open space and water. The Urban Design Element of the *General Plan* includes a map titled “Street Areas Important to Urban Design and Views” that identifies particular street segments throughout the city possessing street views of important buildings, streets that define the city form, and streets that extend the effect of public open space.⁴⁰ The map identifies a segment of Sixth Street between Market and Howard Streets with the designation of “Street View of Important Building” indicating that landmark, proposed landmark, or other historic or culturally significant buildings can be viewed from this segment of the Sixth Street. Views of the Golden Gate and Warfield Theatres (at

⁴⁰ San Francisco Planning Department, General Plan Urban Design Element, Street Areas Important to Urban Design and Views Map. Available online at http://generalplan.sfplanning.org/images/I5.urban_design/urb_street_areas_important_to_perception_of_city.pdf. Accessed March 7, 2016.

the intersection Market and Taylor Streets), the Path of Gold Light Standards (along Market Street), and other historic buildings along this stretch of Sixth Street (and in its vicinity) would not be blocked or substantially altered as a result of the proposed project. The Urban Design Element also includes a map titled “Quality of Street Views” that identifies particular street segments throughout the city possessing “Excellent Quality of Street Views.”⁴¹ Sixth Street is identified as having average street views. At the state level, the California Scenic Highway Program identifies highways of outstanding natural beauty. No highways within the City and County of San Francisco are designated under this program; however, I-80 (which crosses Sixth Street between Harrison and Bryant Streets as an elevated freeway) is identified as an “Eligible State Scenic Highway-Not Officially Designated.”⁴²

The proposed project would result in permanent physical changes within the Sixth Street public right-of-way. All construction and staging would occur within the Sixth Street public right-of-way. Construction activities would be temporary and relatively short-term in duration and, as a result, would not have a permanent impact on scenic vistas. The proposed transportation network and streetscape changes would consist of changes to or the introduction of new at-grade and above-grade features. At-grade transportation network and streetscape changes would include the removal of two travel lanes between Market and Howard Streets, widened sidewalks, corner bulb-outs, curb ramps, and raised crosswalks. Above-grade transportation network and streetscape changes would include new traffic signals at Stevenson and Natoma Streets, new street trees along segments of Sixth Street where tree wells may be empty or the current street tree spacing does not meet the requirements of the *Better Streets Plan*, new traffic signs, and new bicycle racks. Existing traffic signals and other streetscape elements would also be relocated as part of the construction of widened sidewalks and corner bulb-outs between Market and Howard Streets and at Folsom and Harrison Streets. Widened sidewalks, corner bulb-outs, curb ramps, and raised crosswalks would be visually unobtrusive. Proposed traffic signals and other proposed above-grade transportation network and streetscape changes and/or relocations could result in minor obstructions of views.

The proposed transportation network and streetscape changes would have dimensions similar to standard SFMTA transportation-related streetscape changes that exist on other streets in the project vicinity and would be subject to standard SFPW design specifications. These elements are common and accepted visual features of San Francisco’s dense and varied visual environment and would be consistent with the existing urban environment and with the type and scale of the existing transportation facilities within the Sixth Street public right-of-way. Therefore, the proposed project

⁴¹ San Francisco Planning Department, General Plan Urban Design Element, Quality of Street Views Map. Available online at http://generalplan.sfplanning.org/images/I5.urban_design/URB_Quality_of_Street_Views.pdf. Accessed March 7, 2016.

⁴² California Department of Transportation, California Scenic Highway Mapping System, San Francisco County. Available online at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm. Accessed March 7, 2016.

would not have a substantial adverse effect on a scenic vista. This impact would be less than significant and mitigation measures are not necessary.

Impact AE-2: The proposed project would not have a substantial adverse effect on scenic resources, including, but not limited to, trees, rock outcroppings, and other features of the built or natural environment which contribute to a scenic public setting. (*Less than Significant*)

Scenic resources are the visible physical features in a landscape (e.g., land, water, vegetation, animals, structures, or other features) that contribute to a scenic public setting. The proposed project would result in physical changes within the Sixth Street public right-of-way, which does not include scenic resources except for street trees and street light standards. Where feasible, existing street trees and street light standards would be retained and/or relocated. Where necessary, street trees would be replaced. All construction and staging would occur within the Sixth Street public right-of-way. Construction activities would be temporary and relatively short-term in duration and, as a result, would not have a permanent impact on scenic resources.

With respect to potential impacts on street trees, as described under Impact BI-3 in Initial Study Topic E.13, Biological Resources, the Planning Department, Department of Building Inspection (DBI), and SFPW have established guidelines to ensure that the Urban Forestry Ordinance governing the protection of trees is implemented. This ordinance aims to optimize the public benefits of trees on the city's streets and public places, including enhancement of the visual environment, by recognizing that trees are an essential part of the city's aesthetic environment and that the removal of protected trees should be addressed through appropriate public participation and dialogue. The ordinance also includes uniform criteria for the designation of landmark trees, which include consideration of the age, size, shape, species, location, historical association, visual quality, and other contribution to the city's character. There are no landmark trees in the Sixth Street public right-of-way.⁴³ As part of the proposed sidewalk widening and corner bulb-out construction between Market and Howard Streets and at Folsom and Harrison Streets (curb bulb-outs only) existing street trees would be retained in their current locations because the relocation of large and healthy street trees to the newly extended portions of the sidewalk may not be feasible due to the difficulty and cost related to such an intervention. Implementation of the proposed project would augment the tree canopy along Sixth Street, especially along the segment between Market and Howard Streets where there are gaps and/or empty street tree wells. Additionally, any existing street trees deemed unhealthy or hazardous would be relocated and/or replaced. Thus, the proposed project would not result in a reduction in the number of existing street trees along Sixth Street and would comply with the established guidelines ensuring that the goal of optimizing the public benefits of the street trees would be achieved. With respect to potential impacts on historic

⁴³ San Francisco Department of the Environment, Landmark Trees in San Francisco, October 2014. Available online at <http://sfenvironment.org/download/list-of-landmark-trees-updated-oct-2014-0>. Accessed January 29, 2016.

resources, as described under Impact CR-1 in Initial Study Topic E.4, Cultural Resources, the decorative street light standards would be relocated and/or replaced in-kind as part of the proposed sidewalk widening. Thus, the proposed project would not result in a reduction in the number of decorative street light standards along Sixth Street between Market and Harrison Streets.

For these reasons, the proposed project would not have a substantial adverse effect on scenic resources that contribute to the public setting. This impact would be less than significant and mitigation measures are not necessary.

Impact AE-3: Implementation of the proposed project would not substantially degrade the existing visual character or quality of Sixth Street or its surrounding area. (*Less than Significant*)

The character and visual quality of Sixth Street are primarily defined by the varied land uses and the character and quality of the buildings that bound and visually enclose its public right-of-way. The predominant visual feature within the public right-of-way are the 30-foot-tall decorative street light standards. These street light standards are regularly spaced between Market and Harrison Streets and consist of a dual head decorative cross arm, pendant-style tear drop luminaires, a decorative octagonal fluted tapered pole, and a decorative octagonal pole base cover. The proposed project would result in permanent physical changes within the Sixth Street public right-of-way but would not introduce any new structures or land uses that could have a substantial adverse effect on the existing visual character or quality of Sixth Street or its surrounding area.

All construction and staging would occur within the Sixth Street public right-of-way. Construction activities would be temporary and relatively short-term in duration and, as a result, would not have an impact on the visual character of Sixth Street or its surrounding area.

The proposed transportation network and streetscape changes are familiar and accepted visual features of the public realm and would contribute to the visual character of Sixth Street and its surrounding area. The proposed changes to the surface transportation network (e.g., removal of travel lanes, widened sidewalks, pedestrian bulb-outs, bicycle lanes, commercial and passenger loading changes, vehicular parking changes, roadway striping) are generally considered unobtrusive. Implementation of these transportation network and streetscape changes would be expected to result in a redistribution of surface traffic from Sixth Street to adjacent and intersecting streets, affecting how residents, workers, and visitors perceive Sixth Street. The resultant changes to the pattern of surface transportation (including bicycle flows and reduced vehicle flows) would enhance the existing visual character of Sixth Street and its surrounding area.

The proposed above-grade transportation network and streetscape changes (e.g., traffic signals, street lights, street trees, signage, etc.) would be more prominent than the proposed at-grade transportation network and streetscape changes. The installation of traffic signals along Sixth Street at Stevenson and Natoma Streets would be new features, while existing traffic signals and

cobra-style light fixtures would be relocated concurrent with the construction of corner bulb-outs at the intersections between Market and Harrison Streets. Decorative street light standards between Market and Howard Streets would be relocated into the extended portions of the widened sidewalks along with other streetscape features such as utility boxes, bicycle racks, and fire hydrants. The existing street trees would likely be retained in their current locations and augmented where necessary to be in accord with the guidelines in the *Better Streets Plan* and other City requirements. New street trees would be added between Market and Howard Streets where there are gaps, thus improving the visual quality of Sixth Street.

Although the proposed transportation network and streetscape changes would be noticeable to people who live at, work at, or regularly visit Sixth Street or its surrounding area, none of the proposed transportation network and streetscape changes are atypical of streetscape features that currently exist along the Sixth Street public right-of-way or elsewhere in San Francisco. Furthermore, the existing decorative street light standards that line Sixth Street and make a special contribution to its visual character would be retained. Thus, the proposed transportation network and streetscape changes would not substantially detract from the visual character and quality of Sixth Street or its surrounding area.

For these reasons, the proposed project would not have a substantial adverse effect on existing visual character or quality. This impact would be less than significant and mitigation measures are not necessary.

Impact AE-4: The proposed project would not create a new source of substantial light or glare that would have a substantial adverse effect on day or nighttime views. (*Less than Significant*)

The proposed project is located within the Sixth Street public right-of-way, which is lit by an existing system of street lights maintained by the SFPUC. The proposed changes include the installation of new traffic signals at Stevenson and Natoma Streets, the relocation of existing traffic signals and cobra-style light fixtures concurrent with the construction of corner bulb-outs at intersections between Market and Harrison Streets, and the relocation of existing street lights to the extended portions of the widened sidewalks between Market and Howard Streets. The proposed changes would create new sources of light as well as relocate existing sources of light.

All construction and staging would occur within the Sixth Street public right-of-way. Construction activities would be temporary and relatively short-term in duration and would occur during daytime hours. As a result, construction of the proposed changes would not introduce a new source of light and glare and would not have a substantial impact on day or nighttime views of Sixth Street or its surrounding area.

The new and relocated traffic signals would be installed pursuant to specifications in the California Manual on Uniform Traffic Control Devices and, therefore, would be consistent in appearance with

traffic signals elsewhere in the city. A lighting analysis would also be conducted by the SFMTA as part of the new traffic signal design. The new traffic signals and relocated traffic signals and cobra-style light fixtures would not be visually obtrusive in the context of the existing pattern of traffic signals and street lights along Sixth Street. As a result, they would not substantially interfere with day or nighttime views or produce substantial light or glare.

Street lights are a typical element of the streetscape. The decorative street lights between Market and Howard Streets would be relocated to the extended portion of the widened sidewalks and would continue to provide sufficient nighttime lighting for safety and visibility. Additional pedestrian-scale street lighting would also improve the pedestrian experience and safety. The relocation of the decorative street lights and addition of pedestrian-scale lighting would not be visually obtrusive in the context of the existing pattern of street lights along Sixth Street. As a result, they would not substantially interfere with day or nighttime views.

For these reasons, the proposed project would not introduce sources of substantial light or glare that would have a substantial adverse effect on day or nighttime views. This impact would be less than significant and mitigation measures are not necessary.

Cumulative Impacts

Impact C-AE-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would not result in a significant cumulative aesthetics impact. (*Less than Significant*)

The geographic context for cumulative aesthetic impacts is the Sixth Street public right-of-way and vicinity affected by the proposed project and the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52.

Aesthetic impacts typically relate to the scale (height and bulk) of the proposed development projects when considered in the context of existing surrounding development. Physical changes from future land use developments that may result in aesthetic impacts would not be similar to the changes proposed as part of the project, i.e., proposed streetscape changes would be predominantly at-grade transportation network and streetscape changes and no buildings are proposed. Therefore, the effects of proposed development projects would not combine with those of the proposed project to result in cumulative aesthetic impacts.

Other projects occurring within the public rights-of-way in the vicinity of Sixth Street that may combine with the effects of the proposed project would include projects implemented by the SFPUC, SFPW, the Planning Department, and the SFMTA. The SFPUC implements projects throughout the city to address water infrastructure, including sewer and storm water management. SFPW is responsible for maintenance of the City’s streets, including the condition of pavement in

the roadways. The Planning Department often includes public realm improvements as part of Area Plans of the *General Plan*. The SFMTA operates Muni, regulates parking and loading facilities, plans bicycle and pedestrian improvements for the public right-of-way, and oversees traffic operations within the transportation network of the city. Insofar as the transportation network and streetscape changes proposed as part of the Seventh Street Road Diet, the Taylor Street Road Diet, the Better Market Street Project, Muni’s TTRP.14 along Mission Street, the Jessie Street Signalization Project, and other transportation network and streetscape changes are visible and not subsurface, they would be similar to the proposed transportation network and streetscape changes along Sixth Street in that these projects would result in elements typical of the urban context, such as new roadway striping, sidewalk improvements and street furniture, and painted curbs. Therefore, the cumulative aesthetic impacts of multiple changes to the public right-of-way as described above by the variety of City agencies with jurisdiction would not be significant.

As discussed above under Impacts AE-1, AE-2, AE-3, and AE-4, implementation of the proposed project would not have a significant adverse impact related to aesthetics, including scenic vistas, scenic resources, visual character and quality, or light and glare. The proposed transportation network and streetscape changes would consist of the construction of visually unobtrusive features within the existing Sixth Street public right-of-way. Such features are common and accepted visual elements of San Francisco’s dense and varied visual environment. For these reasons, the proposed project, in combination with other past, present, and reasonably foreseeable projects, would not contribute considerably to a significant cumulative aesthetics impact. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.3. POPULATION AND HOUSING—					
Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

In general, a project would be considered growth-inducing if its implementation would result in a substantial population increase, employment increase, or new development that might not occur if the project were not implemented. Population growth can be induced directly through the

construction of new homes and businesses that attract new residents and employees from other areas of the city, or from outside the city. Population growth can also be induced indirectly through the extension of roads or other infrastructure (e.g., water, wastewater, electrical lines) to previously unserved areas. Population growth may also be indirectly stimulated by transportation network and streetscape changes to existing infrastructure, such as the paving of a gravel road, or through economic stimulation such as enhanced amenities (e.g., new or upgraded recreation or park facilities).

Impact PH-1: The proposed project would not directly or indirectly induce substantial population growth in San Francisco. (*Less than Significant*)

The proposed transportation network and streetscape changes would be constructed within the Sixth Street public right-of-way between Market and Brannan Streets. As described in Initial Study Section A, Project Description, the proposed changes would include the removal of two travel lanes between Market and Bryant Streets, widened sidewalks and corner bulb-outs between Market and Howard Streets and at Folsom and Harrison Streets, raised crosswalks at the entrances to alleyways, new traffic signals, and other features. The proposed project would improve the safety of pedestrian and bicycle travel along and across Sixth Street and support commercial activity along Sixth Street through changes to the public realm.

Implementation of the proposed project would not result in an increase in the residential population in the project area, introduce new employment-generating land uses, or extend roads, utilities, or other infrastructure. Construction of the proposed project would result in temporary construction-related employment opportunities over a period of 12 months. An increase in population related to construction employment would not be substantial because the proposed project would consist of relatively small, short-term activities that are expected to be performed by existing contractors in the Bay Area. It is not expected that substantial numbers of construction employees would relocate to the Bay Area due to the Sixth Street project. For these reasons, direct or indirect population or housing impacts that would result from implementation of the proposed project would be less than significant. Mitigation measures are not necessary.

Impact PH-2: The proposed project would not displace substantial numbers of existing housing units or people and would not create demand for additional housing, necessitating the construction of replacement housing. (*No Impact*)

The proposed transportation network and streetscape changes would be constructed within the Sixth Street public right-of-way between Market and Brannan Streets. No existing buildings would be removed. Thus, the proposed project would not displace existing housing or persons. As described above under Impact PH-1, the proposed project would not result in an increase in the residential population in the project area, introduce new employment-generating land uses, or extend roads, utilities, or other infrastructure. Therefore, the proposed project would have no

impact related to the displacement of housing units or substantial numbers of people or the creation of demand for additional housing. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-PH-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative population or housing impact. (*Less than Significant*)

The geographic context for cumulative population and housing impacts is the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52. Most of the private projects would result in the redevelopment of underutilized sites, e.g., surface parking lots and vacant buildings, and others would replace existing structures with new residential, commercial, and retail uses. These private projects would introduce new residents and employees to Sixth Street and its immediate vicinity, increasing the local population and the demand for and the supply of housing. Therefore, the private and public projects considered as part of the cumulative context could result in significant population and housing impacts.

As described above under Impact PH-1, the proposed project would not result in a significant population and housing impact because it is a transportation infrastructure project and would not introduce new residents or employees to Sixth Street or its immediate vicinity. The cumulative public and private development projects could result in an increase in population at these locations. The project is a transportation project and would not introduce new residents, nor create demand for additional housing, along the Sixth Street corridor. The proposed project is a transportation project and would not introduce new residents, nor create demand for additional housing, along the Sixth Street corridor. Therefore, the proposed project, in combination with other past, present, and reasonably foreseeable projects, would not contribute considerably to a significant cumulative population and housing impact. Mitigation measures are not necessary.

<i>Topics:</i>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.4. CULTURAL RESOURCES—Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Topics:	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archeological, cultural, or scientific importance. Numerous federal, state, and local laws, regulations, and statutes seek to protect and target the management of cultural resources. Depending upon a variety of preconditions such as the inclusion of federal monies or significant effects on wetlands, federal or state law may be the primary governing code. For the proposed project, these laws, regulations, and statutes include the National Historic Preservation Act (NHPA), California Public Resources Code Sections 5020-5029, and Articles 10 and 11 of the San Francisco Planning Code.⁴⁴

For the purposes of this Initial Study, the term “historic architectural resource” refers to buildings, structures, objects, sites, landscapes, and historic districts. The term is used to distinguish such resources from archeological resources. Archeological resources refer to material remains of past human life or activities that are of archeological interest and are typically subsurface deposits. Historic architectural resources are discussed under Impact CR-1. Archeological resources are discussed under Impact CR-2 on pp. 72-73.

Impact CR-1: Implementation of the proposed project would not cause a substantial adverse change in the significance of a historic architectural resource. (*Less than Significant*)

Historic architectural resources are those resources designated in or determined to be eligible for the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), or listed in Article 10 or 11 of the San Francisco Planning Code. Resources included in a qualified historic resource survey or identified as a historic resource by the City and County of San Francisco are also considered historic architectural resources.

⁴⁴ City and County of San Francisco, San Francisco Planning Code Articles 10 and 11. Articles 10 and 11 were developed because structures, sites and areas of special character or special historical, architectural or aesthetic interest or value within San Francisco have been and continue to be unnecessarily destroyed or impaired, despite the feasibility of preserving them. Article 10 applies across the city while Article 11 is focused on the preservation of historically, architecturally, and aesthetically important buildings in the Downtown’s C-3 Districts.

Defining a Significant Impact on a Historic Architectural Resource under CEQA

Under CEQA, a project that results in a “substantial adverse change in the significance of an historical resource” may have a significant adverse effect on the environment. The California Public Resources Code defines “substantial adverse change” as “demolition, destruction, relocation or alteration,” activities that would impair the significance of an historical resource. CEQA Guidelines Section 15064.5(b)(2) defines activities that would impair the significance of a historical resource as follows:

- a. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in the California Register of Historic Resources; or
- b. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historic resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1 (g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- c. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Historic Architectural Resources Along the Sixth Street Corridor

The Sixth Street Lodginghouse District is a CRHR-designated historic district along Sixth Street between Market Street to the north and Tehama Street to the south (see Figure 1 on p. 3). The Sixth Street Lodginghouse District consists of 43 parcels, of which 33 are single room occupancy (SRO) residential hotels or lodginghouses constructed between 1906 and 1913 to serve the relatively large number of single male workers involved in rebuilding San Francisco after the 1906 earthquake and fire.⁴⁵ Other buildings in the district are low-rise commercial buildings. The Department of Parks and Recreation (DPR) 523 Survey Form prepared for this district indicates that it is significant under NRHP Criterion A/CRHR Criterion 1 “as the last surviving sizeable group of the very low-budget, SRO densely packed residential hotels built south of Market Street after the 1906 earthquake and fire to serve the single male seasonal workers, the industrial army, that spent its out-of-work time here.”⁴⁶ The district includes 36 contributing structures. Among these structures, four are individually listed Article 11 buildings. Three of these — Hotel Henry (106 Sixth Street),

⁴⁵ Bloomfield, Anne, *Department of Parks and Recreation 523 District Record for the Sixth Street Lodginghouse District*, August 1, 1997. Available online at <http://208.121.200.84/ftp/files/gis/SouthSoMa/Docs/6th%20Street%20Lodginghouse%20District.pdf>. Accessed May 31, 2016.

⁴⁶ *Ibid.*

Orlando Hotel (201-211 Sixth Street), and Kean Hotel (1018 Mission Street) — are Category I buildings, and the other, Seneca Hotel (32 Sixth Street), is a Category III building.⁴⁷

The SoMa Pilipinas-Filipino Cultural Heritage District is one of several locally recognized cultural districts in San Francisco and was developed in part through the Central SoMa and Western SoMa planning processes.⁴⁸ The district is part of a broader strategy to recognize, promote, support, and preserve cultural assets within its boundaries. The boundaries define a geographic area that benefits from the strategy and do not define a historic district under CEQA. A portion of the SoMa Pilipinas-Filipino Cultural Heritage District is located along Sixth Street between Stevenson and Harrison Streets. Among the notable cultural resources along or in the vicinity of Sixth Street are the Bayanihan Community Center and Arkipelago Bookstore at 1010 Mission Street, Bindlestiff Studio at 185 Sixth Street, the Gene Friend Recreation Center between Howard and Folsom Streets, Victoria Manalo Draves Park at 16 Sherman Street (west of Sixth Street between Folsom and Harrison Streets), and the Bessie Carmichael at 375 Seventh Street between Folsom and Harrison Streets. While these and other properties qualify or may be eligible as historic resources, either individually or as part of other potential historic districts under CEQA, the SoMa Pilipinas-Filipino Cultural Heritage District is not a historic district under CEQA.

To the north of Sixth Street, intercepting the Sixth Street corridor between Market Street and Stevenson Street, is the NRHP-listed Market Street Theatre and Loft District composed of an “imposing but somewhat rundown group of commercial buildings on both sides of Market Street.”⁴⁹ On the south side of Market Street, the Market Street Theatre and Loft District extends from the Wilson Building at 973 Market Street, roughly the middle of the 900 block of Market Street, westward to the Odd Fellows Hall at 6-26 Seventh Street, the southwest corner of Market and Seventh Streets. On the north side of the street, the Market Street Theatre and Loft District extends from the Warfield Theatre Building at 982-998 Market Street to the Hotel Shaw Building (Renoir Hotel) at 1100-1112 Market Street, the northwest corner of Market and McAllister Streets (see Figure 1 on p. 3). The district has been identified as significant for both the buildings’ architecture (NRHP Criterion C/CRHR Criterion 3) and for its association with events (NRHP

⁴⁷ Buildings referred to in the Downtown Area Plan as Significant Buildings are divided into Category I and Category II buildings while those referred to as Contributory Buildings are divided into Category III and IV buildings. Category I buildings are judged to be buildings of individual importance and rated excellent in architectural design or are rated very good in both architectural design and relationship to the environment. Category III buildings are buildings classified as Buildings of Individual Importance and rated “very good” in architectural quality. Located outside of conservation districts, these resources are rated “excellent” or “very good” in relationship to the environment.

⁴⁸ Page and Turnbull, *San Francisco Filipino Heritage Addendum to the South of Market Historic Context Statement*, March 13, 2013. Cultural districts are specific areas of the city that are identifiable by the cultural, artistic, and economic activity of the neighborhood.

⁴⁹ Bloomfield, Anne, *United States Department of the Interior National Park Service National Register of Historic Places Inventory - Nomination Form for Market Street Theatre and Loft Historic District*, November 19, 1985. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Criterion A/CRHR Criterion 1) related to the development of the theatre district and rebuilding of San Francisco after the 1906 earthquake and fire.⁵⁰ The district is primarily made up of individually listed Article 11 buildings and includes two individually landmarked Article 10 buildings – the Hibernia Bank (Landmark #130/1 Jones Street) and the Dressler/Garfield Building (Landmark #244/938-942 Market Street). None of the Article 10 or 11 buildings are located within the Sixth Street corridor.

The Path of Gold Light Standards (Landmark #200), a designated historic landmark consisting of 327 33-foot-high lampposts along both sides of Market Street from the Ferry Building to Octavia Boulevard, include two lampposts at the intersection of Market Street and Sixth Street. These two standards are adjacent to the Sixth Street project area.

The San Francisco Fire Department’s auxiliary water supply system (AWSS) was constructed between 1908 and 1913 and forms a discontinuous CRHR-eligible historic district.⁵¹ The citywide system is composed of two pump stations, two storage tanks and their associated valve buildings and pipes, one reservoir, 172 cisterns, and approximately 135 miles of distribution pipes, 3,828 gate valves, 1,600 high-pressure hydrants, and 52 suction connections located along The Embarcadero on the northeastern waterfront. The approximately 12 high-pressure fire hydrants located on the Sixth Street sidewalks between Sixth and Brannan Streets are part of the AWSS and are considered historical resources as contributing elements to a historic district.

Decorative street light standards featuring octagonal fluted tapered poles, decorative finials, and two luminaires are present along Sixth Street between Market and Harrison Streets. Installed circa 2006, these street light standards are not considered historical resources.

Evaluation

The analysis of impacts on historic architectural resources typically assesses the nature of specific physical alterations to identified historic architectural resources. The proposed project would involve construction in the public right-of-way and would not result in any demolition, damage, alteration, relocation, or other direct physical impact on historic architectural resources. Outside of the granite curbs on each side of Sixth Street between Market and Howard Streets, no distinctive or historically significant street paving material is known to exist within the Sixth Street corridor. The AWSS hydrants located along Sixth Street would be retained in place, and no other historically significant street furniture (such as the Path of Gold Light Standards) is located within Sixth Street corridor. Two Path of Gold Light Standards are located at the intersection of Sixth Street and Market Street; however, these historic lampposts would not be affected by construction of the

⁵⁰ Ibid.

⁵¹ Tetra Tech, Inc., Historical Resources Evaluation Report (HRER) for Auxiliary Water Supply System, San Francisco, California, June 2009. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

corner bulb-outs at the southeast and southwest corners of Market and Sixth Streets because they would be outside of the construction zone. Therefore, the proposed transportation network and streetscape changes would not result in any direct physical impacts on historical resources.

Among the seven aspects of historic integrity that allow a resource to convey its historic significance is integrity of setting. Alterations to the surrounding setting of a historical resource could potentially have an indirect effect on the historic significance of that historical resource. Three historic districts – the Sixth Street Lodginghouse District, the Market Street Theatre and Loft District, and the AWSS – as well as individual historical resources have been identified within and adjacent to the Sixth Street corridor. As there are three historic districts as well as over 33 individual properties along Sixth Street that are listed in the CRHR and thus are considered historical resources for the purposes of CEQA, this analysis of impacts focuses on indirect impacts on the visual setting surrounding historic architectural resources.

Construction of the proposed transportation network and streetscape changes would require various construction activities in the vicinity of historic architectural resources (e.g., asphalt and concrete removal, jack-hammering, excavation, compacting, paving, and construction equipment movements). The proposed project would not involve the types of construction activities that could produce excessive groundborne vibration, i.e., pile driving for a foundation or the use of explosives for building demolition. The most intensive construction activities would occur along the north portion of the corridor between Market and Howard Streets, as part of the sidewalk widening. None of the other construction activities would be expected to occur immediately adjacent to or within adjacent buildings. The proposed construction activities are commonplace in an urban environment and, with exercise of typical best construction practices, noise and groundborne vibration related to such work would not present a substantial impact to immediately adjacent historic architectural resources. Additionally, no particularly fragile historic architectural resources have been identified within or adjacent to the Sixth Street corridor. However, due to the presence of a number of historic buildings between Market and Howard Streets that may be considered fragile, vibratory equipment necessary for the demolition of the sidewalks along this segment of Sixth Street has the potential to affect fragile historic architectural resources. As discussed in Initial Study Section E.6, Noise, under Impact NO-2, the proposed project's impact on fragile buildings would be less than significant because vibration limit standards for the work area and construction equipment would be included in the SFMTA construction contract specifications.

Installation of the proposed transportation network and streetscape changes would not result in the construction of any new structures that could have a substantial adverse effect on the visual setting of the Sixth Street Lodginghouse District or the Market Street Theatre and Loft District. Physical alterations under the proposed project (e.g., a reduction in the number of vehicle travel lanes, the widening of the sidewalks, installation of new curb bulb-outs, installation of raised crosswalks, installation of new traffic signals, establishment of a new bike facility, removal of peak-period tow-away lane designations, application of new roadway striping, incorporation of signal timing

modifications, and other streetscape changes) would not obscure views of historic architectural resources (including districts, buildings, structures, and landscape features) along Sixth Street. Physical alterations under the proposed project, where discernible at all, would be simple and utilitarian in design and would not be prominent new features in the overall visual setting of historic architectural resources. The proposed transportation network and streetscape changes would be typical elements of the streetscape that would be visually unobtrusive and would not draw undue attention to themselves and away from the character-defining features of historic architectural resources.

For these reasons, the proposed project would not materially impair the significance of any identified historic architectural resources located within or adjacent to the Sixth Street public right-of-way. Therefore, the proposed project would not have a substantial adverse effect on a historical resource under CEQA, and no mitigation measures are necessary.

Impact CR-2: The proposed project would not cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines Section 15064.5 should such resources exist on or beneath the project site. (*Less than Significant*)

San Francisco has a rich, complex, and unusually well-preserved archeological record that, to date, is known to extend back to nearly 6,000 years before the present. Knowledge of the significant historical periods and movements of pre-Modern San Francisco – the Hispanic Period (1776-1846), the Yerba Buena Period (1835-1848), the Early and Late Gold Rush Periods (1848-1860), and the Victorian Period (1860-1906) – continually expands with the discovery and research of new archeological sites. The majority of known prehistoric sites in San Francisco are no more than 2,000 years old and were found buried at depths of approximately 10 to 20 feet below ground surface (bgs).

The analysis of impacts on archeological resources typically assesses the general location and extent of ground disturbance and the archeological sensitivity of the general area. In order to determine impacts on archeological resources, factors considered in determining the potential for encountering archeological resources are evaluated, including the location, depth, and amount of excavation proposed, as well as any existing information about known resources in the project area. A Preliminary Archeological Review prepared by the San Francisco Planning Department indicates that archeological resources are likely not to be present under the Sixth Street right-of-way at the depths identified.⁵² Implementation of the proposed project includes both construction and operational phases. Of the two, only the construction phase would involve excavation of soils. Therefore, the operational phase would not have any potential impacts on archeological resources, and no further review of it is warranted.

⁵² San Francisco Planning Department, e-mail communication with Randall Dean, Preliminary Archeology Review Log, June 3, 2016. A copy of this e-mail is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Construction of proposed transportation and streetscape changes such as sidewalk extensions between Market and Howard Streets and corner bulb-outs at most alley and major street intersections would require excavation to a depth of three feet bgs. The installation of traffic signals and related hardware at Stevenson and Natoma Streets and the planting of new street trees (locations are not known) would require excavation to a maximum depth of six feet bgs. Therefore, the potential impact resulting from the construction of the proposed project can be evaluated, assuming a maximum six-foot excavation depth in relatively small areas (three feet by three feet) within the public right-of-way along the Sixth Street corridor. The construction of the proposed transportation network and streetscape changes would not require an excavation depth and/or be located in an area where the potential for adverse effects on archeological resources is likely.⁵³ Therefore, implementation of the proposed project would have a less-than-significant impact on archeological resources.

Impact CR-3: The proposed project would not result in the disturbance of human remains, including those interred outside of formal cemeteries, or the disturbance of tribal resources, pursuant to Public Resources Code Section 21074. (*Less than Significant*)

Tribal cultural resources are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either (a) included or determined to be eligible for inclusion in the CRHR, or (b) included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). Based on discussions with Native American tribal representatives in San Francisco, prehistoric archeological resources are presumed to be potential tribal cultural resources. A tribal cultural resource is adversely affected when a project impacts its significance.

Pursuant to Assembly Bill 52, effective July 1, 2015, within 14 days of a determination that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency is required to contact the Native American tribes that are culturally or traditionally affiliated with the geographic area in which the project is located. Notified tribes have 30 days to request consultation with the lead agency to discuss potential impacts on tribal cultural resources and measures for addressing those impacts. On June 1, 2017, the Planning Department mailed a “Tribal Notification Regarding Tribal Cultural Resources and CEQA” to the appropriate Native American tribal representatives who have requested notification. During the 30-day comment period, no Native American tribal representatives contacted the Planning Department to request consultation.

As discussed above under Impacts CR-1 and CR-2, the proposed project would have a less-than-significant impact related to historic architectural resources and historic and prehistoric archeological resources. Based on a maximum depth of excavation of six feet, it is unlikely that

⁵³ San Francisco Planning Department, e-mail communication with Randall Dean, Preliminary Archeology Review Log, June 3, 2016.

project-related ground-disturbing activities would result in the disturbance of human remains, including those of Native Americans and those that may be interred outside of a formal cemetery. Thus, the proposed project would not cause a substantial adverse change in the significance of a tribal cultural resource. Therefore, the proposed project's impacts on human remains and tribal cultural resources would be less than significant.

Cumulative Impacts

Impact C-CR-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact to historic architectural resources. (*Less than Significant*)

The geographic context for cumulative historic architectural resource impacts is the Sixth Street public right-of-way and vicinity affected by the proposed project and the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under "Cumulative Setting" on pp. 41-52.

Historic architectural resource impacts typically relate to the proposed demolition of existing buildings identified as historic architectural resources under CEQA and the compatibility of newly designed buildings with the character-defining features of a historic district. Physical changes from future land use development projects may result in historic architectural resource impacts; however, these proposed land use development projects would not be similar to the proposed project changes because those changes would be implemented within the public right-of-way. The proposed land use development projects could result in cumulative historic architectural resource impacts.

Other projects occurring within the Sixth Street corridor or within public rights-of-way in the vicinity of Sixth Street that may combine with the effects of the proposed project would include projects implemented by the SFPUC, SFPW, the Planning Department, and the SFMTA. The SFPUC implements projects throughout the city to address water infrastructure, including sewer and storm water management. SFPW is responsible for maintenance of the City's streets, including the condition of pavement in the roadways. The Planning Department often includes public realm improvements as part of Area Plans of the *General Plan*. As described above, the Central SoMa Plan involves street network changes for Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth Streets. The SFMTA operates Muni, regulates parking and loading facilities, plans bicycle and pedestrian improvements for the public right-of-way, and oversees traffic operations within the transportation network of the city. Insofar as the transportation network and streetscape changes proposed as part of the Central SoMa Plan, the Seventh Street Road Diet, the Taylor Street Road Diet, the Better Market Street Project, Muni's TTRP.14 along Mission Street, the Jessie Street Signalization Project, and other transportation network and streetscape projects are visible and not subsurface, they would be similar to the proposed transportation network and streetscape changes along Sixth Street in that these projects would result in elements typical of the urban context, such as new roadway striping, curb bulb-outs, sidewalk improvements, new bicycle lanes, and painted

curb zones for commercial and passenger loading. The proposed transportation and streetscape projects could result in cumulative historic architectural resource impacts.

As described above under Impact CR-1, the proposed transportation network and streetscape changes to the Sixth Street corridor (e.g., a reduction in the number of vehicle travel lanes, the widening of the sidewalks, installation of new curb bulb-outs, installation of new traffic signals, establishment of a new bike facility, removal of peak-period tow-away lane designations, application of new roadway striping, and other streetscape changes) would be limited to the existing public right-of-way and would not materially impair historic resources located along the Sixth Street corridor. The proposed project would not demolish or otherwise physically alter any historic architectural resource and would not result in a significant impact on historic architectural resources. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable future projects, would not contribute considerably to a significant cumulative impact on historic architectural resources.

Impact C-CR-2: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a substantial adverse change in the significance of as-yet unknown archeological resources; human remains, including those interred outside of formal cemeteries; or tribal resources should such resources exist on or beneath the project site. (*Less than Significant*)

As discussed above under Impacts CR-2 and CR-3, implementation of the proposed project would have a less-than-significant impact on historic and prehistoric archeological resources; on human remains, including those of Native Americans; and on tribal cultural resources. When considered with other past, proposed, and reasonably foreseeable future development projects involving the excavation of on-site soils, e.g., development projects with proposed below-grade features, and excavation within the public right-of-way, e.g., infrastructure projects implemented by the SFPUC for wastewater and stormwater management or by SFPW for street maintenance, the project-related ground disturbance (approximately six feet bgs at Stevenson and Natoma Streets, where traffic signals would be installed, and approximately three feet bgs at most other construction locations along the Sixth Street corridor) would not result in a cumulative loss of significant historic and scientific information about California, Bay Area, or San Francisco history and prehistory. Multiple construction activities occurring in the right-of-way in the same general location are subject to the requirements of Article 2.4 of the San Francisco Public Works Code, Section 2.4.11 of which requires coordination of excavation among the various City agencies and utility providers based on five-year plans that are updated every six months.

For these reasons, the proposed project, in combination with past, present, and reasonably foreseeable future projects, would not contribute considerably to a significant cumulative impact on prehistoric and historic archeological resources; on human remains, including those of Native Americans; and on tribal cultural resources.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less than Significant with Mitigation Incorporated</u>	<u>Less than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.5. TRANSPORTATION AND CIRCULATION— Would the project:					
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Introduction

Significance Criteria Not Applicable to Proposed Project

Due to the nature of the proposed project, the following topic is not applicable:

- ***Result in a Change in Air Traffic Patterns.*** Due to the nature and scope of the proposed project, its implementation would not have the potential to change air traffic patterns. In addition, the proposed project would not involve the installation of structures that could interfere with air space. Therefore, this topic is not discussed further in this Initial Study.

Approach to Analysis of Other Significance Criteria

Changes to CEQA contained in Public Resources Code Section 21099(b)(1) require that the OPR develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects that “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” CEQA Section 21099(b)(2) states that, upon certification of the revised guidelines for determining transportation

impacts pursuant to Section 21099(b)(1), automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, OPR published for public review and comment a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA⁵⁴ recommending that transportation impacts for projects be measured using a VMT metric. On March 3, 2016, the San Francisco Planning Commission replaced automobile delay (vehicle level of service) with the VMT criteria (Resolution 19579). Accordingly, this Negative Declaration does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided.

As part of implementing CEQA requirements within San Francisco, the City has established the following additional criteria, organized by transportation mode to facilitate the transportation analysis. The transportation significance thresholds are similar to those in Appendix G of the CEQA Guidelines as listed above, except for the criteria related to traffic hazards and VMT. The additional criteria are as follows:

- **Pedestrians.** The project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.
- **Bicycles.** The project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.
- **Transit.** The project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. With the Muni and regional transit screenlines analyses, the project would have a significant effect on the environment if project-related transit trips would cause the capacity utilization standard of a transit provider to be exceeded during the evening peak hour.
- **VMT.**
 - The project would have a significant effect on the environment if it would cause substantial additional VMT.
 - The project would have a significant effect on the environment if it would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network.

⁵⁴ Governor's Office of Planning and Research, Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA. Available online at https://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf. Accessed March 8, 2017.

- **Traffic Hazards.** The project would have a significant adverse effect on the environment if it would cause major traffic hazards.
- **Parking.** The project would have a significant effect on the environment if it would result in a substantial parking deficit that could create hazardous conditions affecting traffic, transit, bicycles, or pedestrians, or significant delays affecting transit, or where particular characteristics of the project or its site demonstrably render use of other modes infeasible.
- **Loading.** The project would have a significant effect on the environment if it would result in a loading demand during the peak hour that could not be accommodated within proposed off-street loading facilities or within convenient on-street loading zones, and if it would create potentially hazardous conditions affecting traffic, transit, bicycles, or pedestrians or significant delays affecting transit.
- **Emergency Vehicle Access.** The project would have a significant effect on the environment if it would result in inadequate emergency access.
- **Construction.** Construction of the project would have a significant effect on the environment if the temporary construction activities' magnitude and duration would result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, or result in potentially hazardous conditions.

This section summarizes and incorporates by reference the results of the Transportation Impact Study (TIS) prepared by the transportation consultant for the proposed project in accordance with the San Francisco Planning Department's *2002 Transportation Impact Analysis Guidelines for Environmental Review (SF Guidelines 2002)* and Planning Commission Resolution 19579.⁵⁵

Development of Existing plus Project and Cumulative Forecasts

The analysis of the proposed project was conducted for existing and 2040 cumulative conditions. "Existing plus project" conditions assess the near-term impacts of the proposed project, while "2040 cumulative" conditions assess the long-term impacts of the proposed project in combination with other reasonably foreseeable development. Year 2040 was selected as the future analysis year because 2040 is the latest year for which travel demand forecasts were available from the San Francisco County Transportation Authority (SFCTA) travel demand forecasting model. The SFCTA SF-CHAMP travel demand model was used to develop forecasts of vehicle and pedestrian trips. The traffic volume output from the SF-CHAMP model reflects any changes to traffic volumes that could result from the proposed project, including diversions from one street to another, or shifts in vehicle travel from inside the study area to outside the study area.

Transportation Setting

The transportation setting for existing and cumulative conditions is presented in Section A, Project Description, and Section B, Project Setting, of this Initial Study, with the existing conditions

⁵⁵ Fehr & Peers and LCW Consulting, *Sixth Street Pedestrian Safety Project Transportation Impact Study*, July 2017. A copy of this report is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2014.1010E.

described on pp. 5-20 and 35-41 and cumulative development projects and transportation network changes assumed for the 2040 cumulative analysis presented under “Cumulative Setting” on pp. 41-52. The SF-CHAMP model for the 2040 cumulative analysis also includes other development growth projections and transportation projects throughout the region.

Project Impacts

Impact TR-1: Implementation of the proposed project would not result in substantial interference with pedestrian, bicycle, loading, or parking circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions. (*Less than Significant*)

Pedestrian Impacts

The proposed project includes implementation of a number of pedestrian improvements along Sixth Street, including sidewalk widening, raised crosswalks, new mid-block signalized crossings, corner sidewalk bulb-outs, installation of continental crosswalks, and a reduction in the number of travel lanes on Sixth Street. These physical changes are primarily located along the busiest section of the street for pedestrians, through the commercial section of Sixth Street (north of Howard Street), which corresponds to the locations with the highest existing pedestrian collision frequencies. In addition to physical changes, the proposed project would provide Leading Pedestrian Intervals (LPIs) at all crossing locations along Sixth Street between Market and Brannan Streets. Key elements of the proposed project include the following:

- **Wider Sidewalks between Market and Howard Streets.** The proposed project would widen the sidewalks on Sixth Street between Market and Howard Streets to meet the recommended widths described in the *Better Streets Plan*. Wider sidewalks would provide more room for pedestrians traveling along Sixth Street to maneuver within the sidewalk and would increase the buffer between the pedestrians and adjacent traffic. The sidewalk widening would also shorten crossing distances, and thus shorten required crossing times for east-west crossings across Sixth Street. As Sixth Street between Market and Howard Streets is a commercial corridor, the wider sidewalks would allow for accommodation of a greater mix of activities than existing conditions, including sidewalk seating and places to linger, without substantially interfering with through pedestrian traffic.
- **Travel Lane Changes and Corner Bulb-Outs.** The reduction in the number of travel lanes would reduce the width of the Sixth Street roadway and pedestrian exposure while crossing through corner sidewalk extensions, also known as corner bulb-outs. Corner bulb-outs would increase the visibility of pedestrians to drivers by placing crossing pedestrians into the turning drivers’ line of sight farther in advance, reducing the likelihood of drivers failing to yield to pedestrians in a crosswalk when making a right or left turn. The proposed project would provide corner bulb-outs at Folsom Street, Harrison Street, and every intersection from Market Street to Howard Street (including alleyways). Fewer travel lanes could also lead to slower vehicle speeds, potentially reducing the frequency and severity of pedestrian collisions by allowing drivers more time to react and limiting the force of impact if collisions do occur.

- **Signalized Mid-Block Pedestrian Crossings.** Pedestrians would benefit from installation of the new signalized mid-block crossings on Sixth Street at Stevenson and Natoma Streets. These signalized mid-block crossings would be in addition to the existing mid-block signal at Minna Street, and the planned midblock signal at Jessie Street, which would be implemented by the end of 2017. The provision of new crossings would enhance pedestrian circulation and safety, as mid-block crossings would substantially reduce the distance that many pedestrians would need to travel to cross the street. The presence of signalized crossings would further enhance safety because such crossings would encourage pedestrians to cross within the designated crossing areas, making their movements more predictable to motorists and reducing the likelihood of collisions. Pedestrian crossing times would be similar to those at adjacent intersections, and would be timed to adequately accommodate pedestrians crossing the vehicular right-of-way (allowing for a walking speed of between 2.4 to 3.1 feet per second to cross the street).
- **Raised Crosswalks at Stevenson, Jessie, Minna, Natoma, and Clementina Streets.** The raised crosswalks at these mid-block locations would make the roadway level with the sidewalks, thus providing a level pedestrian path of travel from curb to curb and facilitating pedestrian access, particularly for seniors and persons with disabilities, including wheelchair users. In addition, the raised crosswalks would serve to slow drivers' turning maneuvers out of these side streets onto Sixth Street. These types of features would increase driver awareness of pedestrians walking across the roadway, and are intended to reduce the frequency and severity of collisions with pedestrians.
- **Crosswalk Changes.** The proposed project includes restriping of existing and new crosswalks at intersections along Sixth Street with the continental design. Crosswalks with a continental design have parallel markings that are the most visible to drivers. Use of this crosswalk marking design would improve crosswalk detection for people with low vision and cognitive impairments. In addition to new crosswalks at the proposed signalized mid-block crossings at Stevenson and Natoma Streets, as described above, a new crosswalk would be striped across Sixth Street at the north leg of the intersection of Sixth Street/Minna Street, as currently there is only a crosswalk provided for the south leg of the intersection.
- **Other Streetscape Changes.** The proposed project would also include streetscape changes, such as street trees, street furniture, and pedestrian-scale lighting, to improve the pedestrian experience and safety. These elements would be placed in a manner that meets City standards and Americans with Disabilities (ADA) requirements for maintaining unobstructed and wide paths of travel for pedestrians and wheelchair users.

The above transportation network and streetscape changes would enhance pedestrian conditions and are intended to reduce the collision potential at high-frequency collision locations along Sixth Street. For example, at the intersection of Sixth Street/Howard Street, which has a high collision rate due to drivers failing to yield to pedestrians in crosswalks when making a right or left turn, streetscape changes would increase pedestrian visibility to drivers. New signalized pedestrian crossing facilities across Sixth Street between Market and Howard Streets would reduce the collision potential at alleyways by providing new pedestrian crossing facilities to accommodate pedestrian desire lines that have developed at the mid-block crossings of Sixth Street. Raising the level of the roadway to the sidewalk for pedestrians traveling along Sixth Street at Stevenson, Jessie, Minna, Natoma, and Stevenson Streets would also reduce the collision potential at

alleyways. The reduction in collision potential includes locations with existing high collision rates such as at Stevenson, Jessie, Natoma, Tehama, and Clementina Streets.

Implementation of the proposed project would not generate new pedestrian trips on study area sidewalks; however, the proposed reduction in vehicle travel lanes on Sixth Street would likely result in some mode shift from auto to pedestrian modes. In addition, the proposed pedestrian improvements could result in a shift of pedestrians from other streets to Sixth Street; however, the shift would not substantially increase pedestrian volumes such that new hazards due to overcrowding could occur.

With implementation of the proposed project's new bicycle lanes, it is anticipated that the number of bicyclists using on Sixth Street would increase. Because the bicycle and pedestrian movements along Sixth Street would be concurrent (i.e., similar to pedestrian and vehicles), any increase in bicycle volumes along Sixth Street would also increase the potential for conflicts between pedestrians and bicyclists turning from Sixth Street onto cross-streets; however, bicyclists turning from Sixth Street onto cross-streets is less of a conflict with pedestrians than vehicles turning from Sixth Street onto cross-streets, as is the current condition. Overall, however, the proposed project would reduce existing safety hazards for pedestrians along Sixth Street by providing transportation network and streetscape changes aimed at reducing the collision potential at high-frequency locations.

A quantitative pedestrian level of service (LOS) analysis was conducted of the existing plus project pedestrian conditions to determine the impact of the proposed sidewalk widening, corner sidewalk extensions (i.e., bulb-outs), crosswalk upgrade changes, and signal timing changes. With the proposed streetscape changes, pedestrians would have more room to maneuver on sidewalks, corners, and crosswalks, and with implementation of the proposed project, the pedestrian LOS at the crosswalk, corner, and sidewalk analysis locations during the weekday p.m. peak hour would be LOS C⁵⁶ or better.

Overall, as described above, implementation of the proposed project would result in more sidewalk area for pedestrian circulation, would increase the number of signalized locations to cross Sixth Street, would improve the visibility of crossing pedestrians, and would reduce vehicle-pedestrian conflicts and enhance pedestrian safety. Therefore, the impact of the proposed project on pedestrians would be less than significant.

⁵⁶ Pedestrian LOS analysis was conducted using the methodology contained within the 2000 Highway Capacity Manual (HCM). At pedestrian LOS C, space is generally sufficient for normal walking speeds, and for bypassing other pedestrians in primarily unidirectional streams. Reverse-direction or crossing movements can cause minor conflicts and speeds and flow rates are somewhat lower.

Bicycle Impacts

The proposed project includes the installation of a new Class II bikeway with 5.5- to 6-foot-wide green-backed bicycle lanes in the northbound and southbound directions of Sixth Street between Market and Folsom Streets. On the segment of Sixth Street between Howard and Folsom Streets, the new bicycle lanes would be separated from vehicle traffic by a painted 5- to 5.5-foot-wide striped buffer zone. In addition, at the intersection of Sixth Street/Howard Street, a green-painted, two-stage bicycle left-turn queue box would be provided for bicyclists traveling northbound and turning left onto Howard Street, while at the intersection of Sixth Street/Folsom Street, a green-painted, two-stage bicycle left-turn queue box would be provided for bicyclists traveling southbound and turning left onto Folsom Street.

The proposed project would not generate new bicycle trips; however, the proposed reduction in the number of travel lanes may result in some shift from auto to bicycle mode for persons traveling through and within the study area. This mode shift is not anticipated to substantially increase bicycle volumes in the study area to the point where new hazards or circulation impediments could occur. In addition, the proposed bicycle lanes and other changes on Sixth Street could result in a shift of bicyclists currently using other less direct routes (e.g., Seventh Street) to reach their destination. The proposed Class II bikeway would connect on the north with the existing Golden Gate Avenue eastbound/southbound-only bicycle lane and the east-west bicycle facilities on Market Street, and to the south the proposed Sixth Street bicycle lanes would connect with existing east-west bicycle facilities on Howard and Folsom Streets.

The proposed project would generally enhance cycling conditions along the Sixth Street corridor. Provision of bicycle lanes on the segment between Market and Folsom Streets would increase bicyclists' visibility. The dedicated bicycle lanes and the reduction in the number of mixed-flow travel lanes would reduce the potential for injury to bicyclists as a result of "dooring" (i.e., when a vehicle driver or passenger opens a door in the path of an oncoming bicyclist, causing a collision).

Where the proposed Sixth Street bicycle lanes would connect with the existing Class II bicycle facilities on Howard Street (westbound) and Folsom Street (eastbound), two-stage left-turn queue boxes would be provided, which would allow bicyclists to wait in a specially marked area (i.e., the two-stage left-turn queue box) in front of stopped traffic for the cross-street green phase and then proceed through the intersection. Bicyclists would only queue in the left-turn queue box while cross-traffic on Howard Street or Folsom Street is stopped at red lights. This feature would serve to reduce vehicle-bicycle conflicts, increase bicyclists' visibility to drivers, and provide bicyclists with a head start when the signal to cross Howard Street or Folsom Street turns green.

Implementation of the proposed project would provide dedicated bicycle lanes and supporting features (e.g., turn boxes, buffer zones) that would enhance bicycle circulation and safety on Sixth Street, and improve connectivity with other east-west and north-south bicycle facilities. In

addition, implementation of the proposed project would reduce the number of mixed-flow travel lanes on Sixth Street and establish turn restrictions, thereby reducing the potential for vehicle-bicycle conflicts. Thus, for these reasons, the impact of the proposed project on bicycle facilities and circulation would be less than significant.

Transit Impacts

The proposed project would not include any changes to transit service on the 14X Mission Express, 27 Bryant, and 8BX Bayshore Express routes that travel along portions of Sixth Street. With implementation of the proposed project, the proposed 60-foot-long curb bulb-out on the west side of Sixth Street north of Harrison Street would serve as a boarding area for the 14X Mission Express route. No other transit changes would be implemented along Sixth Street as part of the proposed project.

The proposed project would not generate any new transit demand; however, the proposed reduction in the number of travel lanes may result in some shift from auto to transit mode for persons traveling through and within the study area. This mode shift would not be substantial, and would not affect ridership levels or capacity utilization of local Muni and regional transit routes.

The primary effect of the proposed project related to transit delay would be from increased traffic congestion due to mixed-flow travel lane reductions that could potentially increase transit travel times along Sixth Street. Transit travel times for other transit routes along adjacent streets could also be affected due to vehicles being diverted to these streets with implementation of the proposed project.

Impact on Muni. Two Muni transit lines operate in mixed-flow travel lanes on Sixth Street during the weekday p.m. peak period: the 14X Mission Express (outbound direction) and the 27 Bryant Street (inbound and outbound directions). The transit routes that operate in mixed-flow travel lanes on streets parallel to Sixth Street within the study area are the 19 Polk on Seventh and Eighth Streets, and the 27 Bryant and 47 Van Ness routes on Fifth Street. The transit routes that operate in mixed-flow travel lanes on streets perpendicular to Sixth Street (i.e., the east-west streets) within the study area are the 12 Folsom on Folsom and Harrison Streets, the 47 Van Ness on Harrison and Bryant Streets, and the 83X Mid-Market Express on Brannan Street.

While the 8/8AX/8BX Bayshore, 30 Stockton, and 45 Union-Stockton currently temporarily travel in the mixed-flow travel lanes on Fifth Street, they would be relocated to Fourth Street following the completion of the above-ground construction of the Central Subway and reinstallation of the transit-only lanes in 2018-2019. Additionally, once the Central Subway project is completed, the 8/8AX/8BX Bayshore will no longer travel on Harrison Street, as these routes will have access to I-80 directly from Fourth Street. These changes to transit routing following completion of the Central Subway project will occur prior to construction of the proposed project, and were therefore

assumed in the transit assessment of the proposed project. The transit-only lanes on Fourth Street will allow these transit vehicles to be separated from congestion within the adjacent mixed-flow travel lanes on these streets, including any increases in vehicle delay resulting from traffic diverted by the proposed project. Therefore, the proposed project would not increase the transit travel time on these routes as a result of increased vehicle delay, and the effect of implementation of the proposed project on these routes (i.e., the 8/8AX/8BX Bayshore, 30 Stockton, and 45 Union-Stockton) did not need to be assessed.

The transit travel time assessment for the Muni routes operating on Sixth Street and in the study area is as follows:

- **14X Mission Express.** Generally, the proposed project would not substantially increase vehicle delay in mixed-flow travel lanes on the outbound segment of Sixth Street traveled by the 14X Mission Express during the p.m. peak hour. This includes the westbound left turn from Mission Street onto southbound Sixth Street, the southbound through travel between Mission and Harrison Streets, and the southbound right turn from Sixth Street onto Harrison Street. The added delay to the 14X Mission Express due to the proposed project would represent less than one minute of increased travel time compared to existing conditions, which is less than one-half of the nine-minute headway for the 14X Mission Express.⁵⁷ Transit travel times for the 14X Mission Express would therefore not increase substantially due to the proposed project.
- **27 Bryant.** The proposed project would likely increase delay slightly on the 27 Bryant in the inbound and outbound directions. This would be due primarily to increases in delay while turning left from Bryant Street onto Sixth Street (inbound direction) and while traveling westbound through the intersection of Sixth and Harrison Streets (outbound direction). Other movements used by the 27 Bryant would experience no change or a slight decrease to delay due to shifting vehicle travel patterns. However, the added delay to the 27 Bryant due to the proposed project would represent 1 to 2 minutes of increased travel time, which is less than one-half of the 15-minute headway for the 27 Bryant.
- **Other Routes.** Other Muni routes operating within the study area parallel or perpendicular to Sixth Street would likely see some changes in operations due to shifts in vehicle volumes resulting from the proposed project. For roadways crossing Sixth Street, these shifts would be minor and dispersed through the roadway network, and would not substantially increase transit delay above the significance threshold of one-half the headway. Transit vehicles traveling on streets parallel to Sixth Street after completion of the Central Subway are the 19 Polk and the 47 Van Ness routes. The proposed project would not increase delay on Seventh or Eighth Streets greater than one-half of the 15-minute headways of the 19 Polk. The proposed project would also not increase transit delay on Fifth, Bryant, or Harrison Streets by greater than the 10-minute headways of the 47 Van Ness route.

In summary, implementation of the proposed project would not substantially increase transit demand or affect transit capacity, or result in a substantial increase in transit travel times. For these

⁵⁷ This calculation is based on the results of the vehicle delay analysis presented in the memorandum titled *Sixth Street Pedestrian Safety Project – Intersection Level of Service Analysis Documentation – Final Memorandum* (Fehr & Peers/LCW Consulting, July 2017). The vehicle delay calculations used for this transit delay assessment are presented in the Appendix of this memorandum.

reasons, the impact of the proposed project on Muni transit operations would be less than significant.

Impact on Regional Transit. Both SamTrans and Golden Gate Transit buses run on City streets within the study area, and would continue to do so in the future. The Golden Gate Transit 10, 70, 80, 101, and 101X routes run on Mission Street, while the Golden Gate Transit 92, 93, and 54 routes run on Howard, Folsom, Harrison, Seventh, and Eighth Streets. SamTrans 292, 397, and KX routes run on Mission Street. Similar to the transit delay impacts identified above for Muni routes on east-west streets, it is not anticipated that the proposed project would substantially affect east-west traffic operations, and therefore proposed project impacts on Golden Gate Transit and SamTrans operations would be less than significant.

Parking Impacts

The proposed project would not generate any new parking demand. Implementation of the proposed project, however, would result in the removal of on-street parking spaces, resulting in increased parking occupancy along Sixth Street and on east-west streets in the vicinity of the parking removal.

Changes to Parking Space Supply. Tables 2 and 4 in Initial Study Section A, Project Description, on pp. 17 and 30 show the existing and proposed on-street parking supply along the Sixth Street corridor. The proposed construction of corner bulb-outs at most of the alley and major street intersections between Market and Brannan Streets would result in the loss of 28 general metered and non-metered parking spaces along Sixth Street – 17 general metered spaces between Market and Folsom Streets, and 11 general non-metered spaces between Folsom and Brannan Streets. Thus, with implementation of the proposed project, the parking supply along Sixth Street would be reduced from 160 general metered and non-metered spaces to 132 spaces. The parking space loss would be generally equally distributed between the east and west sides of the street (i.e., 13 spaces on the east side and 15 spaces on the west side), including the five blocks between Market and Bryant Streets.

The proposed project would remove the existing a.m. and p.m. peak-period tow-away lane designations along the west side of Sixth Street from 300 feet south of Howard Street to Folsom Street, and on both sides of Sixth Street between Folsom and Brannan Streets. The proposed removal of the peak-period tow-away lane designations would restore 110 full-time parking spaces on these segments of Sixth Street – 105 general non-metered spaces between Folsom and Brannan Streets and approximately 5 general metered spaces on the west side of Sixth Street between Howard and Folsom Streets. However, construction of the proposed corner bulb-outs at the northwest, southeast, and southwest corners of the intersection of Sixth Street/Folsom Street and at the northeast, southeast, and southwest corners corner of the intersection of Sixth Street/Harrison Street, in conjunction with the proposed conversion of three general non-metered parking spaces

to non-metered commercial loading spaces (immediately south of Folsom Street in the west-side parking lane), would result in the loss of approximately 2 general metered and 11 general non-metered parking spaces. In addition to the parking loss along Sixth Street, a total of four general non-metered spaces would be lost on the east-west streets and alleys. The construction of corner bulb-outs that extend to the east and west at the intersections of Sixth Street/Howard Street (northeast corner) and Sixth Street/Harrison Street (northeast, southeast, and southwest corners) would result in the loss of two general metered spaces and two general non-metered spaces, while the proposed relocation of two metered commercial loading spaces from Sixth Street (between Market and Howard Streets) to Stevenson and Minna Streets would result in the loss of two general non-metered spaces on those alleys.

Overall, implementation of the proposed project would result in the removal of 34 vehicle parking spaces – 28 on Sixth Street, 1 on Stevenson Street, 1 on Minna Street, 1 on Howard Street, and 3 on Harrison Street.

Changes in Parking Occupancy. Table 7: Summary of Parking and Loading Occupancy with Implementation of the Proposed Project presents the effect of the on-street parking space loss on the parking occupancies on Sixth Street. With implementation of the proposed project, the overall parking supply during the a.m. and p.m. peak periods would increase because the peak-period tow-away regulations on Sixth Street would be rescinded, making these spaces available for an additional six hours during the day and decreasing the parking occupancy during the a.m. and p.m. peak hours. However, as shown in Table 7, the reduction in parking supply would result in parking occupancies ranging between 90 percent and more than 100 percent between 10 a.m. and 2 p.m. Parking occupancies of more than 100 percent indicate that some drivers would need to seek parking elsewhere, either on-street or in public parking facilities.

The number of vehicles that would not be accommodated on-street on Sixth Street would be minimal (about 10 spaces) and would not substantially affect overall on-street parking occupancies on other streets in the study area. The San Francisco Municipal Transportation Agency (SFMTA) and the U.S. Department of Transportation are currently evaluating the data collected as part of the *SFpark* pilot program. (Data collection of on-street real-time space availability and rates ended in December 2013.) On-street parking management would facilitate short-term parking and reduce the around-the-block maneuvers associated with drivers searching for parking. By discouraging long-term on-street parking, continuing implementation of *SFpark* could support a shift in travel from auto to public transit or other modes.

In addition, there are a limited number of off-street public parking facilities within the study area that have some availability throughout the day. The Fifth & Mission/Yerba Buena Garage is the largest nearby public parking facility and generally has availability throughout the day to accommodate additional vehicles.

Table 7: Summary of Parking and Loading Occupancy with Implementation of the Proposed Project

Sixth Street Corridor between Market and Brannan Streets	A.M. and P.M. Peak Periods			Mid-Morning and Early Afternoon			Evening	
	Total Supply	Occupied at 7 a.m.	Occupied at 4 p.m.	Total Supply	Occupied at 10 a.m.	Occupied at 2 p.m.	Total Supply	Occupied at 8 p.m.
Supply and Number of Occupied Spaces^{a,b}								
General Parking Spaces	132	32	35	132	140	122	154	71
Commercial Loading Spaces	22	5	6	22	15	13	--	--
Passenger Loading/unloading Spaces	10	1	3	10	2	4	10	5
ADA Parking Spaces	1	0	1	2	1	1	2	0
Supply and Percent Occupied Spaces								
General Parking Spaces	132	24%	27%	132	106% ^c	92%	154	54%
Commercial Loading Spaces	22	23%	27%	22	68%	59%	--	--
Passenger Loading/unloading Spaces	10	10%	30%	10	20%	40%	10	50%
ADA Parking Spaces	1	0%	100%	2	50%	50%	2	0%
<p><i>Notes:</i> ADA = Americans with Disabilities Act</p> <p>^a Includes spaces on both sides of Sixth Street. With implementation of the proposed project, the existing a.m. and p.m. peak-period tow-away regulations would be rescinded, and the existing parking and commercial loading spaces would be available throughout the day. After 6 p.m., commercial loading spaces become available for general parking.</p> <p>^b With implementation of the proposed project, the six passenger loading/unloading zones (four on the east side and two on the west side of the street), accommodating about 10 vehicles, would remain.</p> <p>^c With implementation of the proposed project and associated removal of 28 on-street parking spaces on Sixth Street, the occupancy of the general parking spaces during the mid-morning period would increase from 88 percent under existing conditions to 106 percent. A parking occupancy of 106 percent indicates that the existing parking demand would exceed the proposed supply on Sixth Street by 6 percent (i.e., eight spaces).</p>								

Sources: SFMTA, June 2016; LCW Consulting, June 2016

Conclusion. Overall, the parking loss would not result in a substantial parking deficit for the following reasons:

- Parking removal would be minimal (34 spaces) and spread out throughout the corridor;
- Other parking, both on-street and off-street, would be available nearby;
- The streets within the study area are well served by public transit;
- The proposed project would further improve transit, bicyclist, and pedestrian conditions that would increase their attractiveness as a mode choice; and
- The parking loss would not be expected to create hazardous conditions.

Thus, for these reasons described above, the impacts of the proposed project on parking would be less than significant.

Loading Impacts

The proposed project would not generate any new loading demand. Implementation of the proposed project, however, would result in the removal of on-street commercial loading spaces, resulting in increased occupancy of the remaining commercial loading spaces along Sixth Street.

Changes in Loading Space Supply. Tables 3 and 5 in Initial Study Section A, Project Description, on pp. 19 and 32 show the existing and proposed on-street loading supply along the Sixth Street corridor. Implementation of the proposed corner bulb-outs on Sixth Street between Market and Howard Streets would result in the loss of 10 metered commercial loading spaces on Sixth Street (a reduction from 27 to 17 commercial loading spaces on this two-block segment of Sixth Street) and the relocation of two commercial loading spaces from Sixth Street to the adjacent alleys (i.e., to Stevenson Street east of Sixth Street, and to Minna Street west of Sixth Street, resulting in a loss of two general non-metered parking spaces on Stevenson and Minna Streets).

On the segment of Sixth Street between Market and Folsom Streets, there would be no change to the number of passenger loading/unloading zones; however, their specific locations on block faces may shift or dimensions may be slightly reduced due to the construction of corner bulb-outs.

On the segment of Sixth Street between Folsom and Brannan Streets, there would be no change to the number or general location of non-metered commercial loading spaces; however, their specific locations on block faces may shift or dimensions may be slightly reduced, e.g., the non-metered commercial loading spaces on the west side of Sixth Street south of Folsom Street would replace general non-metered parking spaces directly to the south. In addition, with implementation of the proposed project, the tow-away regulations on Sixth Street between Folsom and Brannan Streets, as well as on the west side of Sixth Street starting 300 feet south of Howard Street, would be rescinded, and the non-metered commercial loading spaces would become available during the a.m. and p.m. peak hours.

Commercial Vehicle Loading/Unloading Assessment. Table 7 on p. 88 presents the effect of the on-street commercial loading space loss on the loading space occupancies on Sixth Street. Even with the reduction in the number of commercial loading spaces along the Sixth Street corridor, the overall occupancy of the commercial loading spaces would be less than 70 percent, indicating the spaces would remain available to accommodate the existing loading demand and double-parking within the proposed bicycle lane would not be expected. On the blocks where commercial loading spaces would be removed, between three and five commercial loading spaces would remain on each block and on each side of the street to accommodate the demand. Therefore, the proposed project's impact on commercial vehicle loading would be less than significant.

Passenger Loading/Unloading Assessment. The proposed project would not affect the existing passenger loading/unloading zones on Sixth Street, with the exception that the passenger loading/unloading zone on the west side of Sixth Street between Jessie and Mission Streets would be shortened by two feet (i.e., from 58 to 56 feet). Therefore, passenger loading/unloading activities would continue to be accommodated as under existing conditions, and the proposed project's impact on passenger loading/unloading operations would be less than significant.

Conclusion. Overall, for the above reasons, the impacts of the proposed project related to commercial vehicle and passenger loading/unloading activities would be less than significant.

Impact TR-2: Implementation of the proposed project would not result in inadequate emergency vehicle access. (*Less than Significant*)

The proposed project would result in removal of travel lanes on Sixth Street to accommodate the proposed sidewalk widening and bicycle lanes. These proposed transportation network and streetscape changes are conceptual in nature and are expected to be refined as the design process progresses. As part of that work, a preliminary review is being conducted by the SFMTA's Transportation Advisory Staff Committee (TASC)⁵⁸ and the San Francisco Fire Department (SFFD), along with other City agencies. For example, the TASC reviews the details of proposals that modify travel lanes and sidewalks. Proposed sidewalk widening (including sidewalk bulb-outs, corner bulb-outs, sidewalk widening, recessed bays, or narrowing of sidewalks) is reviewed and approved as part of the "sidewalk legislation process." In accordance with Public Works Order No. 172,512, the Board of Supervisors must approve changes to the City's sidewalks. As part of this approval, public agencies and private contractors submit necessary plans and information to the Bureau of Street Use and Mapping (BSM), a division of San Francisco Public Works (SFPW), for review and approval. The BSM refers the plans to many City agencies, including the Department of Public Health, the SFFD, the Port, and the San Francisco Public Utilities Commission (SFPUC). In addition, the BSM refers the plans to outside utility companies,

⁵⁸ Permanent proposed changes affecting roadways and sidewalks are subject to review and approval by the SFMTA's TASC, which is an interdepartmental committee that includes representatives from SFPW, SFMTA, the Police Department, the Fire Department, and the Planning Department.

including Pacific Gas & Electric (PG&E) and a number of telecommunications infrastructure providers. Similarly, the detailed design of the new bicycle lanes and raised crosswalks at the mid-block alleys would also be reviewed by the TASC. Thus, the TASC review ensures that any safety issues, including emergency access, are resolved prior to permit issuance.

In general, implementation of the proposed project would reduce the number of travel lanes along Sixth Street but would not introduce unusual design features, nor would the proposed project hinder or preclude emergency vehicle access. The fewer mixed-flow travel lanes on Sixth Street would reduce the available capacity for vehicles and thereby increase the number of vehicles in the remaining travel lanes. This would result in some additional vehicle delay along Sixth Street. However, the proposed project would not cause any complete roadway closures or disruption to emergency vehicle access. Between Market and Folsom Streets, one mixed-flow travel lane would be provided in each direction. The proposed bicycle lanes along this segment would not include any raised separation that would restrict emergency vehicle access to these lanes, or prevent private vehicles from pulling out of the mixed-flow lanes in the event of an emergency. Between Folsom and Bryant Streets, the proposed project would provide one mixed-flow travel lane in each direction with turn pockets, a center turn lane, and striped buffers between the parking and the travel lanes, which would provide room for vehicles to pull over in the event that an emergency vehicle is traveling along Sixth Street and would provide emergency vehicles with a clear path of travel. Between Bryant and Brannan Streets, the proposed project would provide multiple mixed-flow travel lanes in each direction, which would provide sufficient space for emergency vehicles to maneuver though with limited effects. Therefore, no substantial new emergency vehicle delay or impediments to access would result.

Overall, with implementation of the proposed project, adequate street widths, clearance, and capacity for emergency vehicle access would be maintained, and therefore the proposed project's impact on emergency vehicle access would be less than significant.

Impact TR-3: Implementation of the proposed project would not cause substantial additional vehicle miles traveled (VMT), substantially induce automobile travel, or cause major traffic safety hazards. (*Less than Significant*)

VMT Impacts

The proposed project is a transportation project and would not generate new vehicle trips. The proposed project includes roadway changes on Sixth Street such as the reduction in the number of travel lanes between Market and Howard Streets, the addition of Class II bicycle lanes and pedestrian safety improvements, the installation of new traffic control devices including signalized mid-block pedestrian crossings, signal timing optimization, the removal of on-street parking, and the removal and relocation of on-street commercial loading spaces. These features fit within the

general types of projects identified by OPR that would not substantially induce automobile travel.⁵⁹ Therefore, the overall impact of the proposed project on VMT would be less than significant.

Traffic Hazards Impacts

A traffic hazard is generally defined as a structure, object, or vegetation that obstructs, hinders, or impairs reasonable and safe view by drivers of other vehicles, pedestrians, or bicyclists traveling on the same street, and restricts the ability of the driver to stop the motor vehicle without danger of an ensuing collision. The proposed project would be designed to meet City, National Association of City Transportation Officials, California Manual of Uniform Traffic Control Devices, and Federal Highway Administration recommendations and standards, as appropriate. These engineering recommendations and standards have been developed over the years to enhance street safety and to provide safe facilities for walking, bicycling, transit operations, and the movement of motor vehicles. Furthermore, the proposed implementation of the street network changes (e.g., removal of travel lanes, new bicycle lanes, sidewalk widening, new traffic signals, and crosswalk changes) would reduce the potential for vehicle-pedestrian and vehicle-bicycle conflicts by designing the streets for all modes, enhancing sight lines and visibility, and reducing motor vehicle travel speeds. For example, as discussed above, removal of existing mixed-flow travel lanes would lead to slower vehicle speeds on Sixth Street, thereby allowing drivers more time to react to unexpected changes in the roadway; striping of continental-type crosswalks would make pedestrians more visible to drivers and bicyclists; and installation of a bicycle lane would increase bicyclists' visibility and would provide an exclusive lane for bicyclists. For these reasons, the proposed project's impacts related to traffic hazards would be less than significant.

Impact TR-4: The proposed project's construction activities would not result in substantial interference with pedestrian, bicycle, or vehicle circulation and accessibility to adjoining areas, and would not result in potentially hazardous conditions. (*Less than Significant*)

The proposed changes to the Sixth Street corridor would require the demolition of the existing sidewalks, curbs, and concrete gutters and excavation to a depth of approximately three feet to provide foundations for the new sidewalks and curb bulb-outs. Traffic signals and related hardware would require excavation to a depth of approximately six feet. Detailed plans for construction have not been developed, but construction of the proposed project would take approximately 12 months, starting in the fall of 2018. SFPW anticipates construction operations to be focused on one block at a time (e.g., Sixth Street between Market and Mission Streets). Durations for each block would vary from a high of 8 to 10 weeks per block for the segment of Sixth Street between Market and Howard Streets (to take into account the more intensive streetscape changes proposed on those

⁵⁹ San Francisco Planning Department, *Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for the Sixth Street Pedestrian Safety Project*, January 26, 2017. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

blocks) to a low of 4 to 6 weeks for the less-intensive streetscape changes proposed for the blocks south of Howard Street.

Construction-related activities would typically occur Monday through Friday, between 7 a.m. and 4 p.m. Construction is not anticipated to occur on Saturdays, Sundays, or major legal holidays, but may occur on these days on an as-needed basis. The hours of construction would be stipulated by SFPW, and the contractor would be required to comply with the San Francisco Noise Ordinance. Holiday restrictions apply to the section of Sixth Street between Market and Folsom Streets, as well as other areas with 50 percent or more commercial frontage. No work would be allowed during the holiday moratorium (from the day after Thanksgiving to January 1, 24 hours per day, seven days per week). All plates are required to be removed at least one day before the holiday moratorium in these areas, and all openings in the street and sidewalk must be closed by backfilling and paving, providing safe and adequate passage for vehicles and pedestrians.

Construction of the proposed project would require the temporary closure of travel lanes and sidewalks, as well as the temporary removal of on-street parking. The duration of the temporary travel lane and sidewalk closures would range from a maximum of 8 to 10 weeks between Market and Howard Streets, where the most intensive streetscape changes are proposed, to 4 to 6 weeks between Howard and Brannan Streets, where the proposed work would be less extensive. In some instances, construction may require temporary street closures and rerouting of traffic and transit; however, full street closures are not anticipated. Sidewalk and travel lane closures during construction are required to be coordinated with the City in order to minimize the impacts on vehicles, transit, bicyclists, and pedestrians. In general, temporary travel lane and sidewalk closures, including those during construction, are subject to review and approval by SFPW and the SFMTA.

During construction of the proposed project, there would be a flow of construction-related trucks into and out of the site, with an average of one construction truck and one vendor delivery truck (four one-way trips) traveling to the site on a daily basis. It is anticipated that a majority of the construction-related truck traffic would use I-280 to travel to and from the project site. To reach the project site from I-280, trucks would use the on- and off-ramps at the intersection of Sixth Street/Brannan Street. The project site could also be reached from I-80/U.S. 101. From I-80/U.S. 101, trucks would use the off-ramps at the intersections of Fifth Street/Harrison Street and Fourth Street/Bryant Street and would travel westbound on Harrison Street to Sixth Street, or southbound on Fourth Street to Brannan Street and then westbound on Brannan Street to Sixth Street to reach the project site. To return to I-80/U.S. 101, trucks would use Harrison Street to reach the freeway on-ramps at Harrison and Seventh Streets in the westbound direction or Bryant and Fifth Streets in the eastbound direction. During a project's construction period, temporary and intermittent traffic delays may result from truck movements to and from the project site. Truck movements during periods of peak traffic flow would have greater potential to create conflicts than truck movements

during non-peak hours because of the greater number of vehicles on the streets during the peak hour that would have to maneuver around queued trucks.

There would be an average of about 25 construction workers per day at the project site, with a greater number during peak periods of construction. Some construction workers would be expected to use transit or carpool to reach the project site. Construction workers could find on-street parking along the alleys nearest the particular segment under construction (e.g., along Stevenson and Jessie Streets when the Market-to-Mission block would be under construction), or could park in nearby public parking facilities. Construction staging and vehicle and equipment storage would likely occur on-street along the side streets nearest the particular segment under construction. Parking of construction worker vehicles would temporarily increase occupancy levels in off-street parking facilities, either by those vehicles or by vehicles currently parking in on-street spaces that would be displaced by construction worker vehicles. ADA-compliant pedestrian and vehicle access and emergency vehicle access to all properties would be maintained at all times along and across Sixth Street during construction.

Overall, construction activities associated with implementation of the proposed project would be sequenced along the corridor, would be of limited duration, and would be conducted in conformance with the SFMTA's *Parking and Traffic Regulations for Working in San Francisco Streets* (the "Blue Book"), which establishes regulations for working in San Francisco streets to ensure the activities are conducted safely and with the least possible interference with pedestrians, bicyclists, transit, and vehicles.⁶⁰ For these reasons, the proposed project's construction-related transportation impacts would be less than significant.

While the proposed project's construction-related transportation impacts would be less than significant, Improvement Measure I-TR-4: Construction Management Plan may be recommended for consideration by City decision-makers to further reduce the less-than-significant impacts related to potential conflicts between construction activities and pedestrians, bicyclists, transit, and autos.

Improvement Measure I-TR-4: Construction Management Plan

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and autos, the San Francisco Municipal Transportation Agency, or its contractor, shall prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Construction Management Plan, the project sponsor/construction contractor(s) would meet with San Francisco Public Works, the San Francisco Municipal Transportation Agency, the San Francisco Fire Department, Muni Operations, and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic,

⁶⁰ SFMTA, *Parking and Traffic Regulations for Working in San Francisco Streets*, 8th Edition. Available online at <http://www.sfmta.com/services/streets-sidewalks/construction-regulations>. Accessed December 1, 2016.

bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review could consider other ongoing construction in the project vicinity, including development and transportation infrastructure projects.

Carpool, Bicycle, Walk, and Transit Access for Construction Workers – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycling, walking, and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in the free-to-employee-ride matching program from www.511.org, participating in the emergency ride home program through the City and County of San Francisco (www.sferh.org), and providing transit information to construction workers).

Construction Worker Parking Plan – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking, as well as the person(s) responsible for monitoring the implementation of the proposed parking plan, could be identified. The use of on-street parking to accommodate construction worker parking would be discouraged. All construction bid documents could include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on site, identification of the location, number of parking spaces, and area where vehicles would enter and exit the site could be required. If off-site parking is proposed to accommodate construction workers, identification of the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between the off-site facility and the project site could be required.

Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access for nearby residents and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Construction Management Plan, a regular e-mail notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Improvement Measure I-TR-4, the only improvement measure recommended for the proposed project, would include provisions for construction truck management, a construction worker parking plan, project construction updates for businesses and residents, and encouragement of construction worker travel via non-motorized modes; and would further reduce the proposed project's less-than-significant construction-related transportation impacts.

Cumulative Impacts

Impact C-TR-1: Implementation of the proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in significant cumulative transportation impacts. (*Less than Significant*)

Under 2040 cumulative conditions, impacts of the proposed project, in combination with past, present, and other cumulative projects, on pedestrian, bicyclist, transit, parking, loading, emergency

vehicle access, and traffic-related transportation impacts were determined to be less than significant. For locations and descriptions of currently proposed development and infrastructure projects along and in the vicinity of the Sixth Street corridor, see Initial Study Section B, Project Setting, pp. 41-52 (including Figure 12 [p. 45] and Table 6 [pp. 42-44]). The following sections present the cumulative impact assessment for each transportation topic.

Cumulative Pedestrian Impacts

Future 2040 cumulative pedestrian volumes were estimated based on cumulative development and growth identified by the SFCTA SF-CHAMP travel demand model, using model output that represents existing conditions and model output for 2040 cumulative conditions. The 2040 cumulative pedestrian volumes reflect cumulative growth associated with projected development along Sixth Street and the vicinity. Between existing and 2040 cumulative conditions, the number of pedestrians using the study area crosswalks, sidewalks and corners is anticipated to more than double. This growth would mostly occur at the southern end of the corridor as medium- to high-density residential and commercial office space replaces the existing low-density production, distribution, and repair (PDR) uses and warehousing facilities. The increased pedestrian demand associated with this new development would include many pedestrians traveling throughout the corridor to and from Market Street, contributing to the existing pedestrian safety concerns on the northern segment of the corridor at locations with existing high collision potential.

As presented in Initial Study Section B, Project Setting, on pp. 41-52, the SFMTA is currently implementing a number of projects in San Francisco as part of Vision Zero, focused on eliminating traffic deaths in San Francisco by 2024. Planned Vision Zero projects along Sixth Street include a new mid-block traffic signal at Jessie Street (including LPIs and continental crosswalks), and corner sidewalk extensions and signal timing changes at Sixth and Howard Streets. Other cumulative projects that would enhance the pedestrian network in the study area through sidewalk widening and reduction in mixed-flow travel lanes include the Central SoMa Plan and the Seventh Street and Taylor Street Road Diet Projects. These future projects would complement the pedestrian safety improvements that are proposed as part of the Sixth Street Pedestrian Safety Project.

Under 2040 cumulative conditions, including implementation of the proposed project improvements, pedestrians traveling along and across Sixth Street would have more room to maneuver on sidewalks, corners, and crosswalks. During the weekday p.m. peak hour, the pedestrian LOS at the crosswalk, corner, and sidewalk analysis locations would be LOS D⁶¹ or better.

⁶¹ Based on the HCM 2000 methodology, at pedestrian LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Crossing or reverse-flow movements have a high probability of conflict, requiring frequent changes in speed and position. The LOS provides reasonably fluid flow, but friction and interaction between pedestrians is likely. In San Francisco, LOS D is the considered the lowest acceptable pedestrian LOS designation.

In addition, as described in Impact TR-1 for existing plus project conditions, implementation of the proposed changes would reduce the collision potential at high-frequency collision locations along Sixth Street by providing sidewalks that meet *Better Streets Plan* recommended widths between Market and Howard Streets, raised crosswalks and new mid-block signals at alleyways, corner sidewalk extensions at intersections north of Howard Street, and a reduction in the number of travel lanes along the entire corridor. The proposed mid-block crosswalks would also reduce the potential for pedestrians to cross Sixth Street at non-designated locations. Overall, the proposed project would reduce safety hazards for future pedestrians traveling along Sixth Street by providing changes aimed at reducing the collision potential at high-frequency locations. Therefore, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in less-than-significant cumulative impacts on pedestrians.

Cumulative Bicycle Impacts

The proposed project includes new bicycle facilities on northbound and southbound Sixth Street between Market and Folsom Streets that would connect with the recently implemented separated bicycle lane (Class II) with a striped buffer in the eastbound direction on Golden Gate Avenue between Polk and Market Streets. The proposed new bicycle lanes on Sixth Street would complement the planned bicycle lanes on Fifth Street (the design of the facility on Fifth Street is being developed by the SFMTA to be consistent with the adopted *2009 Bicycle Plan*), the upgrade to the existing Class II northbound bicycle lane on Seventh Street (i.e., to a parking-protected Class IV cycle track), and the Class II and Class IV bicycle facilities on Howard, Folsom, Brannan, Third, and Fourth Streets proposed as part of the Central SoMa Plan. These future bicycle improvements would enhance cycling conditions in the study area. As bicycling continues to increase throughout San Francisco, the number of bicyclists on SoMa bicycle routes and lanes also is anticipated to increase. While there would be a general increase in vehicle traffic that is expected through the future 2040 cumulative conditions, the proposed project would not create potentially hazardous conditions for bicycles, or otherwise interfere with bicycle accessibility to adjoining areas, or substantially affect the existing, planned, and proposed bicycle facilities in the vicinity. Therefore, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in less-than-significant cumulative impacts on bicyclists.

Cumulative Transit Impacts

Cumulative transit conditions in the study area would be affected by changes to the roadway geometry and operational changes implemented under Muni Forward, the Central Subway, and the Central SoMa Plan. Key physical changes under Muni Forward and the Central SoMa Plan include converting mixed-flow travel lanes to transit-only lanes. The Central SoMa Plan proposes upgrades to the transit-only lanes on Fourth Street for the 8/8AX/8BX Bayshore, 30 Stockton, and 45 Union-Stockton routes. The Central SoMa Plan also includes transit-only lanes for routes that run on streets perpendicular to Sixth Street, including the 12 Folsom on Folsom and Harrison Streets, and

the 47 Van Ness on Harrison and Bryant Streets. Muni Forward includes the implementation of the 14 Mission Rapid project, with new or upgraded transit-only lanes on Mission Street, and the relocation of the 47 Van Ness route from 11th, Harrison, and Bryant Streets to Townsend Street.

Under 2040 cumulative conditions, the proposed project is not expected to generate new transit ridership, as it would not add any new residents or land uses to the study area. The proposed reduction in the number of travel lanes on Sixth Street may result in some shift from auto to transit mode for persons traveling through and within the study area due to the potential for increased auto congestion. However, this mode shift would not be substantial and would not affect ridership levels or capacity utilization of local Muni and regional transit routes. Thus, while the proposed project would likely enhance the experience of walking to or from transit stops on Sixth and Market Streets, this is not expected to induce substantial additional ridership on any route in the study area, or contribute considerably to cumulative ridership increases associated with other development or transportation network projects.

Primary causes of transit delay under 2040 cumulative conditions are related to cumulative increases in vehicle delay in cases where transit vehicles operate within mixed-flow travel lanes. Under 2040 cumulative conditions, the 14X Mission Express and 27 Bryant are expected to continue to operate in mixed-flow travel lanes on Sixth Street. Transit routes that currently operate, and will continue to operate, in mixed-flow travel lanes on streets parallel to Sixth Street within the study area include the 19 Polk on Seventh and Eighth Streets and the 27 Bryant on Fifth Street. The remaining routes in the study area will continue to operate in transit-only lanes on Mission, Market, or Fourth Streets. Some vehicles traveling through SoMa along Sixth Street would shift to parallel routes, reducing the number of vehicles along segments of Sixth Street with transit service under 2040 cumulative conditions. This would be due to upstream constraints (i.e., at the I-280 touchdown at Brannan Street, and at Market and Mission Streets) that limit additional vehicles from reaching the Sixth Street segments where transit routes operate within the mixed-flow travel lanes. Overall, these transit routes would experience similar effects on delay under 2040 cumulative conditions as under existing plus project conditions. Therefore, while the proposed project would likely increase delay slightly on the 14X Mission and 27 Bryant due to overall increases in vehicle delay on Sixth Street, and for movements turning onto Sixth Street, the added delay would represent one to two minutes of increased travel time during the p.m. peak hour, which is less than one-half of the headways for these routes, and therefore would not be a cumulative increase in transit travel times. Therefore, the proposed project, in combination with past, present and reasonably foreseeable development in San Francisco, would result in less-than-significant cumulative impacts on local Muni and regional transit, and would not contribute considerably to any significant cumulative transit impacts.

Cumulative Parking Impacts

Due to the land use development and increased density anticipated within the city, parking demand and competition for on-street and off-street parking likely to increase over time. Additionally, through the implementation of the City's Transit First Policy, the City's *Better Streets Plan* and related projects, such as the Central SoMa Plan, on-street parking spaces may be further removed to promote sustainable travel modes and sustainable street designs. These projects would encourage transit use through the reduction of transit travel time and an increase in transit reliability, and would encourage bicycle use through the provision of separated bicycle facilities, which would offer a higher level of security than bicycle lanes and would be attractive to a wider spectrum of the public. The proposed project's permanent removal of 28 on-street parking spaces on Sixth Street and an additional 6 spaces on Stevenson, Minna, Howard, and Harrison Streets would not be substantial. The parking demand associated with cumulative development and displaced through cumulative on-street parking removal would result in the on-street and off-street parking occupancy in the study area increasing. Under 2040 cumulative conditions, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles, or travel by foot) and a relatively dense pattern of urban development, may induce drivers to shift to other modes of travel, or change their overall travel habits. Considering the location in the downtown area with multiple travel modes available (including local and regional transit, bicycling, and walking), nearby parking facilities, and proposed cumulative improvements to the pedestrian and bicycle network, the on-street parking loss along the Sixth Street corridor would not be considered substantial. Therefore, the proposed project, in combination with past, present and reasonably foreseeable development in the immediate vicinity of the Sixth Street corridor including transportation network changes, would result in less-than-significant cumulative impacts on parking.

Cumulative Loading Impacts

A number of development projects are currently proposed along the Sixth Street corridor, primarily in the southern portion of the corridor. To the extent that the commercial vehicle demand generated by these development projects is not accommodated within the development site, these cumulative development projects may seek on-street commercial vehicle loading spaces. The majority of the existing on-street commercial loading spaces are located in the northern portion of the corridor. Even with the reduction in the number of commercial loading spaces with implementation of the proposed project, these loading spaces would be available to accommodate additional demand associated with the very limited number of development projects currently proposed in the northern portion of the corridor. Other proposed changes in the northern portion of the Sixth Street corridor, such as implementation of the bicycle lanes, signalization, and bulb-outs, would not affect access to existing or proposed on-street loading spaces.

In the southern portion of the Sixth Street corridor, only a limited number of on-street commercial loading spaces currently exist, and the proposed changes would not alter the number of commercial loading spaces or access to them. However, implementation of the proposed project would rescind the existing peak-period tow-away regulations that currently exist generally between Folsom and Brannan Streets, which would allow for use of the existing commercial loading spaces during the peak periods (i.e., six additional hours during the day). Implementation of the proposed project would not affect the ability of the SFMTA to provide additional on-street commercial loading spaces.

Other transportation projects in the area, such as the proposed Central SoMa Plan's street network changes, would result in the permanent and peak-period removal of on-street commercial loading spaces on Howard and Folsom Streets. The permanent and peak-period removal of on-street loading spaces would require existing delivery and service vehicles using these spaces to seek alternative locations, particularly during the morning peak period when commercial deliveries are greatest, and would also result in fewer on-street loading spaces being available for future development. Thus, these cumulative projects could result in significant cumulative loading impacts at these locations. The proposed project would not contribute to these potential cumulative impacts, because, as described above, adequate on-street loading spaces would be available to accommodate existing and future loading demand along the Sixth Street corridor, and additional on-street loading spaces could be provided. Therefore, the proposed project would not cause additional vehicles to seek loading spaces, and would not exacerbate any cumulative loading shortages.

Cumulative development projects requiring passenger loading/unloading zones adjacent to their property could apply for a permit from the SFMTA. Requests for passenger loading/unloading zones as part of cumulative development projects would be considered by the SFMTA within the context of the on-street curb regulations. As noted above, the proposed project changes to street regulations in the southern portion of the corridor, where most cumulative development projects are proposed, would allow for on-street parking at all times, which would facilitate implementation and utilization of passenger loading/unloading zones throughout the day. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable development in the immediate vicinity of the Sixth Street corridor including transportation network changes, would result in less-than-significant cumulative impacts on commercial vehicle and passenger vehicle loading/unloading.

Cumulative Emergency Vehicle Access Impacts

Implementation of the proposed project would not contribute considerably to cumulative emergency vehicle access conditions in the area. A number of cumulative projects would affect the street network in the vicinity of Sixth Street, including the Seventh Street Road Diet, the Central SoMa Plan street network changes, the planned bicycle lane on Fifth Street, and the Muni Forward

TTRP.14 project on Mission Street. With implementation of these projects, the roadway network would continue to accommodate emergency vehicle access. With implementation of Muni Forward TTRP.14, transit-only lanes on Mission Street would be enhanced, and emergency vehicles would be permitted full use of the transit-only lanes. Cumulative growth in housing and employment within the study area and elsewhere in San Francisco would result in an increased demand of emergency response calls, thereby increasing the frequency of emergency vehicles traveling within the study area.

The proposed project would reduce the number of travel lanes on Sixth Street; however, a bicycle lane would be provided, which would allow drivers to pull over to allow emergency vehicles to pass. Due to increased congestion on area roadways under 2040 cumulative conditions, emergency vehicle providers may adjust travel routes to respond to incidents and would be subject to increased congestion associated with cumulative development and street network changes, but no new physical features that would substantially delay or impede emergency vehicle access would be added to the Sixth Street roadway. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable development in the immediate vicinity of the Sixth Street corridor, would result in less-than-significant cumulative emergency vehicle access impacts.

Cumulative VMT Impacts

The proposed project includes features that would alter the transportation network (e.g., removal of two travel lanes between Market and Bryant Streets, addition of Class II bicycle lanes, installation of new traffic control devices, signal timing optimization, removal of on-street parking, removal and modification of on-street commercial loading regulations, and other pedestrian safety improvements), and, as discussed for existing plus project conditions, these features fit within the general types of projects identified by OPR that would not substantially induce automobile travel. Therefore, the proposed project would not make a considerable contribution to any substantial cumulative increase in automobile travel. Thus, the proposed project, in combination with past, present, and reasonably foreseeable development in San Francisco and in the immediate vicinity of the Sixth Street corridor, would result in less-than-significant cumulative VMT impacts.

Cumulative Traffic Hazard Impacts

A number of cumulative transportation network projects are currently underway, planned, or proposed that would enhance the transportation network in the project vicinity. These include the Central SoMa Plan, Muni Forward, Vision Zero projects (such as Safer Market Street, Seventh Street Road Diet, and Jessie Street Signalization), and the Better Market Street Project, among others that are targeted at reducing existing hazards. Cumulative transportation projects, including the proposed changes, would not introduce unusual design features, and these projects would be designed to meet City, National Association of City Transportation Officials, and Federal Highway Administration standards, as appropriate. Development projects proposing street changes in the

area would be subject to these requirements as well. Increases in vehicle, pedestrian, and bicycle travel associated with cumulative development could result in the potential for increased vehicle-pedestrian and vehicle-bicycle conflicts, but the increased potential for conflicts would not be considered a new or substantial worsening of a traffic hazard. Thus, the proposed project, in combination with past, present, and reasonably foreseeable development in the immediate vicinity of the Sixth Street corridor, would result in less-than-significant cumulative traffic hazards impacts.

Cumulative Construction Impacts

Implementation of the proposed project may overlap with the construction of land development and public infrastructure projects on and in the vicinity of the Sixth Street corridor, although the timing of construction of the majority of these projects is not currently known. Overall, localized cumulative construction-related transportation impacts could occur as a result of cumulative projects on and in the vicinity of the Sixth Street corridor that either generate increased traffic at the same time and on the same roads as other land development projects or the overlap with infrastructure projects that reduce the number of travel lanes on the local roadway network. The construction manager for each project would work with the various departments of the City to develop a detailed and coordinated plan that would address construction vehicle routing, traffic control, and pedestrian movement adjacent to the construction area for the duration of any overlap in construction activity. The cumulative impacts of multiple nearby construction projects would not be significant, as the construction would be of temporary duration (e.g., typically between two and three years), and the project sponsors would coordinate with various City departments such as the SFMTA and SFPW to develop coordinated plans that would address construction-related vehicle routing and pedestrian movements adjacent to the construction area for the duration of construction overlap. The proposed changes would be constructed within a period of one year, with construction completed one block at a time, and would therefore only minimally overlap with construction of cumulative projects along Sixth Street. Therefore, the proposed project, in combination with past, present, and reasonably foreseeable development in the immediate vicinity of the Sixth Street corridor, would result in less-than-significant cumulative construction-related transportation impacts.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.6. NOISE—Would the project:					
a) Expose people to or generate noise levels in excess of standards established in the <i>San Francisco General Plan</i> or Noise Ordinance (Article 29 of the San Francisco Police Code)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Expose people to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in people being substantially affected by existing noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Approach to Analysis

In the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015,⁶² the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might affect a project’s occupants, except where the project would significantly exacerbate an existing environmental condition. Accordingly, the significance criteria above related to exposure of people to noise levels in excess of standards specified in the City’s *General Plan* or the Noise Ordinance, exposure of people to excessive groundborne vibration or groundborne noise levels, and people being substantially affected by existing noise levels are relevant only to the extent that the project would significantly exacerbate the existing noise and vibration environment. Thus, the analysis below evaluates whether the proposed project could exacerbate the existing or future noise environment. An impact is considered significant if implementation of the proposed project would exacerbate existing or future noise and vibration levels above the levels that would occur without the project.

The Sixth Street corridor is not located within an airport land use plan area, within two miles of any public airports or public use airports that have not adopted land use plans, or in the vicinity of a private airstrip. Thus, the proposed project would not expose people residing or working in the area to excessive noise levels from a public airport, public use airport, or private airstrip.

⁶² *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion Filed December 17, 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Additionally, the proposed road diet project is not a noise-sensitive use and would not be affected by existing noise levels. Therefore, Initial Study Topics E.6e, E.6f, and E.6g are not applicable to the proposed project.

Setting

Sound Fundamentals

Sound is characterized by various parameters that describe the rate of oscillation (frequency) of sound waves, the distance between successive troughs or crests in the wave, the speed that it travels, and the pressure level or energy content of a given sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound, and the decibel (dB) scale is used to quantify sound intensity. Because sound can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called “A-weighting,” expressed as “dBA.” The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3-dBA change is considered a perceptible difference. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness.

Noise Descriptors. Noise is generally defined as sound that is loud, disagreeable, unexpected, or unwanted. Sound is mechanical energy transmitted in the form of a wave by a disturbance or vibration that causes pressure variation in air the human ear can detect. Variations in noise exposure over time are typically expressed in terms of a steady-state energy level (called L_{eq}) that represents the acoustical energy of a given measurement, or alternatively as a statistical description of what sound level is exceeded over some fraction (10, 50 or 90 percent) of a given observation period (i.e., L_{10} , L_{50} , L_{90}). $L_{eq}(24)$ is the steady-state acoustical energy level measured over a 24-hour period. L_{max} is the maximum, instantaneous noise level registered during a measurement period. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dBA increment be added to evening and nighttime noise levels to form a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). CNEL adds a 5-dBA penalty during the evening (7 p.m. to 10 p.m.) and a 10-dBA penalty at night (10 p.m. to 7 a.m.). Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL. Both CNEL and Ldn add a 10-dBA penalty to all nighttime noise levels between 10 p.m. and 7 a.m., but Ldn does not add the evening 5-dBA penalty between 7 p.m. and 10 p.m. In practice, Ldn and CNEL usually differ by less than 1 dBA at any given location for transportation noise sources. Table 8: Typical Sound

Levels Measured in the Environment presents representative noise sources and their corresponding noise levels in dBA at 50 feet from the various noise sources.

Table 8: Typical Sound Levels Measured in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Fly-Over at 100 Feet		
	100	
Gas Lawnmower at 3 Feet		
	90	
Diesel Truck going 50 Miles per Hour at 50 Feet		Food Blender at 3 Feet
	80	Garbage Disposal at 3 Feet
Noise Urban Area during Daytime		
Gas Lawnmower at 100 Feet	70	Vacuum Cleaner at 10 Feet
Commercial Area		Normal Speech at 3 Feet
Heavy Traffic at 300 Feet	60	
		Large Business Office
Quiet Urban Area during Daytime	50	Dishwasher in Next Room
Quiet Urban Area during Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Area during Nighttime		
	30	Library
Quiet Rural Area during Nighttime		Bedroom at Night, Concert Hall (background)
	20	
		Broadcast/Recording Studio
	10	
	0	

Note: dBA = A-weighted decibel

Source: California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013, p. 2-20.

Attenuation of Noise. A receptor’s distance from a noise source affects how noise levels attenuate (decrease). Transportation noise sources tend to be arranged linearly, such that roadway traffic attenuates at a rate of 3.0 to 4.5 dBA per doubling of distance from the source; on the other hand, point sources of noise, including stationary, fixed, and idle mobile sources, like idling vehicles or construction equipment, typically attenuate at a rate of 6.0 to 7.5 dBA per doubling of distance from the source.⁶³ Noise levels can also be attenuated by “shielding” or providing a barrier between

⁶³ The 1.5-dBA variation in attenuation rate (6 dBA vs. 7.5 dBA) can result from ground-absorption effects, which occur as sound travels over soft surfaces such as soft earth or vegetation (7.5 dBA attenuation rate) versus hard ground such as pavement or very hard-packed earth (6 dBA rate). U.S. Housing and Urban Development, *The Noise Guidebook*, 1985, p. 24. Available online at https://portal.hud.gov/hudportal/documents/huddoc?id=DOC_16417.pdf. Accessed March 6, 2017.

the source and the receptor. Based on the United States Environmental Protection Agency (US EPA) national average, closed windows reduce noise levels by approximately 25 dBA, while open windows reduce noise levels by about 15 dBA.⁶⁴

Vibration and Groundborne Noise

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Vibration is typically measured by peak particle velocity (PPV) in inches per second (in/sec). With the exception of long-term occupational exposure, vibration levels rarely affect human health. Instead, most people consider vibration to be an annoyance that can affect concentration or disturb sleep. People may tolerate infrequent, short-duration vibration levels, but human annoyance to vibration becomes more pronounced if the vibration is continuous or occurs frequently. High levels of vibration can damage fragile buildings or interfere with sensitive equipment. According to the Federal Transit Administration (FTA), if groundborne vibration exceeds 0.5 in/sec PPV, it could cause cosmetic damage to a structure.⁶⁵

Typical sources of groundborne vibration in San Francisco are large-scale construction projects that involve pile driving or underground tunneling, and Muni Metro's light rail vehicles and historic streetcars. Vibration is also caused by transit vehicles in the subway system under Market Street, including Muni Metro light rail vehicles and Bay Area Rapid Transit (BART) trains. Because rubber tires provide vibration isolation, rubber tire vehicles, such as Muni buses, trucks, and automobiles, rarely create substantial groundborne vibration effects unless there is a discontinuity or bump in the road that causes the vibration.⁶⁶

⁶⁴ United States Environmental Protection Agency (US EPA), Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, Appendix B, Table B-4, p. B-6, March 1974. Available online at <https://nepis.epa.gov/Exe/ZyNET.exe/2000L3LN.TXT?ZyActionD=ZyDocument&Client=EPA&Index=Prior+to+1976&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmIQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C70thru75%5CTxt%5C00000001%5C2000L3LN.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL>. Accessed March 6, 2017.

⁶⁵ Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, DTA-VA-90-1003-06, May 2006, p. 12-9. Available online at <https://www.transit.dot.gov/regulations-and-guidance/environmental-programs/noise-and-vibration>. Accessed March 3, 2017.

⁶⁶ *Ibid*, p. 7-9.

Existing Conditions

Noise. The proposed project encompasses the Sixth Street public right-of-way between Market and Brannan Streets (six blocks). The project corridor is located in an urban area where the sound of vehicular traffic (autos, trucks, buses) on Sixth Street itself, as well as on the I-80 freeway and adjacent streets, dominates the existing ambient noise environment.

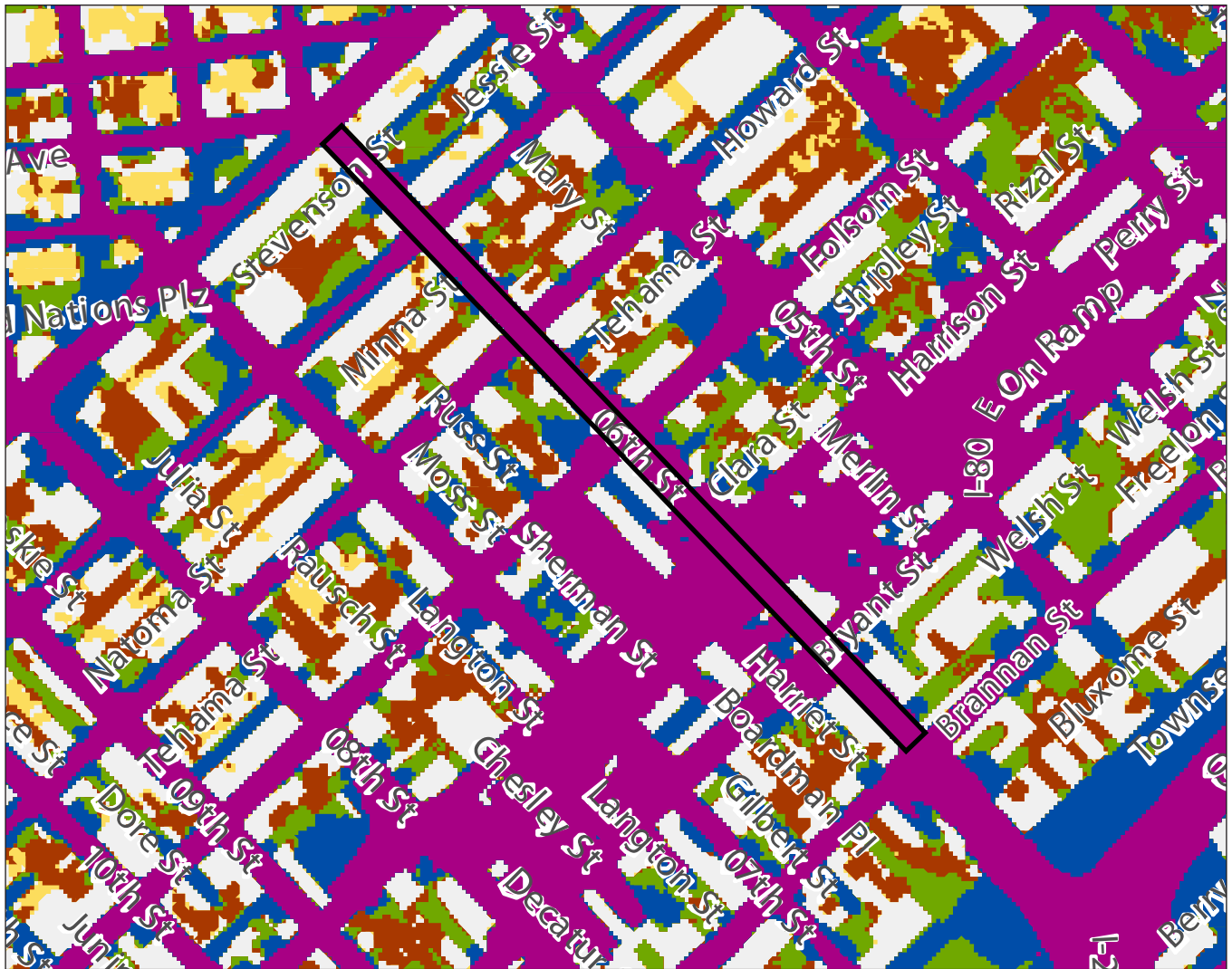
The San Francisco Department of Public Health (DPH) has mapped background noise levels throughout the city. The San Francisco DPH Background Noise Levels – 2009 map is based on a citywide modeling of traffic volumes and on a sample of sound level readings.⁶⁷ The map presents background noise levels between a range of 50 to 55 dBA (Ldn) on the low end to over 70 dBA (Ldn) on the high end. Based on the DPH map, noise levels immediately adjacent to the Sixth Street project corridor exceed 70 dBA (Ldn). See Figure 13: Background Noise Levels. Major cross-streets such as Market, Mission, Howard, Folsom, Harrison, Bryant, and Brannan Streets are similarly subject to noise levels above 70 dBA (Ldn). However, cross-street minor streets (i.e., alleyways) such as Jessie, Minna, Natoma, Tehama, Clementina, Shipley, and Clara Streets are subject to lower noise levels, ranging from 55 dBA to 70 dBA (Ldn).

Groundborne Noise and Vibration. There are no known sources of groundborne vibration in the vicinity of the project site except BART’s underground train operations under Market Street, which is located at the north end of the project corridor.

Existing Sensitive Receptors. Some land uses (and associated users) are considered more sensitive to ambient noise levels than others due to the types of activities typically involved with the land use and the amount of noise exposure (in terms of both exposure duration and insulation from noise). In general, occupants of residences, schools, daycare centers, hospitals, places of worship, and nursing homes are considered to be sensitive receptors, i.e., persons who are sensitive to noise based on their specific activities, age, health, and other factors.

The Environmental Protection Element of the *General Plan* contains Land Use Compatibility Guidelines for Community Noise for determining the compatibility of various land uses with different noise levels (see Figure 14: San Francisco Land Use Compatibility Chart for Community Noise). These guidelines, which are similar to state guidelines set forth by the Governor’s Office of Planning and Research, indicate maximum acceptable noise levels for various land uses. For

⁶⁷ San Francisco Planning Department, San Francisco General Plan Environmental Protection Element, Map 1: Background Noise Levels – 2009. Available online at http://generalplan.sfplanning.org/images/I6.environmental/ENV_Map1_Background_Noise%20Levels.pdf. Accessed March 6, 2017.









SOURCE: San Francisco Planning Department, San Francisco General Plan, Environmental Protection Element, Map 1, Background Noise Levels, 2009. Available online at http://www.sf-planning.org/ftp/General_Plan/images/16.environmental/ENV_Map1_Background_Noise%20Levels.pdf. Accessed on March 7, 2017.



 Project Corridor

Noise Levels (Ldn)

-  Below 50
-  50-55
-  55-60
-  60-65
-  65-70
-  Above 70

SIXTH STREET PEDESTRIAN SAFETY PROJECT

2014.1010E

FIGURE 13: BACKGROUND NOISE LEVELS

Figure 14: San Francisco Land Use Compatibility Chart for Community Noise

Land Use Category	Sound Levels and Land Use Consequences (L _{dn} Values in dB)						
	55	60	65	70	75	80	85
Residential – All Dwellings, Group Quarters	Satisfactory		Discouraged				
Transient Lodging - Motels, Hotels	Satisfactory		Discouraged				
School Classrooms, Libraries, Churches, Hospitals, Nursing Homes, etc.	Satisfactory		Not Undertaken				
Auditoriums, Concert Halls, Amphitheaters, Music Shells	Satisfactory		Not Undertaken				
Sports Arenas, Outdoor Spectator Sports	Satisfactory		Discouraged				
Playgrounds, Parks	Satisfactory		Discouraged				
Golf Courses, Riding Stables, Water-Based Recreation Areas, Cemeteries	Satisfactory		Discouraged				
Office Buildings – Personal, Business, and Professional Services	Satisfactory		Discouraged				
Commercial – Wholesale and Some Retail, Industrial/Manufacturing, Transportation, Communication, and Utilities	Satisfactory		Discouraged				
Manufacturing – Noise-Sensitive Communications – Noise-Sensitive	Satisfactory		Not Undertaken				

Satisfactory, with no special noise insulation requirements.

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

New construction or development should generally not be undertaken.

Source: San Francisco Planning Department, *San Francisco General Plan Policy 11.1*, adopted June 27, 1996. Available online at http://www.sf-planning.org/ftp/General_Plan/I6_Environmental_Protection.htm#ENV_TRA_9. Accessed March 3, 2017.

residential land uses, the maximum satisfactory exterior noise level without incorporating noise insulation features into a project is 60 dBA (Ldn). Where existing noise levels exceed 65 dBA (Ldn), residential development is generally discouraged. Where exterior noise levels exceed 60 dBA (Ldn), new residential development must demonstrate, through the preparation of a detailed noise analysis, how the interior noise standard of 45 dBA (Ldn) would be met. Interior noise levels in new development can be reduced through the use of noise-insulating windows and by using sound insulation materials in walls and ceilings.

Land uses within the project area are described in detail in Initial Study Section B, Project Setting, on pp. 35-41. Noise-sensitive land uses adjacent to the Sixth Street project corridor include residential, in the forms of residential hotels, apartment buildings, and multi-family buildings (e.g., duplexes, triplexes, etc.). In general, residential uses in the SoMa neighborhoods form residential enclaves interspersed with commercial, retail, office, light industrial, and production, distribution, and repair (PDR) uses. In the immediate vicinity of the project corridor, there are residential clusters along narrow alleys such as Minna, Natoma, Clementina, Shipley and Clara Streets as well as along major streets (Market, Mission, Howard, and Folsom Streets). Market, Sixth, Mission, Howard, and Folsom Streets contain stretches of moderate-to-high-density residential mixed-use developments. The closest school is the Bessie Carmichael Elementary School at 375 Seventh Street, located approximately 600 feet west of the project corridor.

Project Construction Impacts

Impact NO-1: Construction of the proposed project would not cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project and would not expose people to or generate noise levels in excess of standards in the Noise Ordinance (Article 29 of the San Francisco Police Code) or applicable standards of other agencies. (*Less than Significant*)

Equipment Noise

Construction noise is regulated by Sections 2907 and 2908 of the City's Noise Ordinance (Article 29 of the San Francisco Police Code, revised November 25, 2008). Section 2907(a) requires that noise levels from individual pieces of powered construction equipment, other than impact tools and equipment, not exceed 80 dBA at a distance of 100 feet from the source between 7 a.m. and 8 p.m. Section 2907(b) requires that the intakes and exhausts of impact tools and equipment be equipped with mufflers, and that pavement breakers and jackhammers be equipped with acoustically attenuating shields or shrouds to the satisfaction of the Director of Public Works or Building Inspection, as feasible, to best accomplish maximum noise attenuation.

Table 9: Typical Construction Noise Levels shows typical noise levels associated with a range of construction equipment that is expected to be used for this project. As indicated in this table, operation of pavement saws and scarifiers as well as jackhammers would have the potential to

exceed the 86-dBA-at-50-feet or 80-dBA-at-100-feet noise limit for construction equipment (as specified by the Police Code) by 4 dBA. Jackhammers would be exempt from this ordinance limit, but Section 2907(b) would require them to be equipped with acoustically attenuating shields or shrouds. Pavement saws and scarifiers, however, would not be exempt from this ordinance noise limit. Therefore, implementation of noise controls on construction equipment and tools, such as shields on jackhammers, pavement saws, and scarifiers/grinders, as necessary would ensure that all construction equipment used for this project meets the City’s 80-dBA-at-100-feet ordinance limit, and therefore temporary equipment-related noise increases would be less than significant.

Table 9: Typical Construction Noise Levels

Construction Equipment	Noise Level (dBA, Leq at 50 feet)	Noise Level (dBA, Leq at 100 feet)
Pavement Saw	90	84
Jackhammer ^a	89^a	83^a
Loader (including Skid Steer)	79	73
Backhoe	78	72
Excavator	81	75
Dump Truck	76	70
Flatbed Truck	74	68
Concrete Truck	81	75
Roller	80	74
Pavement Scarifier (Grinder)	90	84
Paver	77	71
<i>San Francisco Noise Ordinance Limit</i>	86	80

Notes: dBA = A-weighted decibel

The above Leq noise levels are calculated assuming a 100 percent usage factor at full load (i.e., Lmax noise level 100 percent) for the one-hour measurement period. Noise levels in **bold** exceed the above ordinance limit, but as indicated, one of the three exceedances are exempt from this limit.

^a Exempt from the ordinance noise limit of 86-dBA-at-50 feet or 80-dBA-at-100 feet because this is an impact tool and impact equipment is exempt.

Sources: U.S. Department of Transportation, Federal Highway Administration, 9.0 Construction Equipment Noise Levels and Ranges, Table 9.1, RCNM Default Noise Emission Reference Levels and Usage Factors, Construction Noise Handbook, Updated July 2011. Available online at http://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm. Accessed March 2, 2017.

Temporary Noise Increases at Noise-Sensitive Receptors

Construction activity noise levels at and near any construction site would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The project’s construction duration is proposed to be 12 months, but construction activities would be focused on one block at a time and progress along this corridor so that any given receptor would not be subject to construction noise for the entire 12-month duration. Instead construction duration at any given receptor would vary from a high of 8 to 10 weeks per block for more intensive changes (along the northern portion of the corridor, between Market and Howard Streets) to 4 to 6 weeks per block for less-intensive streetscape changes (along the southern portion of the corridor, between

Howard and Brannan Streets). Such relatively short durations would help limit the adverse effects of temporary noise increases on adjacent sensitive receptors.

Off-Site Haul Truck Traffic

Project construction would generate an average of one haul truck and one vendor truck per day (four one-way truck trips) over the 12-month construction duration. Proposed truck haul routes would be the major streets in the project vicinity providing access to nearby freeways (Fourth, Fifth, Sixth, Bryant, Harrison, and Brannan Streets), and noise levels adjacent to these streets currently exceed 70 dBA (Ldn). The proposed project's construction-related traffic noise increases (up to 25 worker vehicles and two trucks per day) would result in noise increases of less than 1 dBA, a less-than-significant noise impact.

Conclusion

Although construction noise, including noise from construction truck traffic, may be perceived by some as an occasional annoyance, the potential for noise disturbance would be less than significant with compliance with equipment noise limits specified in the San Francisco Noise Ordinance.

Impact NO-2: Construction of the proposed project would not expose persons or structures to or generate excessive groundborne vibration levels. (*Less than Significant*)

Groundborne Noise

Groundborne noise refers to a condition where noise is experienced inside a building or structure as a result of vibrations produced outside of the building and transmitted as ground vibration between the source and receiver. Groundborne noise can be problematic even in situations where the primary airborne noise path is blocked, such as in the case of construction of a subway tunnel in proximity to homes or other noise-sensitive structures. The proposed project would only involve shallow excavations and would not involve tunneling or underground construction where the airborne noise path is blocked. Therefore, impacts related to groundborne noise from construction activities are not expected to be substantial.

Groundborne Vibration

If groundborne vibration generated by project-related demolition and construction activities were to exceed 0.5 in/sec PPV, it could cause cosmetic damage to a nearby structure. Older structures may be more fragile, and cosmetic damage could occur at lower vibration levels (possibly as low as 0.3 in/sec PPV).⁶⁸ Typical vibration levels associated with the operation of various types of

⁶⁸ Caltrans, Transportation and Construction Vibration Guidance Manual, September 2013, Table 19, p. 38. Available online at www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf. Accessed March 2, 2017.

construction equipment (some of which are similar to those proposed to be used for the proposed project) at the closest expected distances to adjacent structures are listed in Table 10: Vibration Levels for Construction Equipment. While vibration attenuation with distance can vary depending on subsoils, normal attenuation rates indicate that vibration generated by vibratory rollers, jackhammers, or small vibratory compactors could result in cosmetic damage to adjacent older residential buildings if the equipment is operated within or immediately adjacent to these structures. However, vibration controls specified in the SFMTA construction contract specifications would limit construction-related vibration to 0.3 in/sec PPV at older residential buildings (i.e., buildings with plastered walls) and 0.5 in/sec PPV at all other structures. Such required limits would ensure vibration effects would be less than significant when vibratory rollers, vibratory compactors, or jackhammers operate in proximity to older structures (i.e., buildings with plastered walls).

Table 10: Vibration Levels for Construction Equipment

Equipment	Distance between Source and Closest Structure ^a	Peak Particle Velocity (PPV) (in/sec)		Exceeds 0.5 in/sec PPV Threshold for Cosmetic Damage? ^c	Exceeds 0.3 in/sec PPV Threshold for Cosmetic Damage? ^d
		Reference Level at 25 Feet	Vibration Level Adjusted for Distance ^b		
Vibratory Roller	12	0.210	0.471	No	Yes
Large Bulldozer	12	0.089	0.200	No	No
Loaded Truck	12	0.076	0.170	No	No
Jackhammer, Jumping Jack Vibratory Compactor	2.25	0.035	0.495	No	Yes
Small Bulldozer	12	0.003	0.007	No	No

Notes: in/sec = inches per second

^a Distances assume vibratory rollers, trucks, and bulldozers would operate at or beyond the curb, which is about 12 feet from existing buildings at a minimum. If jackhammers or compactors are operated during sidewalk demolition and construction, they are assumed to operate at least 2.25 feet from the building façade.

^b Vibration amplitudes for construction equipment assume normal propagation conditions and were calculated using the following formula: $PPV(equip) = PPV(ref) \times (25/D)^{1.1}$ where:

- PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance.
- PPV (ref) = the reference vibration level in in/sec from pages 22-23 and Table 18 of the Caltrans Vibration Guidance Manual.
- D = the distance from the equipment to the receiver.

^c For new residential structures (i.e., buildings in good repair with gypsum board walls), Caltrans recommends 0.5 in/sec PPV as the vibration damage potential threshold for continuous/frequent intermittent sources such as vibratory compaction equipment or impact/vibratory pile drivers.

^d For older residential structures (i.e., buildings with plastered walls), Caltrans recommends 0.3 in/sec PPV as the vibration damage potential threshold for continuous/frequent intermittent sources.

Source: Caltrans, Transportation and Construction Vibration Guidance Manual, September 2013, Tables 10, 14, 15, 18, and 19, pp. 24, 25, 37, and 38. Available online at www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf. Accessed March 2, 2017.

Project Operational Impacts

Impact NO-3: Operation of the proposed project would not cause substantial permanent increases in ambient noise levels on affected roadway segments in the project vicinity or expose persons to or generate substantial groundborne vibration or noise. (*Less than Significant*)

Noise

The proposed project would eliminate two vehicular travel lanes along Sixth Street between Market and Bryant Streets. The proposed project would also remove peak-period tow-away lane designations on Sixth Street between Howard and Brannan Streets and restore full-time parking. In doing so, project implementation would reduce travel speeds and thereby increase delays along Sixth Street. With more delays on Sixth Street, traffic is expected to divert to adjacent or nearby parallel routes.⁶⁹ The shifting of travel routes and subsequent reduced travel speeds are considerations in estimating noise level changes resulting from project implementation. Noise levels can decrease by 1 to 2 dBA with every decrease of 5 miles per hour (mph) in average speeds of 25 mph or more. However, noise level reductions at speeds of less than 25 mph are less predictable because of acceleration (stop-and-go) effects and gear changes on larger vehicles. Therefore, project-related noise level changes in this analysis are based on the estimated changes in traffic volumes on local roadways in the project vicinity. There would be no other permanent changes in noise associated with the proposed project.

In general, traffic noise increases of less than 3 dBA are barely perceptible to people, while a 5-dBA increase is readily noticeable.⁷⁰ Therefore, permanent increases in ambient noise levels of more than 5 dBA are considered to be unacceptable and a significant noise impact in any existing or resulting noise environment. However, in places where the existing or resulting noise environment for the noise-sensitive use is “Conditionally Acceptable,” “Conditionally Unacceptable,” or “Unacceptable” based on the San Francisco Land Use Compatibility Chart for Community Noise (Figure 14, p. 109), any noise increase greater than 3 dBA is considered a significant noise impact.

Traffic noise levels on 66 road segments in the project vicinity were modeled using traffic volumes presented in the intersection Level of Service analysis completed for the proposed project.⁷¹ In Table 11: Summary of Existing and Existing Plus Project Traffic Noise Levels, these modeled traffic noise levels were used to determine the change in traffic noise levels resulting from changes

⁶⁹ Fehr & Peers and LCW Consulting, *Sixth Street Pedestrian Safety Project – Intersection Level of Service Analysis Documentation – Final Memorandum*, July 2017. A copy of this report is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

⁷⁰ California Department of Transportation, Division of Environmental Analysis, Technical Noise Supplement, November 2009, pp. 2-48 to 2-49. Available online at http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed February 28, 2017.

⁷¹ Fehr & Peers and LCW Consulting, *Sixth Street Pedestrian Safety Project – Intersection Level of Service Analysis Documentation – Final Memorandum*, July 2017.

in traffic volumes. The above thresholds (more than a 5-dBA increase, or a 3-dBA increase where ambient noise levels are Conditionally Acceptable, Conditionally Unacceptable, or Unacceptable for noise-sensitive receptors) were applied to determine whether the incremental noise increases are considered significant.

Table 11: Summary of Existing and Existing Plus Project Traffic Noise Levels

Street	Segment or Cross-Street	Ldn Noise Level (dBA) at 50 Feet from Roadway Center Line		
		Existing (2016)	Existing + Project	Project Change
Eighth Street	North of Market	64.0	64.1	0.1
	Market-Mission	64.1	64.2	0.1
	Mission-Howard	63.9	64.0	0.1
	Howard-Folsom	63.2	63.3	0.1
	South of Folsom	62.9	63.0	0.1
	North of Harrison	61.4	61.5	0.0
	South of Harrison	60.5	60.5	0.0
	North of Bryant	63.0	63.1	0.1
Seventh Street	North of Market	63.2	63.3	0.1
	Market-Mission	63.7	63.8	0.1
	Mission-Howard	64.1	64.2	0.1
	Howard-Folsom	64.1	64.2	0.1
Fifth Street	South of Folsom	64.2	64.3	0.1
	North of Harrison	59.3	59.5	0.2
	North of Market	63.5	64.0	0.5
	Market-Mission	64.1	64.4	0.3
	Mission-Howard	64.6	64.9	0.2
	Howard-Folsom	64.1	64.4	0.2
	South of Folsom	63.9	64.2	0.3
	North of Bryant	60.9	60.7	-0.2
	South of Bryant	64.8	65.0	0.1
	North of Brannon	62.3	62.6	0.3
Sixth Street	Market-Stevenson	65.2	62.8	-2.4
	Stevenson-Jessie	65.0	62.5	-2.5
	Jessie-Mission	65.1	62.2	-2.9
	Mission-Minna	65.1	62.1	-3.0
	Minna-Natoma	64.9	61.9	-3.0
	Natoma-Howard	65.0	62.0	-3.0
	Howard-Folsom	65.2	62.1	-3.1
	Folsom-Harrison	65.7	63.1	-2.6
	Harrison-Bryant	66.2	63.2	-3.0
	Bryant-Brannan	66.4	64.2	-2.2
Market Street	West of Eighth	59.6	59.5	0.0
	Eighth-Seventh	57.8	57.6	-0.2
	Seventh- McAllister/Jones	59.1	59.1	0.0

Street	Segment or Cross-Street	Ldn Noise Level (dBA) at 50 Feet from Roadway Center Line		
		Existing (2016)	Existing + Project	Project Change
	McAllister/Jones-Sixth	58.3	58.7	0.3
	Sixth-Turk/Mason	59.9	60.1	0.3
	Turk/Mason-Fifth	60.0	60.1	0.1
	East of Fifth	60.7	60.7	0.0
Mission Street	West of Hyde	64.0	64.0	0.0
	Hyde-Seventh	63.6	63.6	0.0
	Seventh-Sixth	64.2	64.2	0.0
	Sixth-Fifth	64.1	64.1	0.0
	East of Fifth	64.4	64.4	0.0
Howard Street	West of Hyde	63.2	63.2	0.0
	Hyde-Seventh	62.2	62.3	0.0
	Seventh-Sixth	61.8	61.9	0.1
	Sixth-Fifth	63.3	63.2	-0.1
Folsom Street	East of Fifth	63.7	63.7	0.0
	West of Hyde	63.8	63.7	-0.1
	Hyde-Seventh	63.9	63.9	0.0
	Seventh-Sixth	63.6	63.6	0.0
	Sixth-Fifth	63.3	63.4	0.1
	East of Fifth	62.9	62.9	0.0
Harrison Street	West of Hyde	62.0	62.1	0.1
	Hyde-Seventh	66.3	66.4	0.0
	Seventh-Sixth	69.1	69.2	0.1
	East of Sixth	65.2	64.2	-1.0
Stevenson Street	West of Sixth	49.9	50.6	0.8
	East of Sixth	49.0	50.8	1.8
Jessie Street	West of Sixth	37.1	40.5	3.4
	East of Sixth	50.9	50.1	-0.9
Minna Street	West of Sixth	49.3	49.7	0.4
	East of Sixth	49.5	50.1	0.5
Natoma Street	West of Sixth	50.4	50.5	0.1
	East of Sixth	50.9	51.2	0.3

Notes: dBA = A-weighted decibel

Noise levels may vary by up to one-tenth of a decibel due to rounding. Negative (-) noise level changes indicate a noise level decrease. Noise levels in **bold** exceed either of the following threshold increases when compared to baseline noise levels: (1) an increase of 5 dBA or more, or (2) an increase of 3 dBA or more in areas where the existing or resulting noise increase exceeds acceptable (or satisfactory) levels for the affected use (see Figure 14: San Francisco Land Use Compatibility Chart for Community Noise, p. 109).

Traffic noise modeling was completed using the Federal Highway Administration RD-77-108 model. Background noise levels due to traffic on other roadways (such as cross-streets or nearby freeways) and non-traffic-related activities are not reflected in these noise levels. Noise levels in this table are intended to indicate incremental noise changes due to project implementation. Since they do not include background noise levels, they may not necessarily reflect actual noise levels along these roadway segments if there are other nearby sources of noise.

Source: Orion Environmental Associates, 2017.

Table 11 indicates that project implementation would result in traffic noise decreases of up to 3 dBA on various road segments, but primarily along Sixth Street. Noise increases were less than 3 dBA on all but one of the 66 roadway segments evaluated in this analysis, and such increases along those 65 roadway segments would not be perceptible or barely perceptible. Based on the significance thresholds for traffic noise increases, these increases would be a less-than-significant impact regardless of the compatibility of adjacent land uses with ambient noise levels.

The only exception would be a 3.4-dBA noise increase on the section of Jessie Street west of Sixth Street, which slightly exceeds the 3-dBA threshold. However, because ambient noise levels along most of Jessie Street west of Sixth Street are acceptable for residential uses (Figure 13 on p. 108 shows noise levels range between 55 and 60 dBA, Ldn), the 5-dBA increase significance threshold applies, and this 3.4-dBA increase would also be less than significant. There is a short segment of Jessie Street immediately west of Sixth Street that is estimated to have noise levels between 60 and 70 dBA (Ldn), which are considered to be Conditionally Acceptable. However, given that the elevated ambient noise levels on Jessie Street near Sixth Street are attributable to noise from Sixth Street and traffic noise levels on this section of Sixth Street are estimated to decrease by 2.5 to 3.0 dBA with project implementation, the small (0.4-dBA) exceedance is expected to be offset by the much larger traffic noise decrease on Sixth Street. Therefore, the 3.4-dBA increase on this section of Jessie Street is considered to be less than significant.

Groundborne Vibration and Noise

Groundborne vibration is not a common environmental problem, and even large vehicles (e.g., trucks and buses) do not generally result in perceptible vibration. The proposed project would not introduce new long-term vibration sources. Therefore, long-term vibration impacts associated with project implementation would be less than significant and no mitigation is needed.

Cumulative Impacts

Impact C-NO-1: Construction of the proposed project, in combination with other past, present, and reasonably foreseeable future projects in the project vicinity, could result in temporary or periodic cumulative increases in localized ambient noise or vibration levels above levels existing without the proposed project, but the project's contribution would not be cumulatively considerable. (*Less than Significant*)

In general, cumulative noise and vibration increases associated with project construction could result if any other projects located adjacent to Sixth Street were constructed at the same time or substantially extended the duration of construction noise at any nearby sensitive receptors. There are residential receptors located adjacent to the project corridor that could be subject to these cumulative noise increases. The closest cumulative projects, shown on Figure 12 on p. 45, where concurrent construction could cumulatively increase noise levels in the Sixth Street vicinity would be the Jessie Street Signalization Project (A), 214 Sixth Street (#38), the Howard Street

Signalization Project (B), Gene Friend Recreation Center (#37), 301 Sixth Street (#34), 345 Sixth Street (#18), 363 Sixth Street (#7), 377 Sixth Street (#24), and 630-698 Brannan Street (#32). Cumulative construction-related noise and vibration impacts could occur at any sensitive receptors or structures located adjacent to both the project corridor and one of these projects if maximum construction-related noise and vibration levels were to occur at both locations simultaneously, a potentially significant cumulative impact. Although the proposed project would contribute to potentially significant cumulative construction noise and vibration impacts, its incremental contribution would be limited by geography. The proposed project would make an incrementally greater contribution when combined with future projects along the northern portion of the corridor, where the most intensive project construction is proposed (e.g., sidewalk widening and corner bulb-outs between Market and Howard Streets), and a more limited incremental contribution along the southern portion of the corridor (between Howard and Brannan Streets), where project construction activities would consist of a limited number of new corner bulb-outs and raised crosswalks, roadway striping, and removal of peak-period tow-away lanes. Any incremental project-related contributions to construction noise and vibration from other cumulative projects in the vicinity would be minimized by distance and the presence of intervening buildings. In addition, compliance with the noise limits specified in the City's Noise Ordinance and vibration controls specified in the SFMTA construction contract specifications would ensure that the proposed project's contribution to construction-related noise and vibration impacts would be less than significant. Therefore, the proposed project's contribution to this cumulative impact would not be cumulatively considerable, and this cumulative impact would be less than significant.

Impact C-NO-2: Project operational noise from traffic increases generated by the proposed project, when combined with other past, present, and reasonably foreseeable future projects in the project vicinity and noise from reasonably foreseeable traffic growth forecast to the year 2040, would not contribute considerably to a significant cumulative permanent increase in ambient noise levels in the project vicinity above levels existing without the proposed project or cumulative traffic noise increases. (*Less than Significant*)

Cumulative traffic noise levels include all traffic associated with the past, present, and reasonably foreseeable projects in the project vicinity as well as forecasted cumulative citywide and regional traffic growth over the next 25 years. Table 12: Summary of Cumulative Traffic Noise Levels indicates that project implementation including diversions would result in traffic noise decreases of up to 3 dBA on various road segments but primarily along Sixth Street. Noise increases were less than 3 dBA on all of the 66 roadway segments evaluated in this analysis. Based on the significance thresholds for traffic noise increases, these cumulative increases would be less than significant and the proposed project's contribution of 2.3 dBA or less would not be cumulatively considerable.

Table 12: Summary of Cumulative Traffic Noise Levels

Street	Segment or Cross-Street	Ldn Noise Level (dBA) at 50 Feet from Roadway Center Line		
		Cumulative (2040)	Cumulative + Project	Project Change
Eighth Street	North of Market	65.6	65.7	0.1
	Market-Mission	65.8	65.8	0.1
	Mission-Howard	65.3	65.4	0.1
	Howard-Folsom	65.2	65.3	0.1
	South of Folsom	64.8	64.9	0.1
	North of Harrison	61.2	61.2	0.0
	South of Harrison	59.3	59.2	-0.1
	North of Bryant	64.3	64.4	0.2
Seventh Street	North of Market	65.0	65.1	0.1
	Market-Mission	64.9	65.0	0.1
	Mission-Howard	65.7	65.9	0.1
	Howard-Folsom	65.9	66.0	0.1
Fifth Street	South of Folsom	65.7	65.9	0.2
	North of Harrison	59.9	60.0	0.2
	North of Market	65.6	65.7	0.1
	Market-Mission	66.0	66.1	0.1
	Mission-Howard	67.0	67.1	0.1
	Howard-Folsom	66.3	66.4	0.1
	South of Folsom	66.1	66.3	0.2
	North of Bryant	63.2	63.4	0.2
	South of Bryant	67.7	67.9	0.2
	North of Brannon	65.8	65.9	0.1
Sixth Street	Market-Stevenson	65.1	62.9	-2.1
	Stevenson-Jessie	65.2	62.7	-2.5
	Jessie-Mission	65.2	62.5	-2.6
	Mission-Minna	65.5	62.6	-2.9
	Minna-Natoma	65.5	62.3	-3.2
	Natoma-Howard	65.6	62.7	-2.9
	Howard-Folsom	66.0	62.6	-3.4
	Folsom-Harrison	67.8	64.9	-2.9
	Harrison-Bryant	68.1	65.9	-2.2
	Bryant-Brannan	68.5	67.4	-1.1
Market Street	West of Eighth	61.2	61.2	0.0
	Eighth-Seventh	57.2	57.6	-0.2
	Seventh- McAllister/Jones	58.5	59.1	0.0
	McAllister/Jones- Sixth	57.7	58.7	0.3
	Sixth-Turk/Mason	58.7	60.1	0.3
	Turk/Mason-Fifth	58.2	60.1	0.1
	East of Fifth	53.1	60.7	0.0
Mission Street	West of Hyde	64.4	64.4	0.0
	Hyde-Seventh	63.9	63.9	0.0
	Seventh-Sixth	64.2	64.2	0.1
	Sixth-Fifth	64.6	64.6	0.0

Street	Segment or Cross-Street	Ldn Noise Level (dBA) at 50 Feet from Roadway Center Line		
		Cumulative (2040)	Cumulative + Project	Project Change
Howard Street	East of Fifth	64.4	64.4	-0.1
	West of Hyde	65.6	65.7	0.1
	Hyde-Seventh	65.4	65.5	0.1
	Seventh-Sixth	64.8	64.9	0.1
	Sixth-Fifth	65.4	65.2	-0.1
Folsom Street	East of Fifth	64.9	64.4	-0.4
	West of Hyde	64.8	64.8	0.0
	Hyde-Seventh	65.4	65.4	0.0
	Seventh-Sixth	64.6	64.8	0.2
	Sixth-Fifth	65.3	65.1	-0.1
Harrison Street	East of Fifth	65.1	65.0	0.0
	West of Hyde	63.9	64.0	0.1
	Hyde-Seventh	68.0	68.1	0.0
	Seventh-Sixth	69.9	70.1	0.1
	East of Sixth	66.4	66.1	-0.2
Stevenson Street	West of Sixth	51.3	51.9	0.5
	East of Sixth	47.1	49.3	2.3
Jessie Street	West of Sixth	47.1	48.3	2.3
	East of Sixth	47.1	45.3	-1.8
Minna Street	West of Sixth	53.1	53.4	0.3
	East of Sixth	56.1	56.1	0.0
Natoma Street	West of Sixth	48.3	50.1	1.8
	East of Sixth	53.8	54.0	0.2

Notes: dBA = A-weighted decibel

Noise levels may vary by up to one-tenth of a decibel due to rounding. Negative (-) noise level changes indicate a noise level decrease.

Traffic noise modeling was completed using the Federal Highway Administration RD-77-108 model. Background noise levels due to traffic on other roadways (such as cross-streets or nearby freeways) and non-traffic-related activities are not reflected in these noise levels. Noise levels in this table are intended to indicate incremental noise changes due to project implementation. Since they do not include background noise levels, they may not necessarily reflect actual noise levels along these roadway segments if there are other nearby sources of noise.

Source: Orion Environmental Associates, 2017.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.7. AIR QUALITY—Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a cumulative air quality impact in combination with past, present and reasonably foreseeable future projects in the vicinity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Approach to Analysis

As discussed in the Approach to Analysis subsection of Initial Study Topic E.6, Noise, CEQA does not generally require lead agencies to consider how existing environmental conditions might affect a project’s users or residents, except where the project would significantly exacerbate an existing environmental condition. Accordingly, the significance criterion above related to exposure of sensitive receptors to substantial pollutant concentrations is relevant only to the extent that the project exacerbates air quality conditions. The impact is considered significant if the project would significantly exacerbate existing or future air quality conditions.

Setting

Overview

The Bay Area Air Quality Management District (BAAQMD) is the regional agency with jurisdiction over the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa Counties and portions of Sonoma and Solano Counties. The BAAQMD is responsible for attaining and maintaining air quality in the SFBAAB within federal and state air quality standards, as established by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA), respectively. Specifically, the BAAQMD has the responsibility to monitor ambient air pollutant levels

throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and state standards. The CAA and the CCAA require plans to be developed for areas that do not meet air quality standards, generally. The most recent air quality plan, the *2010 Clean Air Plan* (2010 CAP), was adopted by the BAAQMD on September 15, 2010. The 2010 CAP updates the Bay Area 2005 Ozone Strategy in accordance with the requirements of the CCAA to implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, air toxics, and greenhouse gases (GHGs) in a single, integrated plan; and establish emission control measures to be adopted or implemented. The 2010 CAP contains the following primary goals:

- Attain air quality standards;
- Reduce population exposure and protect public health in the San Francisco Bay Area; and
- Reduce GHG emissions and protect the climate.

The 2010 CAP represents the current applicable air quality plan for the SFBAAB. In April 2017, the BAAQMD released the *2017 Clean Air Plan* (2017 CAP).⁷²

Criteria Air Pollutants

In accordance with the state and federal CAAs, air pollutant standards are identified for the following six criteria air pollutants: ozone, carbon monoxide (CO), particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. These air pollutants are termed criteria air pollutants because they are regulated by developing specific public health- and welfare-based criteria as the basis for setting permissible levels. In general, the SFBAAB experiences low concentrations of most pollutants when compared to federal or state standards. The SFBAAB is designated as either in attainment⁷³ or unclassified for most criteria pollutants. However, the SFBAAB is designated as non-attainment for ozone and particulate matter (PM_{2.5} and PM₁₀), for either the state or federal standards. By its very nature, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in non-attainment of air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality impacts. If a project's contribution to cumulative air quality impacts is considerable, then the project's impact on air quality would be considered significant.⁷⁴

⁷² Bay Area Air Quality Management District (BAAQMD), *2017 Clean Air Plan: Spare the Air, Cool the Climate*, April 20, 2017. Available online at http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en. Accessed August 21, 2017.

⁷³ "Attainment" means the region is meeting federal and/or state standards for a specified criteria pollutant. "Non-attainment" means the region does not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" means there are not enough data to determine the region's attainment status for a specified criteria air pollutant.

⁷⁴ BAAQMD *California Environmental Quality Act Air Quality Guidelines*, May 2017 (hereinafter "*CEQA Air Quality Guidelines*"), p. 2-1.

Development projects may contribute to regional criteria air pollutants during the construction and operational phases of a project. Table 13: Criteria Air Pollutant Significance Thresholds identifies air quality significance thresholds. This table is followed by a discussion of each threshold. Projects that would result in criteria air pollutant emissions below these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

Emission calculations of criteria air pollutants have been prepared for the proposed project.⁷⁵ The calculations show estimated construction and operational criteria air pollutant emissions from the proposed project. These issues are discussed below and, as noted there, impacts would be less than significant.

Table 13: Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds		Operational Thresholds	
	Average Daily Emissions (pounds/day)		Average Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
ROG	54		54	10
NOx	54		54	10
PM ₁₀	82 (exhaust)		82	15
PM _{2.5}	54 (exhaust)		54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices		Not Applicable	

Notes: ROG = reactive organic gases; NOx = oxides of nitrogen; PM₁₀ = “coarse” particulate matter (made of particulates that are 10 microns or less in diameter); PM_{2.5} = “fine” particulate matter (made of particulates that are 2.5 microns or less in diameter)

Source: Bay Area Air Quality Management District (BAAQMD), 2017, Table 2-1, p. 2-2.

Ozone Precursors. As discussed previously, the SFBAAB is currently designated as non-attainment for ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and oxides of nitrogen (NOx). The potential for a project to result in a cumulatively considerable net increase in criteria air pollutants, which may contribute to an existing or projected air quality violation, is based on the CAA and CCAA emissions limits for stationary sources. To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, BAAQMD Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NOx, the offset emissions level is an annual average of 10 tons per year (or 54 pounds per day).⁷⁶ These levels represent emissions

⁷⁵ Orion Environmental Associates, *Sixth Street Pedestrian Safety Project Air Quality Technical Report*, July 2017, pp. 10-23. A copy of this report is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

⁷⁶ BAAQMD, *Revised Draft Options and Justification Report, California Environmental Quality Act Thresholds of Significance*, October 2009 (hereinafter “*Revised Draft Options and Justification Report*”), p. 17.

by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

Although this regulation applies to new or modified stationary sources, land use development projects result in ROG and NO_x emissions as a result of increases in other types of sources, such as vehicle trips, architectural coating, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of land use projects, and those projects that result in emissions below these thresholds would not be considered to contribute to an existing or projected air quality violation or result in a considerable net increase in ROG and NO_x emissions. Due to the temporary nature of construction activities, only the average daily thresholds are applicable to construction-phase emissions.

Particulate Matter (PM₁₀ and PM_{2.5}).⁷⁷ The SFBAAB is currently also designated as non-attainment for particulate matter. The BAAQMD has not established an offset limit for PM_{2.5}. However, the emissions limit in the federal New Source Review (NSR) for stationary sources in non-attainment areas is an appropriate significance threshold. For PM₁₀ and PM_{2.5}, the emissions limit under NSR is 15 tons per year (82 pounds per day) and 10 tons per year (54 pounds per day), respectively. These emissions limits represent levels at which a source is not expected to have an impact on air quality.⁷⁸ Similar to ozone precursor thresholds identified above, land use development projects typically result in PM emissions as a result of increases in vehicle trips, space heating and natural gas combustion, landscape maintenance, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of a land use project. Because construction activities are temporary in nature, only the average daily thresholds are applicable to construction-phase emissions.

Fugitive Dust. Fugitive dust emissions are typically generated during construction phases. Studies have shown that the application of best management practices (BMPs) at construction sites significantly control fugitive dust,⁷⁹ and individual measures have been shown to reduce fugitive dust by anywhere from 30 percent to 90 percent.⁸⁰ The BAAQMD has identified a number of BMPs to control fugitive dust emissions from construction activities.⁸¹ The City's Construction Dust Control Ordinance (Ordinance 176-08, effective July 30, 2008) requires a number of measures

⁷⁷ PM₁₀ is often called "coarse" particulate matter (made of particulates that are 10 microns or less in diameter). PM_{2.5}, is often called "fine" particulate matter (made of particulates that are 2.5 microns or less in diameter).

⁷⁸ BAAQMD, *Revised Draft Options and Justification Report*, p. 16.

⁷⁹ Western Regional Air Partnership, *WRAP Fugitive Dust Handbook*, September 7, 2006, p. 3-16. Available online at http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf. Accessed February 28, 2017.

⁸⁰ BAAQMD, *Revised Draft Options and Justification Report*, p. 27.

⁸¹ BAAQMD, *CEQA Air Quality Guidelines*, pp. 8-3 to 8-5.

to control fugitive dust, and the BMPs employed in compliance with the City's Construction Dust Control Ordinance are an effective strategy for controlling construction-related fugitive dust.

Other Criteria Pollutants. Regional concentrations of CO in the Bay Area have not exceeded the state standards in the past 11 years, and SO₂ concentrations have never exceeded the standards. The primary source of CO emissions from development projects is vehicle traffic. Construction-related SO₂ emissions represent a negligible portion of the total basin-wide emissions, and construction-related CO emissions represent less than 5 percent of the Bay Area total basin-wide CO emissions. As discussed previously, the SFBAAB is in attainment for both CO and SO₂. Furthermore, the BAAQMD has demonstrated, based on modeling, that in order to exceed the California ambient air quality standard of 9.0 parts per million (ppm) (eight-hour average) or 20.0 ppm (one-hour average) for CO, project traffic in addition to existing traffic would need to exceed 44,000 vehicles per hour at affected intersections (or 24,000 vehicles per hour where vertical and/or horizontal mixing is limited). Therefore, given the Bay Area's attainment status and the limited CO and SO₂ emissions that could result from a development project, development projects would not result in a cumulatively considerable net increase in CO or SO₂, and quantitative analysis is not required.

Local Health Risks and Hazards

In addition to criteria air pollutants, individual projects may emit toxic air contaminants (TACs). TACs collectively refer to a diverse group of air pollutants that are capable of causing chronic (i.e., long-duration) and acute (i.e., severe but short-term duration) adverse effects on human health, including carcinogenic effects. 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.

Unlike criteria air pollutants, TACs do not have ambient air quality standards, but the BAAQMD regulates TACs using a risk-based approach to determine the sources and pollutants to control as well as the appropriate degree of control. A health risk assessment is an analysis in which human health exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.⁸²

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, children's daycare centers, hospitals, and nursing and convalescent homes are considered to be the

⁸² In general, a health risk assessment is required 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. The applicant is then subject to a health risk assessment for the source in question. Such an assessment generally evaluates chronic, long-term effects, estimating the increased risk of cancer as a result of exposure to one or more TACs.

most sensitive to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 70 years, the longest duration of all sensitive receptors. Therefore, assessments of residential exposure to air pollutants typically result in the greatest adverse health outcomes of all population groups.

Exposures to fine particulate matter (PM_{2.5}) are strongly associated with mortality, respiratory diseases and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.⁸³ In addition to PM_{2.5}, diesel particulate matter (DPM) is also of concern. The California Air Resources Board (ARB) identified DPM as a TAC in 1998, primarily based on evidence demonstrating cancer effects in humans.⁸⁴ The estimated cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other TAC routinely measured in the region.

In an effort to identify areas of San Francisco most adversely affected by sources of TACs, the City has partnered with the BAAQMD to conduct a citywide health risk assessment based on an inventory and assessment of air pollution and exposures from mobile, stationary, and area sources within San Francisco. Areas with poor air quality, termed the “Air Pollutant Exposure Zone (APEZ),” were identified based on health-protective criteria that consider (1) estimated cancer risk, (2) exposures to fine particulate matter, (3) proximity to freeways, and (4) locations with particularly vulnerable populations. The project corridor is located within the APEZ. Each of the APEZ criteria is discussed below.

Excess Cancer Risk. The 100 per one million persons (100 excess cancer risk) criterion is based on the United States Environmental Protection Agency (US EPA) guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale level.⁸⁵ As described by the BAAQMD, the US EPA considers a cancer risk of 100 per million to be within the “acceptable” range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants (NESHAP) rulemaking,⁸⁶ the US EPA states that it “...strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than

⁸³ San Francisco Department of Public Health, Assessment and Mitigation of Air Pollutant Health Effects from Intra-Urban Roadways: Guidance for Land Use Planning and Environmental Review, May 2008.

⁸⁴ California Air Resources Board (ARB), Fact Sheet, “The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines,” October 1998.

⁸⁵ BAAQMD, Revised Draft Options and Justification Report, p. 67.

⁸⁶ 54 Federal Register 38044, p. 60241. September 14, 1989. Available online at <https://www.gpo.gov/fdsys/pkg/FR-2014-10-06/pdf/2014-23266.pdf>. Accessed July 5, 2017.

approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.” The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.⁸⁷

Fine Particulate Matter. In April 2011, the US EPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*. In this document, US EPA staff concludes that the then-current federal annual PM_{2.5} standard of 15 micrograms per cubic meter (µg/m³) should be revised to a level within the range of 13 to 11 µg/m³, with evidence strongly supporting a standard within the range of 12 to 11 µg/m³. The APEZ for San Francisco is based on the health-protective PM_{2.5} standard of 11 µg/m³, as supported by the US EPA’s Particulate Matter Policy Assessment, although lowered to 10 µg/m³ to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.

Proximity to Freeways. According to the California ARB, studies have shown an association between the proximity of sensitive land uses to freeways and a variety of respiratory symptoms, asthma exacerbation, and decreases in lung function in children. Siting sensitive uses in close proximity to freeways increases both exposure to air pollution and the potential for adverse health effects. As evidence shows that sensitive uses in an area within a 500-foot buffer of any freeway are at an increased health risk from air pollution,⁸⁸ lots that are within 500 feet of freeways are included in the APEZ.

Health Vulnerability Locations. Based on the BAAQMD’s evaluation of health vulnerability in the Bay Area, those zip codes in the worst quartile of Bay Area Health Vulnerability scores as a result of an air pollution-related cause (94102, 94103, 94105, 94124, and 94130) were afforded additional protection by lowering the standards for identifying lots in the APEZ to (1) an excess cancer risk greater than 90 per one million persons exposed, and/or (2) PM_{2.5} concentrations in excess of 9 µg/m³.⁸⁹

The above citywide health risk modeling was also used as the basis in approving a series of amendments to the San Francisco Building and Health Codes, generally referred to as the Enhanced Ventilation Required for Urban Infill Sensitive Use Developments, or Health Code Article 38 (Ordinance 224-14, effective December 8, 2014) (Article 38). The purpose of Article 38 is to protect the public health and welfare by establishing an APEZ and imposing an enhanced ventilation requirement for all urban infill sensitive use development within the APEZ. In addition,

⁸⁷ BAAQMD, Revised Draft Options and Justification Report, p. 67.

⁸⁸ California Air Resources Board, Air Quality and Land Use Handbook, A Community Health Perspective, April 2005. Available online at <http://www.arb.ca.gov/ch/landuse.htm>. Accessed February 28, 2017.

⁸⁹ San Francisco Planning Department and San Francisco Department of Public Health, 2014 Air Pollutant Exposure Zone Map (Memo and Map), April 9, 2014. These documents are part of San Francisco Board of Supervisors File No. 14806, Ordinance No. 224-14, Amendment to Health Code Article 38.

projects within the APEZ require special consideration to determine whether the project's activities would add a substantial amount of emissions to areas already adversely affected by poor air quality. The project site is located within the APEZ and within Health Vulnerability zip code 94103.

The APEZ and Health Vulnerability zip codes were also used as the basis for approving a series of amendments to the San Francisco Environment and Administrative Codes, generally referred to as the Clean Construction Ordinance, or Environment Code Section 25 (Ordinance 28-15, effective April 19, 2015). The purpose of the Clean Construction Ordinance is to protect the public health, safety, and welfare by requiring contractors on City public works projects to reduce diesel and other PM emissions generated by construction activities.

IMPACTS

Project-related air quality impacts fall into two categories: short-term impacts from construction and long-term impacts from project operation.

Project Construction Impacts

Impact AQ-1: The proposed project's construction activities would generate fugitive dust and criteria air pollutants, but would not violate an air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (*Less than Significant*)

Construction activities (short-term) typically result in emissions of ozone precursors and PM in the form of dust (fugitive dust) and exhaust (e.g., vehicle tailpipe emissions). Emissions of ozone precursors and PM are primarily a result of the combustion of fuel from on-road and off-road vehicles. However, ROG (reactive organic gases, also ozone precursors) are also emitted from activities that involve painting, other types of architectural coatings, or asphalt paving.

The proposed project would include demolition of existing sidewalks, curbs, and concrete gutters, excavation to a depth of about three feet (six feet for traffic signals and related hardware), road restriping (painting), construction of new curb bulb-outs and wider sidewalks, and installation of new traffic signals, a bicycle facility, and streetscape changes. During the proposed project's approximately 12-month construction period, construction activities would have the potential to result in emissions of ozone precursors and particulate matter, as discussed below.

Construction-Related Fugitive Dust Emissions

Project-related demolition, excavation, grading, and other construction activities may cause wind-blown dust that could contribute PM into the local atmosphere. Although there are federal standards for air pollutants and state and regional air quality control plans are being implemented, air pollutants continue to have impacts on human health throughout the country. Studies in California have found that PM exposure can cause health effects at lower levels than national

standards. The current health burden of PM demands that, where possible, public agencies take feasible available actions to reduce sources of PM exposure. According to the California ARB, reducing PM_{2.5} concentrations to state and federal standards of 12 µg/m³ in the San Francisco Bay Area would prevent between 200 and 1,300 premature deaths.⁹⁰

Dust can be an irritant causing watering eyes or irritation to the lungs, nose, and throat. Depending on exposure, adverse health effects can occur due to this PM in general and also due to specific contaminants such as lead or asbestos that may be constituents of soil.

In response, the San Francisco Board of Supervisors approved a series of amendments to the San Francisco Building and Health Codes generally referred hereto as the Construction Dust Control Ordinance (Article 22B of the Health Code) with the intent of reducing the quantity of dust generated during site preparation, demolition, and construction work in order to protect the health of the general public and of on-site workers, to minimize public nuisance complaints, and to avoid orders to stop work by the Department of Building Inspection (DBI). Section 1247 of Article 22B of the Health Code requires that all City agencies authorizing construction or other changes on City property adopt rules and regulations to ensure that the dust control requirements of Article 22B are followed. Compliance with the Construction Dust Control Ordinance would ensure that required dust control requirements—described below—are implemented during project construction, and therefore the proposed project’s fugitive dust emissions would be less than significant.

The ordinance requires that all site preparation work, demolition, or other construction activities within San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specified dust control measures whether or not the activity requires a permit from DBI. For projects over one-half acre, the Construction Dust Control Ordinance requires that project sponsors submit a Dust Control Plan for approval by the DPH. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has a site-specific Dust Control Plan, unless the Director waives the requirement.

The site-specific Dust Control Plan for the proposed project would require the San Francisco Municipal Transportation Agency (SFMTA) to submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three

⁹⁰ California Air Resources Board, Methodology for Estimating Premature Deaths Associated with Long-term Exposure to Fine Airborne Particulate Matter in California, Staff Report, October 24, 2008, Table 4c, p. 41. Available online at <http://www.arb.ca.gov/research/health/pm-mort/PMmortalityreportFINALR10-24-08.pdf>. Accessed February 28, 2017.

times per day;⁹¹ provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent third party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, and other factors (e.g., increase watering frequency whenever wind speeds exceed 15 miles per hour [mph]); establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and secure the bed with a tarpaulin; enforce a 15-mph speed limit for vehicles entering and exiting construction areas; vacuum or sweep (with water sweepers) affected streets, sidewalks, paths, and intersections where work is in progress at the end of the day; install and use wheel washers to clean truck tires; terminate construction activities when winds exceed 25 mph; sweep off adjacent streets to reduce particulate emissions; and stabilize inactive stockpiles (where no disturbance occurs for more than seven days) greater than 10 cubic yards or 500 square feet of excavated material, backfill material, import material, gravel, sand, road base, and soil by either covering with a 10-millimeter (0.01-inch) polyethylene plastic (or equivalent) tarp that is braced down or using other equivalent soil stabilization techniques. The SFMTA would be required to designate an individual to monitor compliance with these dust control requirements.

Construction-Related Criteria Air Pollutant Emissions

Construction activities would result in emissions of criteria air pollutants from the use of off-road equipment. The project's off-road, construction-related emissions were estimated using the equipment mix and operating durations provided by the SFMTA and the CalEEMod emissions estimator model. Section 6.25 of the San Francisco Administrative Code establishes the City's Clean Construction Ordinance. The Clean Construction Ordinance requires all work required to be performed under a public works contract to (1) use only off-road equipment and off-road engines fueled by biodiesel fuel grade B20 or higher, (2) use engines equipped with Tier 2 + Level 3 Verified Diesel Emissions Control Strategies (VDECS), (3) restrict idling of diesel engines to two minutes, (4) prohibit use of portable diesel engines where alternative sources of power are available, and (5) implement proper maintenance/tune-ups of equipment. To reflect these requirements, construction emissions were estimated assuming that project construction would comply with Clean Construction Ordinance requirements (including Tier 2 + Level 3 VDECS engines on construction equipment).

⁹¹ Ordinance 175-91 restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of San Francisco, unless permission is obtained from the San Francisco Public Utilities Commission (SFPUC). Non-potable water must be used for soil compaction and dust control activities during project construction and demolition. The SFPUC operates a recycled water truck-fill station at the Southeast Water Pollution Control Plant, which provides recycled water for these activities at no charge.

Table 14: Estimated Average Daily Construction Emissions presents modeling results assuming compliance with the Clean Construction Ordinance (which includes US EPA Tier 2 engines + Level 3 VDECS engines). Estimated construction-related emissions are associated with combustion-related emissions (ROG, NO_x, PM₁₀, and PM_{2.5}) associated with operation of off-road equipment, on-road worker commute trips, and on-road delivery and haul truck operations. This table also lists the applicable thresholds of significance. Average daily emissions of criteria air pollutants (with implementation of Construction Dust Control Ordinance and Clean Construction Ordinance requirements) over the proposed project’s 12-month construction duration would be 0.73 pound per day of ROG, 13.37 pounds per day of NO_x, 0.09 pound per day of PM₁₀, and 0.09 pound per day of PM_{2.5}. The proposed project’s construction-related criteria pollutant emissions would be well below the City’s significance thresholds, and therefore the criteria pollutant emissions during project construction would be a less-than-significant impact.

Table 14: Estimated Average Daily Construction Emissions

<u>Project Construction Activity</u>	<u>Projected Average Daily Emissions (Pounds per Day)^a</u>			
	<u>ROG</u>	<u>NO_x</u>	<u>PM₁₀</u>	<u>PM_{2.5}</u>
Off-Road Equipment (2017)	0.73	13.37	0.09	0.09
Significance Threshold	54	54	82	54

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM₁₀ = “coarse” particulate matter (made of particulates that are 10 microns or less in diameter); PM_{2.5} = “fine” particulate matter (made of particulates that are 2.5 microns or less in diameter)

^a Emission factors were generated by CalEEMod model for San Francisco County. Estimated emissions assume compliance with the City’s Clean Construction Ordinance and Construction Dust Control Ordinance, which includes use of United States Environmental Protection Agency (US EPA) Tier 2 + Level 3 Verified Diesel Emissions Control Strategies (VDECS) engines and watering three times per day.

Source: Orion Environmental Associates, 2017.

Impact AQ-2: The proposed project’s construction activities would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial pollutant concentrations. (*Less than Significant*)

The project site is located within the APEZ and Health Vulnerability zip code 94103, as described above. Sensitive receptors in the project vicinity include residential uses, which are located immediately adjacent to Sixth Street and along the alleys and major cross-streets, as well as Bessie Carmichael Elementary School (375 Seventh Street; Grades pre-K to 5), which is located 600 feet from the project corridor. There are no hospitals located within 1,000 feet of the project corridor.

Project construction activities over the 12-month construction duration would result in short-term emissions of DPM and other TACs. Within the APEZ and Health Vulnerability zip code 94103, as discussed above on p. 126, such additional construction activity could adversely affect populations that are already at a higher risk for adverse long-term health effects from existing sources of air pollution. While emission reductions from limiting idling, educating workers and the public, and properly maintaining equipment are difficult to quantify, other measures, specifically the requirement for equipment with Tier 2 engines with Level 3 VDECS, can reduce construction emissions by 89 to 94 percent compared to equipment with engines meeting no

emission standards and without VDECS.⁹² Emissions reductions from the combination of Tier 2 equipment with Level 3 VDECS are almost equivalent to requiring only equipment with Tier 4 Final engines. Therefore, compliance with the Clean Construction Ordinance, which requires use of Tier 2 equipment with Level 3 VDECS, would substantially reduce the magnitude of emissions of DPM and other TACs during construction, thereby reducing the proposed project's contribution to local health risks. This is expected to reduce construction-related health risk impacts on nearby sensitive receptors to a less-than-significant level.

Project Operational Impacts

Impact AQ-3: During project operations, the proposed project would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. (*Less than Significant*)

The proposed project would eliminate two vehicular travel lanes along Sixth Street between Market and Bryant Streets. The proposed project would also remove peak-period tow-away lane designations on Sixth Street between Howard and Brannan Streets and restore full-time parking. In doing so, project implementation would reduce travel speeds and thereby increase delays and idling times along Sixth Street. With more delays on Sixth Street, traffic is expected to divert to adjacent or nearby parallel routes. The shifting of travel routes and subsequent delay (as indicated by level of service) are a consideration in the air quality analysis and modeling effort. The impact is expressed by changes in traffic volumes as vehicles use alternative routes coupled with delays caused by increased idling time at intersections due to reduced travel speed and time spent in queue, as well as changes in distance traveled by vehicles as they shift to other travel routes.⁹³

⁹² PM emissions benefits are estimated by comparing off-road PM emission standards for Tier 2 with Tier 1 and 0. Tier 0 off-road engines do not have PM emission standards, but the US EPA's Exhaust and Crankcase Emissions Factors for Nonroad Engine Modeling – Compression Ignition has estimated Tier 0 engines between 50 horsepower (hp) and 100 hp to have a PM emission factor of 0.72 grams per horsepower hour (g/hp-hr) and greater than 100 hp to have a PM emission factor of 0.40 g/hp-hr. Therefore, requiring off-road equipment to have at least a Tier 2 engine would result in between a 25 percent and 63 percent reduction in PM emissions, as compared to off-road equipment with Tier 0 or Tier 1 engines. The 25 percent reduction comes from comparing the PM emission standards for off-road engines between 25 hp and 50 hp for Tier 2 (0.45 grams per brake horsepower hour [g/bhp-hr]) and Tier 1 (0.60 g/bhp-hr). The 63 percent reduction comes from comparing the PM emission standards for off-road engines above 175 hp for Tier 2 (0.15 g/bhp-hr) and Tier 0 (0.40 g/bhp-hr). In addition to the Tier 2 requirement, ARB Level 3 VDECSs are required and would reduce PM by an additional 85 percent. Therefore, the mitigation measure would result in between an 89 percent (0.0675 g/bhp-hr) and 94 percent (0.0225 g/bhp-hr) reduction in PM emissions, as compared to equipment with Tier 1 (0.60 g/bhp-hr) or Tier 0 engines (0.40 g/bhp-hr).

⁹³ A detailed description of the traffic data inputs (Sixth Street Pedestrian Safety Project – Intersection Level of Service Analysis Documentation – Final Memorandum, July 2017), how the California Air Resources Board's Emission FACTor model (EMFAC2014) was applied, and methodology for applying delay factors is included in the Sixth Street Pedestrian Safety Project Air Quality Technical Report (July 2017). Copies of both reports are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

The proposed road diet would reduce travel speeds and increase delays and vehicle idling on Sixth Street. With more delays, traffic is expected to shift to adjacent or nearby parallel routes, and this could result in higher emissions from increased idling times along these alternate routes. Criteria air pollutant emissions under Existing and Existing Plus Project Conditions are presented in Table 15: Estimated Average Daily Regional Emissions under Existing Conditions. This table also lists the applicable thresholds of significance. In summary, project implementation would result in a net increase of 0.6 pound per day of ROG, 1.3 pounds per day of NOx, 0.1 pound per day of PM₁₀, and 0.1 pound per day of PM_{2.5} when compared to Existing Conditions. Because the proposed project is a road improvement project, no stationary, area, or any other mobile sources of air pollutants would be generated by project operation.

Table 15: Estimated Average Daily Regional Emissions under Existing Conditions

<u>Existing Conditions</u>	<u>Projected Daily Emissions (Pounds per Day)^a</u>			
	<u>ROG</u>	<u>NOx</u>	<u>PM₁₀</u>	<u>PM_{2.5}</u>
Existing	4.3	8.6	0.5	0.5
Existing + Project	<u>5.0</u>	<u>9.9</u>	<u>0.6</u>	<u>0.5</u>
<i>Project's Net Increase</i>	<i>0.6</i>	<i>1.3</i>	<i>0.1</i>	<i>0.1</i>
Significance Threshold	54	54	82	54

Notes: ROG = reactive organic gases; NOx = oxides of nitrogen; PM₁₀ = “coarse” particulate matter (made of particulates that are 10 microns or less in diameter); PM_{2.5} = “fine” particulate matter (made of particulates that are 2.5 microns or less in diameter)

^a Net changes may not appear to add or subtract accurately because emission estimates have been rounded.

Source: Orion Environmental Associates, 2017.

As shown in the table, criteria air pollutant emissions associated with project operations would remain well below any of the significance thresholds for criteria air pollutants, and this would be a less-than-significant impact.

Impact AQ-4: The proposed project’s operations would generate toxic air contaminants, including diesel particulate matter, but would not expose sensitive receptors to substantial air pollutant concentrations. (Less than Significant)

The project site is within the APEZ and Health Vulnerability zip code 94103, as described above. Sensitive receptors in the project vicinity include residential uses, which are located immediately adjacent to Sixth Street and along the alleys and major cross-streets, as well as Bessie Carmichael Elementary School (375 Seventh Street; Grades pre-K to 5), which is located 550 feet from the project corridor. There are no hospitals located within 1,000 feet of the project corridor.

This is a street improvement project and not a development project, and changes in vehicle emissions due to increased idling time resulting from decreased intersection levels of service and shifts in travel patterns would not substantially alter vehicle-related DPM emissions. As shown in Table 15, the proposed project would result in a net increase of 0.1 pound per day of PM₁₀. Assuming all PM₁₀ is DPM, this amount would not be a substantial increase in DPM emissions because the emissions in this amount would disperse from the point at which the pollutants are emitted and would be substantially reduced at sensitive receptor locations, so that the actual

exposure to the sensitive receptors would be much less. No other mobile, stationary, or area sources of TACs would be associated with the proposed project. Given the small changes in DPM or TAC emissions associated with project-related changes to existing travel patterns, no increase in traffic levels, and no new sources of DPM or TAC emissions, project implementation would not substantially alter existing health risk exposures at nearby sensitive receptors, and the proposed project would therefore have a less-than-significant impact.

Impact AQ-5: The proposed project would not conflict with, or obstruct implementation of, the 2010 Clean Air Plan. (*Less than Significant*)

The most recently adopted air quality plan for the SFBAAB is the *2010 Clean Air Plan* (2010 CAP). The 2010 CAP is a road map that demonstrates how the San Francisco Bay Area will achieve compliance with the state ozone standards as expeditiously as practicable and how the region will reduce the transport of ozone and ozone precursors to neighboring air basins. In determining consistency with the 2010 CAP, this analysis considers whether the project would (1) support the primary goals of the 2010 CAP, (2) include applicable control measures from the 2010 CAP, and (3) avoid disrupting or hindering implementation of control measures identified in the 2010 CAP. The discussion below also addresses the proposed project's relationship to the 2017 CAP.

Project Consistency with 2010 Clean Air Plan

To meet the primary goals, the 2010 CAP recommends specific control measures and actions. These control measures are grouped into various categories and include stationary and area source measures, mobile source measures, transportation control measures, land use measures, and energy and climate measures. The 2010 CAP recognizes that, to a great extent, community design dictates individual travel mode and that a key long-term control strategy to reduce emissions of criteria pollutants, air toxics, and GHGs from motor vehicles is to channel future Bay Area growth into vibrant urban communities where goods and services are close at hand and people have a range of viable transportation options. To this end, the 2010 CAP includes 55 control measures aimed at reducing air pollution in the SFBAAB.

The measures most applicable to the proposed project are transportation control measures. The proposed project's impacts with respect to GHGs are discussed in Initial Study Topic E.8, Greenhouse Gas Emissions, which demonstrates that the proposed project would comply with the applicable provisions of the City's Greenhouse Gas Reduction Strategy. Transportation control measures that pertain to the proposed project include the following:

- TCM D-1, Bicycle Access and Facilities Improvements, calls for expanding bicycle facilities (i.e., bike lanes, routes, paths, and bicycle parking facilities) to improve bicycle access to reduce criteria pollutant emissions, air toxics, and GHGs.
- TCM D-2, Pedestrian Access and Facilities Improvements, calls for improving pedestrian facilities (i.e., sidewalks/paths, benches, reduced street width, reduced intersection turning radii, crosswalks with activated signals, curb extensions/bulbs, buffers between sidewalks

and traffic lanes, and street trees) and encourages walking by funding projects that improve pedestrian access to transit, employment, and major activity centers. This measure will reduce criteria pollutant emissions, air toxics, and GHGs.

The proposed project would make multi-modal changes to Sixth Street between Market and Brannan Streets to improve safety and access for pedestrians, bicyclists, and transit as well as for drivers. The proposed project would include the addition of new bike lanes on both sides of Sixth Street between Market and Folsom Streets. Proposed streetscape changes include widened sidewalks, new curb bulb-outs, raised crosswalks, new traffic signals, and new crosswalks. Such changes would be consistent with Transportation Control Measures TCM D-1 and TCM D-2. Therefore, the proposed project would not only avoid conflicting with control measures identified in the 2010 CAP, but would support implementation of these 2010 CAP measures. Thus, the proposed project would support the primary goals of the 2010 CAP and include control measures from the 2010 CAP, and would not hinder implementation of control measures identified in the 2010 CAP.

Project Relationship to 2017 Clean Air Plan Control Measures

Primary goals of the 2017 CAP are to protect public health and protect the climate. The 2017 CAP includes a wide range of proposed control measures, which consist of actions to reduce combustion-related emissions, decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs. Numerous measures address reduction of several pollutants: ozone precursors, particulate matter, air toxics, and/or GHGs. Other measures focus on a single type of pollutant, super GHGs such as methane and black carbon, or harmful fine particles that affect public health. All 17 transportation control measures that are included in the 2010 CAP are carried forward in the 2017 CAP, including the two measures that pertain to the proposed project (i.e., TCM D-1 and TCM D-2), and the proposed project's consistency with these measures is discussed above.

Conclusion

For the reasons described above, the proposed project would not interfere with implementation of the 2010 CAP or the 2017 CAP, and because the proposed project would be consistent with the applicable air quality plan that shows how the region will improve ambient air quality and achieve the state and federal ambient air quality standards, this impact would be less than significant.

Impact AQ-6: The proposed project would not create objectionable odors that would affect a substantial number of people. (*Less than Significant*)

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. During construction, diesel exhaust from construction equipment would generate some

odors, although construction-related odors would be temporary and would not persist upon project completion. Other than causing incremental increases in idling vehicles and associated exhaust odors within the surrounding area, the proposed road diet would not introduce any new sources of objectionable odors or generate substantial increases in exhaust-related odors. Therefore, the proposed project would not create significant sources of new odors, and odor impacts would be less than significant.

Cumulative Impacts

Impact C-AQ-1: The proposed project, in combination with past, present, and reasonably foreseeable future development in the project area, would not substantially contribute to cumulative air quality impacts. (Less than Significant)

As discussed above on p. 122, regional air pollution is by its very nature largely a cumulative impact. Emissions from past, present, and reasonably foreseeable future projects contribute to the region’s adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional non-attainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulative adverse air quality impacts.⁹⁴ Criteria air pollutant emissions under the 2040 Cumulative Condition are presented in Table 16: Estimated Average Daily Regional Emissions under Cumulative (2040) Conditions, while project-related operational increases in criteria air pollutant emissions under the 2040 Cumulative Plus Project Condition are also listed in this table.

Table 16: Estimated Average Daily Regional Emissions under Cumulative (2040) Conditions

<u>Future (2040) Cumulative Conditions</u>	<u>Projected Daily Emissions (Pounds per Day)^a</u>			
	<u>ROG</u>	<u>NOx</u>	<u>PM₁₀</u>	<u>PM_{2.5}</u>
2040 Cumulative Baseline (No Project)	2.8	9.4	0.5	0.5
2040 Cumulative + Project	<u>2.7</u>	<u>9.2</u>	<u>0.5</u>	<u>0.5</u>
<i>Project’s Net Cumulative (2040) Contribution</i>	<i>-0.1</i>	<i>-0.1</i>	<i>0.0</i>	<i>0.0</i>
Significance Threshold	54	54	82	54

Notes: ROG = reactive organic gases; NOx = oxides of nitrogen; PM₁₀ = “coarse” particulate matter (made of particulates that are 10 microns or less in diameter); PM_{2.5} = “fine” particulate matter (made of particulates that are 2.5 microns or less in diameter)

^a Net changes may not appear to add or subtract accurately because emission estimates have been rounded. Under Future (2040) Cumulative Conditions, the proposed project would result in a reduction in ROG and NOx emissions and no change in PM₁₀ or PM_{2.5}, as a result of future improvements in emission factors and decreases in automobile use as people shift to different transportation modes.

Source: Orion Environmental Associates, 2017.

In summary, the proposed project’s net cumulative (2040) contribution to regional criteria air pollutant emissions would be a reduction of 0.1 pound per day of ROG, a reduction of 0.1 pound per day of NOx, and no change in daily PM₁₀ and PM_{2.5} emissions. As explained above, vehicles are becoming progressively cleaner with newer technology as older vehicles are phased out, and therefore the emission rates under the cumulative scenario are projected to be lower than those under existing conditions. At the same time that increased delays would increase criteria air

⁹⁴ BAAQMD, CEQA Air Quality Guidelines, p. 2-1.

pollutant emissions, these delays in traffic and improvements to pedestrian and bicycle facilities could encourage a shift to alternative modes of transportation, reducing automobile use and decreasing associated emissions. However, increased emissions from these increased delays would be less than the emissions reductions from newer technology and decreases in automobile use such that a net reduction in emissions would occur in the future despite the increased delays.

The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, because the proposed project’s construction (Impact AQ-1) and operational (Impact AQ-3) emissions would not exceed the project-level thresholds for criteria air pollutants, the proposed project would not be considered to result in a cumulatively considerable contribution to regional air quality impacts, and would have a less-than-significant cumulative impact.

As discussed above, the project site is located in an area that already experiences poor air quality. However, since the proposed project is a street improvement project, changes in vehicle emissions due to increased idling time resulting from decreased intersection levels of service and shifts in travel patterns would not substantially alter vehicle-related DPM emissions. The proposed project would result in a net increase of 0.1 pound per day of PM₁₀ to this area. Given the small change in DPM emissions associated with project-related changes to existing travel patterns, no increase in traffic levels, and no new sources of DPM or TAC emissions, the proposed project would not be considered to result in a cumulatively considerable contribution to cumulative impacts on health risk exposures at nearby sensitive receptors, and would have a less-than-significant cumulative impact.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.8. GREENHOUSE GAS EMISSIONS—					
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Greenhouse gas (GHG) emissions and global climate change represent cumulative impacts. GHG emissions cumulatively contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature; instead, the combination of GHG emissions from past, present, and future projects has contributed and will contribute to global climate change and its associated environmental impacts.

The BAAQMD has prepared guidelines and methodologies for analyzing GHG emissions. These guidelines are consistent with CEQA Guidelines Sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHG emissions and describes the required contents of such a plan. Accordingly, the City has prepared *Strategies to Address Greenhouse Gas Emissions* (GHG Reduction Strategy),⁹⁵ which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's Qualified GHG Reduction Strategy in compliance with CEQA Guidelines. These GHG reduction actions have resulted in a 23.3 percent reduction in GHG emissions in 2012 compared to 1990 levels,⁹⁶ exceeding the year 2020 reduction goals outlined in the BAAQMD's *Bay Area 2010 Clean Air Plan*, Executive Order (EO) S-3-05, and Assembly Bill 32 (AB) 32 (also known as the Global Warming Solutions Act).⁹⁷ In addition to complying with the City's regulations, the 2008 Green Building Ordinance requires that all City departments prepare an annual department-specific climate action plan. In March 2014, SFPW updated its Climate Action Plan, which is summarized below.⁹⁸

Given that the City has met the state and regional 2020 GHG reduction targets and the City's GHG reduction goals are consistent with, or more aggressive than, the long-term goals established under

⁹⁵ San Francisco Planning Department, *Strategies to Address Greenhouse Gas Emissions*, 2010. Available online at <http://www.sf-planning.org/index.aspx?page=2627>. Accessed February 26, 2016.

⁹⁶ ICF International, *Technical Review of the 2012 Community-wide Inventory for the City and County of San Francisco*, January 21, 2015. Available online at <http://sfenvironment.org/download/2012-community-greenhouse-gas-inventory-3rd-party-verification-memo-january-2015>. Accessed March 11, 2016.

⁹⁷ Executive Order S-3-05, Assembly Bill 32, and the Bay Area 2010 Clean Air Plan set a target of reducing to below 1990 levels by the year 2020.

⁹⁸ San Francisco Public Works, *2014 Climate Action Plan*, Updated March 2014. Available online at http://www.sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2014_dpw_cap_fy1213.pdf. Accessed February 26, 2016.

EO S-3-05⁹⁹, EO B-30-15^{100,101}, and Senate Bill (SB) 32^{102,103}, the City's GHG reduction goals are consistent with EO S-3-05, EO B-30-15, AB 32, SB 32, and the *Bay Area 2010 Clean Air Plan*. Therefore, proposed projects that are consistent with the City's GHG reduction strategy would be consistent with the aforementioned GHG reduction goals, would not conflict with these plans or result in significant GHG emissions, and would therefore not exceed San Francisco's applicable GHG threshold of significance.

The following analysis of the proposed project's impact on climate change focuses on the project's contribution to cumulatively significant GHG emissions. Because no individual project could emit GHGs at a level that could result in a significant impact on the global climate, this analysis is in a cumulative context, and this section does not include an individual project-specific impact statement.

Impact C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions. (*Less than Significant*)

Individual projects contribute to the cumulative effects of climate change by directly or indirectly emitting GHG emissions during construction and operational phases. Direct operational emissions include GHG emissions from new vehicle trips and area sources (natural gas combustion). Indirect emissions include emissions from electricity providers; energy required to pump, treat, and convey water; and emissions associated with waste removal, disposal, and landfill operations.

⁹⁹ Executive Order S-3-05 sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide equivalents [MTCO₂E]); by 2020, reduce emissions to 1990 levels (approximately 427 million MTCO₂E); and by 2050, reduce emissions to 80 percent below 1990 levels (approximately 85 million MTCO₂E). Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

¹⁰⁰ Office of the Governor, Executive Order B-30-15, April 29, 2015. Available online at <https://www.gov.ca.gov/news.php?id=18938>. Accessed March 3, 2016. Executive Order B-30-15, issued on April 29, 2015, sets forth a target of reducing GHG emissions to 40 percent below 1990 levels by 2030 (estimated at 2.9 million MTCO₂E).

¹⁰¹ The City's GHG reduction goals are codified in Section 902 of the Environment Code and include the following: (i) by 2008, determine city GHG emissions for year 1990; (ii) by 2017, reduce GHG emissions by 25 percent below 1990 levels; (iii) by 2025, reduce GHG emissions by 40 percent below 1990 levels; and by 2050, reduce GHG emissions by 80 percent below 1990 levels.

¹⁰² Senate Bill 32 amends California Health and Safety Code Division 25.5 (also known as the California Global Warming Solutions Act of 2006) by adding Section 38566, which directs that statewide greenhouse gas emissions must be reduced by 40 percent below 1990 levels by 2030.

¹⁰³ Senate Bill 32 was paired with Assembly Bill 197, which would modify the structure of the California Air Resources Board; institute requirements for the disclosure of greenhouse gas emissions criteria pollutants, and toxic air contaminants; and establish requirements for the review and adoption of rules, regulations, and measures for the reduction of greenhouse gas emissions.

As a pedestrian safety improvement project, the proposed project would not increase the intensity of uses along the Sixth Street public right-of-way by introducing dwelling units, commercial space, or other new land uses. Although the proposed project would not increase overall traffic volumes, it would be expected to result in a redistribution of surface traffic from Sixth Street to adjacent and intersecting streets. Construction of the proposed transportation network and streetscape changes would be completed in 12 months and would result in temporary increases in GHG emissions. The proposed project would support the City's goal of shifting single occupancy vehicle trips to alternative modes through the enhancement of pedestrian and bicycle facilities. The proposed project would also support the City's goal of carbon sequestration through the planting of new street trees in the extended portion of the sidewalk between Market and Howard Streets, as the current street tree spacing does not meet the *Better Streets Plan* guidance for planting at 20-foot intervals. Therefore, the proposed project would not contribute to annual long-term increases in GHG emissions as a result of increased vehicle trips (mobile sources), or residential and commercial operations that could result in an increase in energy use, water use and wastewater treatment, and solid waste disposal.

The proposed project would be subject to regulations adopted to reduce GHG emissions as identified in the GHG Reduction Strategy. As discussed below, compliance with the applicable regulations would reduce the proposed project's GHG emissions related to transportation and waste disposal.

Compliance with the City's Commuter Benefits Ordinance, Emergency Ride Home Program, Healthy Air and Clean Transportation Ordinance, and Clean Construction Ordinance would reduce the proposed project's transportation-related emissions. These regulations reduce GHG emissions from single-occupancy vehicles by promoting the use of alternative transportation modes with zero or lower GHG emissions on a per capita basis.

The proposed project's waste-related emissions would be reduced through compliance with the City's Green Building Code requirements for City property, Construction and Demolition Debris Recovery Ordinance, Resource Conservation Ordinance, Recycling and Composting Ordinance, and Construction Recycled Content Ordinance. These regulations reduce the amount of materials sent to a landfill, reducing GHGs emitted by landfill operations. These regulations also promote reuse of materials, conserving their embodied energy¹⁰⁴ and reducing the energy required to produce new materials.

The proposed project would be required to comply with the environment and conservation requirements of the City's street tree planting requirements (San Francisco Public Works Code Sections 805 and 806) and Stormwater Management and Construction Pollution Prevention

¹⁰⁴ Embodied energy is the total energy required for the extraction, processing, manufacture, and delivery of building materials to the building site.

Ordinances, which would increase carbon sequestration, protect the environment, and support conservation efforts, thereby reducing the proposed project's GHG emissions.¹⁰⁵

For the reasons discussed above, the proposed project was determined to be consistent with the City's GHG Reduction Strategy.¹⁰⁶

The project sponsor is required to comply with these regulations, which have proven effective as San Francisco's GHG emissions have measurably decreased when compared to 1990 emissions levels, demonstrating that the City has met and exceeded EO S-3-05, AB 32, and the BAAQMD's *Bay Area 2010 Clean Air Plan* GHG reduction goals for the year 2020. Other existing regulations, such as those implemented through AB 32, will continue to reduce a proposed project's contribution to climate change. In addition, the City's local GHG reduction targets are consistent with the long-term GHG reduction goals of EO S-3-05, EO B-30-15, AB 32, SB 32, and the *Bay Area 2010 Clean Air Plan*. Therefore, because the proposed project is consistent with the City's GHG Reduction Strategy, it is also consistent with the GHG reduction goals of EO S-3-05, EO B-30-15, AB 32, SB 32 and the *Bay Area 2010 Clean Air Plan*; would not conflict with these plans; and would therefore not exceed the City's applicable GHG threshold of significance. As such, the proposed project would result in a less-than-significant impact with respect to GHG emissions. Mitigation measures are not necessary.

In addition to complying with the City's regulations, San Francisco Environment Code Section 903(c) requires that all City departments assess greenhouse gas emissions associated with their activities and submit a written action plan to the Department of the Environment that identifies and makes recommendations on GHG reduction measures applicable to operations of the department, other City GHG emission sources within its jurisdiction, and private sector GHG emission sources regulated by the department.¹⁰⁷ The latest Climate Action Plans for SFPW and the SFMTA were updated in 2014 and cover departmental information from Fiscal Year 2012-2013.¹⁰⁸ These Climate Action Plans detail the efforts of each City department to reduce GHG

¹⁰⁵ Compliance with water conservation measures reduces the energy (and GHG emissions) required to convey, pump, and treat water required for a project.

¹⁰⁶ San Francisco Planning Department, Greenhouse Gas Analysis: Compliance Checklist for the Sixth Street Pedestrian Safety Project, July 5, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁰⁷ On May 13, 2008, San Francisco Environment Code Chapter 9 was amended by San Francisco Board of Supervisors Ordinance 81-08 to establish, among other things, City GHG emissions targets and departmental action plans, and to authorize the Department of the Environment to coordinate efforts to meet these targets. Available online at [http://library.amlegal.com/nxt/gateway.dll?f=id\\$Id=0-0-0-908&t=document-frame.htm&3.0\\$p=](http://library.amlegal.com/nxt/gateway.dll?f=id$Id=0-0-0-908&t=document-frame.htm&3.0$p=). Accessed February 10, 2017.

¹⁰⁸ San Francisco Department of the Environment, 2014 Climate Action Plans. The SFMTA Climate Action Plan is available online at http://sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2014_mta_cap_fy1213.pdf and the SFPW Climate Action Plan is available online at http://sfenvironment.org/sites/default/files/fliers/files/sfe_cc_2014_dpw_cap_fy1213.pdf. Accessed February 10, 2017.

emissions and identify actions to maintain progress toward the City's GHG emissions reduction goals.

SFPW Strategies

SFPW builds and maintains the City's streets, plants and prunes over 40,000 trees, and designs, constructs, and maintains City buildings and public spaces. SFPW owns 681 vehicles and equipment including cars, sport utility vehicles, light duty pickups, heavy duty pickups, trucks, light duty vans, heavy duty vans, heavy equipment, and small off-road equipment. The 2014 Climate Action Plan (using data from Fiscal Year 2012-2013) includes operational GHG emissions reduction goals that encompass the energy used to power its vehicle fleet and facilities, and the energy used for the consumption of water (i.e., water pumps), the elimination of wastewater, and the production and handling of solid waste. These goals have been set in support of the City's overall efforts to reduce operational GHG emissions (as measured in units of carbon dioxide equivalents [CO₂e]) to 20 percent below 1990 levels by 2012, 25 percent below 2005 levels by 2017, 40 percent below 2005 levels by 2025, and 80 percent below 2005 levels by 2050. SFPW's operational CO₂e reduction goals are measured against their 2008 baseline CO₂e emissions level (5,952.57 metric tons). The goals are as follows: a reduction to 5,357.2 metric tons by 2012 (10 percent), 5,178.62.2 metric tons by 2013 (13 percent), 5,000.05 metric tons by 2014 (16 percent), 4,464.33 metric tons by 2017 (25 percent), and 1,190.496 metric tons by 2050 (80 percent). Approximately 94 percent of SFPW's CO₂e emissions in 2011-2012 were generated by the use of liquid fuel. In addition to continuing to design, maintain, and construct projects that meet Leadership in Energy and Environmental Design (LEED) Gold standards, SFPW will focus on strategies to reduce the use of gasoline-powered vehicles and to transition the vehicle fleet to alternative fuel sources. Among its other practices that support Citywide efforts to reduce CO₂e emissions are carbon sequestration through the enhancement and continued maintenance of the urban forest, continuing efforts to achieve zero waste by 2020, and the continuing introduction of sustainable business practices, including the use of sustainable construction materials and methods.

SFMTA Strategies

The SFMTA operates the City's public transit system and is responsible for all modes of transportation within the city as well as taxi and traffic and parking management. The SFMTA's fleet is made up of over 1,950 vehicles including motor coaches, electric trolley coaches, light rail cars, historic streetcars, cable cars, parking control vehicles, pooled staff cars, and maintenance support vehicles. The SFMTA also regulates over 1,890 privately owned taxis and paratransit vehicles. Approximately 90 percent of the SFMTA's carbon footprint comes from the use of diesel fuel; approximately 5 percent comes from gasoline, compressed natural gas, and propane used in the non-revenue fleet; and the remaining approximately 5 percent comes from natural gas used in over two dozen facilities.

By June 2010, the SFMTA had already met the City's goal of a 20 percent GHG emissions reduction target over 1990 levels, primarily through purchasing fuel-saving hybrid buses and using biodiesel fuels. The SFMTA hybrid bus fleet was operating with a 25 to 28 percent higher miles per gallon output compared to non-hybrid buses. These efforts have reduced particulate matter emissions by 99 percent since 2000. Due to fleet consolidation and hybridization, fuel use has also decreased in the non-revenue vehicle fleet. Since 2011, zero emission electricity from the SFPUC's Hetch Hetchy system has been used to power over 500 transit vehicles and all SFMTA facilities. As of 2014, 50 percent of the SFMTA's transit fleet are zero emission vehicles. Hybrid buses make up approximately 38 percent of the motor coach fleet, while hybrid taxis make up approximately 86 percent of the taxi fleet. Over the next five years, the SFMTA will continue the replacement of its remaining 400 conventional diesel buses with hybrid buses powered by biodiesel fuels as well as the transition of over 250 parking control vehicles to electricity.

In addition to addressing its direct carbon footprint (fuel and energy used), the SFMTA is also focused on addressing GHG emissions produced by all other vehicle modes in San Francisco's transportation sector (all transportation sources, including cars and trucks) by reducing reliance on single-occupant vehicle trips and vehicle ownership. These efforts include the development and implementation of community-wide Transportation Demand Management (TDM) programs, strategies, and measures to reduce vehicle miles traveled and the resultant carbon emission, e.g., the Commuter Shuttles Policy and Pilot Programs, the Commute by Bike Pilot Program, the Wayfinding Program, and Safety and Education Programs, as well as specific transportation demand management programs for large development plan areas such as Central SoMa, Treasure Island, and Parkmerced. Furthermore, Proposition A, passed by voters in November 2007, included a 20 percent reduction goal for carbon emission levels specific to the entire transportation sector. In compliance with the mandates of Proposition A, the SFMTA prepared the 2011 Draft Climate Action Strategy document.¹⁰⁹ The SFMTA is working to reduce the impacts of automobile emissions and congestion through GHG reduction strategies focused on travel demand, i.e., travel choice and information, demand pricing, and transit-oriented development; and infrastructure support, i.e., transit improvements, complete streets, and electric vehicles. These initiatives are described in the SFMTA Climate Action Strategy, which complements the San Francisco Department of the Environment's Climate Action Plan by focusing on carbon emission reductions that are achieved through transportation policies and programs and are part of a larger Community Climate Action Strategy. The SFMTA has also begun to implement its *Clean Air Plan: Zero Emissions 2020*, a transition strategy for further reducing motor coach emissions and fossil fuel use through bridge technologies such as hybrid buses and cleaner fuels such as biodiesel with the aim of a 100 percent zero emissions fleet by 2020.

¹⁰⁹ SFMTA, 2011 Climate Action Strategy for San Francisco's Transportation System, Draft. Available online at <http://archives.sfmta.com/cms/cmta/documents/4-19-11item13CAS-citywide.pdf>. Accessed February 10, 2017.

Among the SFMTA’s other practices that support Citywide efforts to reduce CO₂e emissions are carbon sequestration through the enhancement and continued maintenance of the portion of the urban forest under SFMTA control, continuing efforts to achieve zero waste by 2020, and continuing the introduction of sustainable business practices.

Project Relationship to SFPW and SFMTA Strategies

The proposed project would introduce new landscaping and plant new street trees, specifically where sidewalk widening and corner bulb-outs are proposed, thus reducing the amount of existing impervious surfaces along the Sixth Street public right-of-way. In order to further SFPW and SFMTA efforts to conserve water and minimize energy use, drought-resistant plant species and water-efficient irrigation systems would be implemented as part of the proposed landscaping. The proposed project would also implement the best management practices (BMPs) for reducing energy use and resource conservation through the application of sustainable business practices, including the use of sustainable construction materials and methods. In addition, the proposed project would reduce energy use through the promotion of alternative modes of travel for construction employees. Thus, the proposed project would be consistent with the SFPW and SFMTA 2014 Climate Action Plans and their goals for GHG emission reductions.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.9. WIND AND SHADOW—Would the project:					
a) Alter wind in a manner that substantially affects public areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impact WS-1: The proposed project would not alter winds in a manner that would substantially affect public areas. (*Less than Significant*)

Wind impacts are typically caused by large building masses extending substantially above neighboring buildings, and by new buildings oriented or designed with large walls that interfere with and channel prevailing winds, particularly if such a wall contains little or no articulation. Generally, wind impacts are caused by construction of buildings over 80 feet tall that are located in high-density areas.

The City’s wind standards (Planning Code Section 148) do not apply to the proposed project because none of the project components would involve the construction of buildings or any structures with massing capable of affecting street level wind conditions in any consequential manner. As described in Initial Study Section A, Project Description, the proposed project would construct and/or relocate various above-grade streetscape changes within the Sixth Street public

right-of-way such as traffic signal support poles, street lighting standards, and street trees. The maximum height of the traffic signal poles and street lights would be 30 feet. Traffic signal poles have a diameter of up to 16 inches at their base, while street lights have a diameter of up to 19 inches at their base. Thus, the largest diameter of new and/or relocated above-grade structures would be approximately 19 inches, which would not be large enough to substantially alter local wind patterns.

In general, street trees provide “roughness” that disperses the force of pedestrian-level winds. The proposed project would plant new street trees in the extended portion of the sidewalk between Market and Howard Streets and at Folsom and Harrison Streets where proposed curb bulb-outs would be constructed. New and/or replacement street trees would be planted at locations along the Sixth Street corridor where gaps in the existing street tree spacing pattern allow and where existing street trees would be removed during project construction. In addition, unhealthy street trees would be removed and replaced, and new street trees would be planted in locations where there are existing empty street wells. The proposed project would not result in a permanent loss of street trees; however, any removal may contribute to a temporary increase in pedestrian-level winds along the Sixth Street corridor. This impact would be temporary and less than significant. After tree replacement, pedestrian-level wind effects would be expected to again be attenuated. Thus, pedestrian-level winds would either be similar to existing conditions or, with the planting of new street trees, further attenuated.

All other proposed physical transportation network and streetscape changes would be at- or below-grade and would not result in any change to wind conditions. Therefore, the proposed project would have a less-than-significant impact on wind. Mitigation measures are not necessary.

Impact WS-2: The proposed project would not create new shadow that would substantially affect outdoor recreation facilities or other public areas. (*Less than Significant*)

A proposed project would have a significant shadow effect if it would create or result in new shadow that substantially affects outdoor recreation facilities or other public areas. The proposed project would not result in the construction of any buildings or structures of any height or bulk such that significant shadowing would occur on public open spaces, including those under the jurisdiction of the Recreation and Park Commission. Section 295 of the Planning Code was adopted in response to Proposition K (passed in November 1984) in order to protect certain public open spaces from shadowing by new structures during the period between one hour after sunrise and one hour before sunset, year round. Section 295 restricts new shadow upon public spaces under the jurisdiction of the Recreation and Park Commission by any structure exceeding 40 feet unless the City Planning Commission and the Recreation and Park Commission find the impact to be insignificant.

Section 295 of the Planning Code does not apply to the proposed project, as no building permit is required for the proposed project. In addition, the maximum height of any of the physical

transportation network and streetscape changes constructed as part of the proposed project would be 30 feet. Given the 19-inch diameter of the tallest proposed components, the 30-foot-tall street light standards, these proposed components would not have a sufficient mass to create substantial new shadow. Therefore, due to the limited bulk of the proposed project components, any new shadows produced as a result of the proposed project would be minimal and would have a less-than-significant shadow impact on outdoor recreation facilities and other public areas. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-WS-1: The proposed project, in combination with past, present, or reasonably foreseeable future projects, would not result in significant cumulative wind or shadow impacts. (*Less than Significant*)

The geographic context for cumulative wind and shadow impacts is the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52. Most of these private projects would result in the redevelopment of underutilized sites, e.g., surface parking lots and vacant buildings, and others would replace existing structures with new residential, commercial, and retail uses. The proposed project would not contribute to any wind or shadow impacts that may be caused by the development of future private projects along the Sixth Street corridor or in its vicinity. Some future public projects, e.g., the Better Market Street Project and Muni’s TTRP.14 along Mission Street, would maximize the capacity of the surface public transit system and improve the safety and comfort of pedestrians and bicyclists. Other future public projects, e.g., the Gene Friend Recreation Center Improvement Project, would expand on or improve existing public uses.

As discussed under Impact WS-1, the proposed project would include transportation network and streetscape changes in the public right-of-way that would not have a significant impact on wind conditions along the Sixth Street corridor. All other past, present, and reasonably foreseeable projects within a ¼-mile radius of the Sixth Street corridor that are subject to the City’s wind standards would have to undergo a wind analysis to determine and avoid the creation of hazardous ground-level winds in the public right-of-way. Thus, the proposed project, in combination with other past, present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative wind impact along the Sixth Street public right-of-way.

As discussed under Impact WS-2, the proposed project would not include any structures that would cast any net new shadow on nearby public open spaces under the jurisdiction of the Recreation and Parks Commission or other City agencies. All other past, present, and reasonably foreseeable projects within a ¼-mile radius of the Sixth Street corridor and subject to Planning Code Section 295 and other controls would have to undergo a shadow analysis to determine and avoid substantial net new shading of public open spaces. Thus, the proposed project, in combination with other past,

present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative shadow impact on public open spaces in the vicinity of the Sixth Street corridor.

For the above reasons, the proposed project, in combination with other past, present, and reasonably foreseeable projects, would not contribute considerably to significant cumulative wind or shadow impacts. Mitigation measures are not necessary.

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
E.10. RECREATION—Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Physically degrade existing recreational resources?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Setting

The San Francisco Recreation and Park Department (SFRPD) manages more than 220 parks, playgrounds, and open spaces throughout the city. SFRPD recreation facilities also include 25 recreation centers, nine swimming pools, five golf courses, and more than 300 athletic fields, tennis courts, and basketball courts.¹¹⁰ Regional parks within and near the city and under the jurisdiction of the National Park Service include the Golden Gate National Recreation Area, which has open space areas such as Ocean Beach and Baker Beach in San Francisco and the Marin Headlands north of the city, and the Presidio of San Francisco.

The following parks and recreation facilities are located within a ¼-mile radius of the Sixth Street corridor and would be accessible to park users in the project area (see Figure 1 on p. 3):

- The 1.02-acre Gene Friend Recreation Center at the northwest corner of Sixth and Folsom Streets (270 Sixth Street) includes a variety of activities for the public including basketball, a playground with a sand pit, art sculptures, a lawn area, an indoor gymnasium, an activity room, a weight room, lockers, a ping pong table, and a foosball table.¹¹¹

¹¹⁰ San Francisco Recreation and Park Department, Recreation Assessment Report, August 2004, p. 21. Available online at <http://sfrecpark.org/about/publications/2004-recreation-assessment/>. Accessed February 26, 2016.

¹¹¹ The San Francisco Recreation and Park Department is currently partnering with The Trust for Public Land on a feasibility study and concept design for the Gene Friend Recreation Center. Available online at <http://sfrecpark.org/project/gene-friend-rec-improvement-project/>. Accessed February 26, 2016.

- The 0.15-acre Tutubi Children’s Park is a fenced private park at the corner of Russ and Minna Streets. The park is associated with the affordable housing complex at 535-539 Minna Street. It consists of a play structures and climbing walls.
- The 2.52-acre Victoria Manalo Draves Park, between Folsom and Harrison Streets and Sherman and Columbia Square Streets, includes a softball field, basketball court, dual-level playground, picnic area, community garden, and large grass field.
- The 0.20-acre Howard and Langton Mini Park is located on the southwest corner of Howard and Langton Streets. The mini park is a community garden where members can grow produce and ornamental plants for personal use.
- The 0.97-acre Father Alfred E. Boeddeker Park at the northeast corner of Jones and Eddy Streets (295 Eddy Street) includes a basketball half-court, swings, a slide, play structures, and a community clubhouse.

Except for Tutubi Children’s Park, all the above parks and recreation facilities are under the jurisdiction of the SFRPD. In addition, U.N. Plaza, Hallidie Plaza, and Mint Plaza are located within a ¼-mile radius of the project site. U.N. and Hallidie Plazas are under the jurisdiction of SFPW, while Mint Plaza is managed and maintained by Friends of Mint Plaza. U.N. Plaza is a 2.5-acre space adjacent to Market Street and located between Leavenworth and Hyde Streets that includes the Civic Center Muni/Bay Area Rapid Transit (BART) station entrance and hosts weekly farmers markets on Wednesdays and Sundays. Hallidie Plaza is a 1.4-acre space adjacent to Market Street and Fifth Street/Cyril Magnin Street that includes the Powell Street Muni/BART station entrance. Hallidie Plaza also includes a tourist information center and the turnaround for the historic cable cars located at street level at the intersection of Market and Powell Streets. Mint Plaza is an approximately 0.3-acre open space between Mint and Fifth Streets and the historic Old U.S. Mint Building to the south and residential buildings to the north. The plaza provides pedestrian access to and from nearby shopping areas, as well as ground-level retail and cafe space, and is designed for passive use with two raised areas that provide informal seating along the edges and moveable chairs scattered throughout the plaza. The plaza is the site of periodic programmed open space events including farmers markets, music, and dance festivals.

Project Impacts

Impact RE-1: The proposed project would not result in the increased use of existing neighborhood or regional parks or other recreation facilities such that substantial physical deterioration would result or be accelerated. (*Less than Significant*)

Increased recreational facility or park use in a community is usually driven by the addition of new users, typically new residents, and to a lesser degree, new workers. As described under Initial Study Topics E.1, Land Use and Land Use Planning, and E.3, Population and Housing, the proposed project would not result in an increase in population, housing, or residents, and would not generate population or employment growth that would exceed what has already been anticipated and planned for in City and regional population and employment growth projections through 2040. Overall, the proposed changes to and redesign of existing transportation and streetscape

infrastructure would not increase the use of existing parks or other recreation facilities because it would not introduce new residential uses to the project area. Any increased employment during the construction phase of the proposed project would be temporary and likely to draw from the regional workforce. Thus, these construction workers would not be expected to result in a perceptible increase in the use of City recreation facilities. Furthermore, construction of the proposed project would be implemented over an estimated 12-month period and would not result in a substantial permanent increase in local employment that could otherwise lead to increased park usage.

Construction of the proposed project would require the temporary closure of travel lanes and sidewalks, which could impede vehicle and pedestrian traffic on Sixth Street; however, these closures would not inhibit the ability of motorists, pedestrians, or bicyclists to visit the parks and plazas identified above. The temporary closure of travel lanes and sidewalks between Market and Howard Streets, as well as removal of on-street parking, could temporarily limit access to the Tutubi Children's Park during construction activities. Although motorists may have to use alternative access routes during the temporary closures, these closures would not affect the playground structure or impede the main entrances to the playground. Residents in the project area who currently walk to and from the playground would continue to have access to the park. In addition, the other public parks and plazas listed above would provide alternative recreational opportunities for any users that may be temporarily diverted as a result of construction activities. Given the abundance and proximity of these alternative recreational facilities, and with maintained pedestrian access to Tutubi Children's Park, no substantial physical deterioration of this park or other parks or plazas in the project area would occur.

The proposed project, once completed, would directly improve pedestrian and bicycle access to recreational facilities by implementing pedestrian safety measures and improving the streetscape, granting pedestrians improved connection to nearby recreation facilities. The majority of pedestrians and cyclists who use Sixth Street are likely existing city residents and workers who may already frequent the nearby parks and recreational facilities, which are neighborhood-serving facilities, not regional destinations. As such, implementation of the proposed project would not result in a marked difference in the overall use of the nearby parks and recreational facilities. Furthermore, improved access to nearby parks and recreational facilities as a result of the enhancements to the pedestrian environment would not substantially increase the use of any of these parks and recreational facilities such that substantial physical deterioration or degradation would occur or be accelerated. Therefore, the proposed project would have a less-than-significant impact on parks and recreation facilities. Mitigation measures are not necessary.

Impact RE-2: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment. (No Impact)

The objectives of the proposed project include calming motor vehicle traffic and reducing speed, reducing collisions, improving pedestrian crossings, improving safety and comfort for bicyclists, and creating a safe and inviting public space. All of the various proposed project elements would be implemented within the public right-of-way, which is largely under the jurisdiction of SFPW and the SFMTA, and no new recreational facilities would be constructed as part of the proposed project.

In addition, as described under Impact RE-1, construction and implementation of the proposed project would not result in a marked difference in the overall use of the parks, plazas, and recreational facilities in the project area. Consequently, the proposed project would not substantially increase demand for or use of other recreational facilities such that increased user demand would require the construction of new recreational facilities or the expansion of existing facilities. Therefore, the proposed project would not result in the construction of other recreational facilities that would themselves have a physical environmental impact, and there would be no impact. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-RE-1: The proposed project, in combination with other past, present, and reasonably foreseeable projects, would not result in a significant cumulative recreation impact. (Less than Significant)

The geographic context for cumulative recreational impacts is the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52. Most of these private projects would result in the redevelopment of underutilized sites, e.g., surface parking lots and vacant buildings, and others would replace existing structures with new residential, commercial, and retail uses. Future projects that may result in recreational impacts typically relate to the addition of residential and employment-generating uses that contribute to the demand for recreational facilities. These reasonably foreseeable projects would introduce a substantial number of new residents and employees to the area that could result in the substantial physical deterioration of existing recreational resources. Some future public projects, e.g., the Better Market Street Project and Muni’s TTRP.14 along Mission Street, would maximize the capacity of the surface public transit system and improve the safety and comfort of pedestrians and bicyclists. Other future public projects, e.g., the Gene Friend Recreation Center Improvement Project, would expand on or improve existing public uses.

As discussed under Impact RE-1 and Impact RE-2, implementation of the proposed project would not have a significant adverse impact related to recreation because it would not introduce new land

uses that would add residents or workers to the project area, and any usage of recreational facilities generated by the employees related to the construction of the proposed changes would be temporary. While the proposed project would improve access to parks and recreational facilities through the implementation of pedestrian and bicycle safety enhancements along Sixth Street, it would not result in a change in usage that would lead to the deterioration or degradation of any existing parks and recreational facilities in the project area.

Based on the above, the proposed project in combination with past, present, and reasonably foreseeable projects would not contribute considerably to a significant cumulative impact on recreational resources. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.11. UTILITIES AND SERVICE SYSTEMS—					
Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supply available to serve the project from existing entitlements and resources, or require new or expanded water supply resources or entitlements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact UT-1: The proposed project would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board. (*Less than Significant*)

The City's combined sanitary sewer and stormwater system (combined sewer system) collects, transports, and treats sanitary sewage and stormwater runoff in the same facilities. Discharges to federal and state waters are governed by two National Pollutant Discharge Elimination System (NPDES) permits, one of which is the Bayside NPDES Permit (Permit No. CA0037664).

The Sixth Street public right-of-way is located within the Channel Basin of the Bayside drainage area, which is one of the two drainage areas of the City's combined sewer system. The Channel Basin is one of the City's eight major drainage basins from which wastewater and stormwater runoff is collected and conveyed to treatment plants through various trunk sewers and transport structures.¹¹²

All wastewater and stormwater flows that emanate from the Bayside drainage area are subject to the Bayside NPDES Permit, issued and enforced by the San Francisco Bay Regional Water Quality Control Board. The Bayside NPDES Permit specifies discharge prohibitions, dry-weather effluent limitations, wet-weather effluent performance criteria, receiving water limitations, sludge management practices, and monitoring and reporting requirements for the Southeast Water Pollution Control Plant (which treats discharge from Sixth Street), the North Point Wet-Weather Facility, and the Bayside Wet-Weather Transport/Storage and Diversion Structures, a series of storage/transport boxes located around the perimeter of the city.¹¹³ During wet weather, the capacity at the Southeast Water Pollution Control Plant is supplemented by the North Point Wet-Weather Facility and the Bayside Wet-Weather Transport/Storage and Diversion Structures. If wet-weather flows exceed the capacity of the overall system, the excess (primarily stormwater) is discharged from one of 36 combined sewer overflow (CSO) structures located along the waterfront. The Bayside NPDES Permit prohibits overflows from the CSO structures during dry weather, and requires wet-weather overflows to comply with the nine minimum controls specified in the federal Combined Sewer Overflow Control Policy.

Implementation of the proposed project would not result in new residents or businesses, and the proposed project would not substantially increase the amount of impervious surfaces as the components would be implemented entirely within the existing Sixth Street public right-of-way

¹¹² San Francisco is roughly divided into two major drainage areas: the Westside and Bayside, which are further divided into eight drainage basins. San Francisco Public Utilities Commission (SFPUC), San Francisco Sewer System Master Plan, June 15, 2010, pp. 3-1 to 3-4. Available online at <http://www.sfwater.org/modules/showdocument.aspx?documentid=723>. Accessed March 4, 2016.

¹¹³ The storage/transport boxes provide treatment that consists of settling and screening of floatable materials inside the boxes and that is equivalent to primary treatment at the wastewater treatment plants. SFPUC, San Francisco Sewer System Master Plan - Summary Report Final Draft, March 2010, pp. 2-7 to 2-8. Available online at <http://www.sfwater.org/modules/showdocument.aspx?documentid=613>. Accessed March 4, 2016.

(which, in general, is already paved surface). As discussed in more detail under Impact UT-2, implementation of the proposed project would not change the volume of stormwater flows.

Runoff from construction sites is a major source of stormwater contaminants. Construction sites are required to implement BMPs to keep pollutants, such as dirt and debris, out of the City's combined sewer system and sensitive local water bodies. All construction sites, including the Sixth Street construction site, must submit an Erosion and Sediment Control Plan as well as a Construction Site Runoff Permit Application to the SFPUC for review and approval.

On November 17, 2013, the San Francisco Board of Supervisors adopted the Construction Site Runoff Ordinance (Ordinance No. 260-13) amending the San Francisco Public Works Code to protect water quality by controlling the discharge of sediment or other construction pollutants from construction sites and preventing erosion and sedimentation due to construction activities. This ordinance would apply to the proposed project, and construction contractors would be required to comply with these requirements.

The proposed sidewalk widening and curb bulb-outs would require the relocation of stormwater catch basins. Other components of the proposed project that would not involve in-street construction (e.g., signal timing and control modifications, roadway striping, and signage) would have no impact on stormwater and wastewater infrastructure. In accordance with SFPW specifications and the San Francisco Public Works Code (Article 2.4, Section 2.4.13(7)), projects within the public right-of-way are required to incorporate low-impact design stormwater facilities consistent with Stormwater Design Guidelines to the maximum extent practical and feasible. It is unlikely that low-impact design measures are feasible to implement as part of the proposed project due to the constrained subsurface conditions beneath the right-of-way, but such measures would be incorporated where feasible. Although the proposed project would include the relocation and reconstruction of stormwater catch basins, it would not introduce any new land uses or other changes that could cause the proposed project to exceed the wastewater treatment requirements of the Regional Water Quality Control Board.

In conclusion, the proposed project would have a less-than-significant impact related to exceeding wastewater treatment requirements because runoff during construction would be treated in accordance with BMPs, the stormwater and sewer infrastructure would be relocated and rebuilt pursuant to the San Francisco Public Works Code, and no new contaminated runoff would be caused once the project is completed. Thus, mitigation measures are not necessary.

Impact UT-2: The proposed project would not require or result in the construction of new or the expansion of existing water, wastewater treatment, or stormwater drainage facilities, or result in a determination that the wastewater treatment provider has inadequate capacity to serve the proposed project. (*Less than Significant*)

Water

San Francisco's water supply system is owned and operated by the SFPUC, which supplies water to San Francisco and to Santa Clara, Alameda, San Mateo, and Tuolumne Counties.

Construction of the proposed project, e.g., sidewalk widening and corner bulb-outs, would likely include the use of water for dust control in compliance with Article 21 of the San Francisco Public Works Code, which requires the use of non-potable or reclaimed water. Compliance with this requirement would eliminate any short-term potable water demand that could be generated during construction of the proposed transportation network and streetscape changes.

As described in Initial Study Topic E.3, Population and Housing, the proposed project would not increase the residential population or introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Therefore, the proposed project would not substantially affect the demand for water. Consequently, the proposed project would not exceed water use anticipated in the *2010 Urban Water Management Plan for the City and County of San Francisco*.

Because the proposed project would not substantially increase water demand or require the construction of new or expanded water supply treatment facilities, the proposed project would have a less-than-significant impact on water supply facilities. Mitigation measures are not necessary.

Wastewater and Stormwater

The City's combined sewer system collects, transports, and treats sanitary sewage and stormwater runoff in the same facilities. Stormwater runoff comprises the primary source of total flows collected, conveyed, and eventually treated at the City's treatment facilities. Implementation of the proposed changes on Sixth Street would not alter wastewater or stormwater flows in the city. The expansion of the sidewalks and construction of corner bulb-outs between Market and Howard Streets and the construction of corner bulb-outs at Folsom and Harrison Streets would not increase the amount of impervious area. Therefore, the amount of stormwater flowing to the combined sewer system would not increase. As described in Initial Study Topic E.3, Population and Housing, the proposed project would not increase the residential population or introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Therefore, the proposed project would not generate a substantial increase in wastewater flows.

The proposed project would include both transportation network and streetscape changes, including changes to the roadway configuration, traffic signals, bicycle facilities, pedestrian facilities, streetscapes, commercial and passenger loading, and vehicular parking. The proposed project would be implemented in an urban area within the public right-of-way (which, in general, is already paved surface). Because all of the transportation network and streetscape changes would be

constructed within paved roadways and existing sidewalks and would replace existing non-permeable surfaces, the transportation network and streetscape changes would not increase the amount of impervious surfaces. Thus, the proposed project would not substantially increase the amount of stormwater runoff, result in a substantial change in surface permeability, or alter the topography within the Sixth Street public right-of-way in a manner that could result in increased runoff. An increase in the amount of stormwater drainage would not be anticipated as a result of the proposed project.

The proposed project would include the construction of widened sidewalks and corner bulb-outs between Market and Howard Streets and the construction of corner bulb-outs at Folsom and Harrison Streets. These proposed transportation network and streetscape changes would require the relocation or reconstruction of stormwater catch basins. The closure and installation of storm drains would require issuance of a permit by SFPW, the review of which would ensure adherence to all applicable ordinances and codes.

Although minor changes to existing stormwater collection facilities would be required, the proposed project would not increase stormwater flow or wastewater generation or require construction of new wastewater and stormwater collection, conveyance, or treatment facilities. Therefore, the proposed project would have a less-than-significant impact on wastewater treatment and stormwater drainage facilities and would not result in a determination by the SFPUC that it has insufficient capacity to continue providing wastewater treatment. Mitigation measures are not necessary.

Impact UT-3: The proposed project would have sufficient water supply available from existing entitlements and would not require new or expanded water supply resources or entitlements. (*Less than Significant*)

The SFPUC provides an average of approximately 265 million gallons per day of water to approximately 2.5 million people in the San Francisco and Santa Clara, Alameda, San Mateo, and Tuolumne Counties.¹¹⁴ Approximately 96 percent of the water provided to San Francisco is supplied by the SFPUC Regional Water System, which is made up of water from the Hetch Hetchy Reservoir and Bay Area reservoirs in the Alameda Creek and Peninsula watersheds.¹¹⁵ The city is currently served by this adequate water delivery infrastructure.

As described under Impact UT-2, non-potable or reclaimed water would be used during project construction, in compliance with Article 21 of the San Francisco Public Works Code. As described

¹¹⁴ SFPUC, 2010 Urban Water Management Plan for the City and County of San Francisco, June 2011, pp. 7, 14, 22-25. Available online at <http://sfwater.org/modules/showdocument.aspx?documentid=1055>. Accessed February 26, 2016.

¹¹⁵ SFPUC, 2010 Urban Water Management Plan for the City and County of San Francisco, June 2011, pp. 22-25. Groundwater and recycled water make up the remainder of the SFPUC supplies to the city. Available online at <http://sfwater.org/modules/showdocument.aspx?documentid=1055>. Accessed February 26, 2016.

in Initial Study Topics E.1, Land Use and Land Use Planning, and E.3, Population and Housing, the proposed project would result in a continuation of existing transportation land uses and would not introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Additionally, the number of construction-related jobs would not be substantial. Therefore, the proposed project would not result in an increase in water demand based on population or employment. The proposed project would not generate additional demand for water that would exceed available water resources. Therefore, the proposed project would have a less-than-significant impact on water supply resources. Mitigation measures are not necessary.

Impact UT-4: The proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project’s solid waste disposal needs, and the proposed project would comply with federal, state, and local statutes and regulations related to solid waste. (*Less than Significant*)

In September 2015, the City approved an agreement with Recology, Inc., for the transport and disposal of the City’s municipal solid waste (MSW) at the Recology Hay Road Landfill in Solano County. The Recology Hay Road Landfill is permitted by Solano County and the California Department of Resources Recycling and Recovery (CalRecycle) to accept up to 2,400 tons per day of MSW for disposal, to receive up to 620 vehicles per day (averaged over a seven-day period), and to operate up to 24 hours per day, seven days per week. The City began disposing its MSW at the Recology Hay Road Landfill in January 2016, and that practice is anticipated to continue for approximately nine years, with an option to renew the agreement thereafter for an additional six years.

The California Integrated Waste Management Act of 1989 (AB 939) requires municipalities to adopt an Integrated Waste Management Plan to establish objectives, policies, and programs related to waste disposal, management, source reduction, and recycling. San Francisco had a goal of 75 percent solid waste diversion by 2010, which it exceeded at 80 percent diversion, and has a goal of 100 percent solid waste diversion or “zero waste” to landfill or incineration by 2020.¹¹⁶ San Francisco Ordinance No. 27-06, the City’s Construction and Demolition Debris Recovery Ordinance, requires that mixed construction and demolition debris be transported by a Registered Transporter and taken to a Registered Facility that must recover for reuse or recycling and divert from landfills at least 65 percent of all received construction and demolition debris. The San Francisco Green Building Code also requires certain projects to submit a Recovery Plan to the Department of the Environment demonstrating recovery or diversion of at least 75 percent of all demolition debris. San Francisco’s Mandatory Recycling and Composting Ordinance No. 100-09

¹¹⁶ San Francisco Department of the Environment, Zero Waste Program, San Francisco Sets North American Record for Recycling and Composting with 80 Percent Diversion Rate. Available online at <http://www.sfenvironment.org/news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-north-america>. Accessed March 4, 2016.

requires all properties and everyone in the city to separate their solid waste into recyclables, compostables, and landfill trash.

As described in Initial Study Topics E.1, Land Use and Land Use Planning, and E.3, Population and Housing, the proposed project would result in a continuation of existing transportation land uses and would not introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Therefore, there would be no solid waste associated with operation of the proposed project.

Construction of the proposed project would generate solid waste in the form of construction and demolition debris (e.g., fully cured asphalt, concrete, brick, rock, and excavated soils) and trash generated by on-site construction workers that would need to be accommodated at a landfill. The proposed project would be subject to San Francisco Ordinance No. 27-06, which requires all mixed construction and demolition debris to be transported to a Registered Facility that can divert a minimum of 65 percent of the material from landfills. The proposed project would also be subject to the Resource Efficiency and Green Building Ordinance, which requires all demolition and new construction projects to recycle construction and demolition materials to the maximum extent feasible, with a goal of 75 percent diversion. Construction contract specifications for the proposed project would include the requirement that the contractor prepare a Construction and Demolition Debris Management Plan prior to commencement of the proposed project. Additionally, the proposed project would be subject to the City's Mandatory Recycling and Composting Ordinance, which would minimize solid waste generated by on-site construction workers.

The proposed project would be expected to comply with published federal, state, and local statutes and regulations related to solid waste. Solid waste that would not be diverted from landfills through compliance with the above-noted statutes and regulations would be transported off-site to the Hay Road Landfill.

Based on the above, solid waste generated as a result of the construction of the proposed project would be accommodated by the existing landfill in the region, and the proposed project would comply with federal, state, and local statutes and regulations related to solid waste. Therefore, the proposed project would have a less-than-significant impact on solid waste facilities and no impact in relation to compliance with solid waste statutes and regulations. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-UT-1: The proposed project, in combination with other past, present, and reasonably foreseeable projects, would not result in a significant cumulative impact on utilities and service systems. (*Less than Significant*)

Reasonably foreseeable cumulative development and population and employment growth in the city would incrementally increase demand on citywide utilities and service systems. The City has existing service management plans related to water, wastewater, and solid waste that address anticipated growth in the city and region. The past, present, and reasonably foreseeable projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52 are accounted for in these plans.

As discussed under Impacts UT-1 through UT-4, the proposed project would not have a significant impact related to utilities and service systems because it would adhere to all applicable regulations and ordinances that control the water quality of construction site runoff and would not induce population or employment growth or construct new buildings that would contribute to an increase in the demand for water, generation of wastewater, generation of stormwater, or generation of solid waste. Therefore, the proposed project in combination with past, present, and reasonably foreseeable projects would not contribute considerably to any significant cumulative impacts on utility service provision or facilities. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.12. PUBLIC SERVICES— Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of, or the 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 public services such as fire protection, police protection, schools, parks, or other services?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impacts on public services are assessed by determining whether a project would result in the need to increase or alter service in such a way that would necessitate construction of new facilities or alteration of existing facilities that, in turn, would have an adverse impact on the physical environment. As described in Initial Study Topic E.3, Population and Housing, the proposed project would not generate an increase in population or employment that could drive demand for public services such as fire protection, police protection, schools, and parks. Impacts related to emergency vehicle access are analyzed in Initial Study Topic E.5, Transportation and Circulation, under Impact TR-2, and are discussed below because of the potential effect on police and fire response times.

Impacts related to parks, open spaces, and other recreation resources are analyzed in Initial Study Topic E.10, Recreation.

Impact PS-1: The proposed project would not result in substantial adverse physical impacts associated with the provision of, or the 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. (*Less than Significant*)

Police Protection Services

The San Francisco Police Department (SFPD) provides police protection services in the city. The closest police stations in the vicinity of the Sixth Street public right-of-way are the Tenderloin Station at 301 Eddy Street and the Southern Police Station at 1251 Third Street.¹¹⁷ The SFPD's Central Market Safety Hub is located at 72 Sixth Street on the west side of the Sixth Street immediately south of Jessie Street.¹¹⁸

Construction of the proposed project would involve the relocation of traffic signals and street lights between Market and Howard Streets and at Folsom and Harrison Streets as part of the construction of extended sidewalks and corner bulb-outs and the installation of new traffic signals at Stevenson and Natoma Streets. These construction activities could generate a temporary increase in demand for traffic control. Construction on certain streets within the city is required to have police personnel on-site, generally stipulated as part of a Special Traffic Permit. A Special Traffic Permit is required for any work that does not comply with the regulations in the *Regulations for Working in San Francisco Streets* manual or the Traffic Routing Specifications in a City Contract. Since the construction-related police services (if needed) would be temporary in duration and sporadic in nature, the proposed project would not result in the need for altered or new police facilities. Therefore, this impact would be less than significant.

Additionally, as described under Impact TR-2 on pp. 90-91, with implementation of the proposed project there would be fewer mixed-flow travel lanes on Sixth Street, which would reduce the available capacity for vehicles and thereby increase the number of vehicles in the remaining travel lanes. This would result in some additional vehicle delay along Sixth Street. However, the proposed project would not cause any complete roadway closures or disruption to emergency vehicle access. As noted above, one mixed-flow travel lane would be provided in each direction between Market and Folsom Streets, and the bicycle lanes along this segment would not include any raised separation that would restrict emergency vehicle access to these lanes or prevent private vehicles from pulling out of the mixed-flow lanes in the event of an emergency. Between Folsom and Brannan Streets, multiple mixed-flow travel lanes in each direction and/or a center turn lane would be provided, which emergency vehicles could use to pass vehicle queues in the mixed-flow

¹¹⁷ San Francisco Police Department, Police District Maps. Available online at <http://www.sanfranciscopolice.org/police-district-maps>. Accessed February 26, 2016.

¹¹⁸ San Francisco Office of the Mayor, News Releases: Mayor Lee Celebrates Opening of SFPD Central Market Safety Hub on Sixth Street. Available online at <http://www.sfmayor.org/index.aspx?recordid=270&page=846>. Accessed February 26, 2016.

travel lanes. The design of all proposed project changes, including the new bicycle lanes, sidewalk widening, corner bulb-outs and raised crosswalks, would be reviewed by the SFPD as part of the TASC review, to make sure that they meet all applicable standards and to ensure that emergency vehicle access at specific locations is maintained. Therefore, no substantial new emergency vehicle delay or impediments to access would result, and the proposed project's impact on emergency vehicle access and response times would be less than significant.

As described in Initial Study Topic E.3, Population and Housing, the proposed project would not increase the residential population or introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Therefore, the proposed project would not generate demand for new police services based on population or employment. The SFPD bases its estimates of need for additional facilities on estimated population growth, the number and types of calls for service, types and times of traffic and pedestrian flow patterns, and operational hours of uses within each Police District area and deploys its resources based on the use of computer statistics, which allows the SFPD to proactively address public safety issues before they occur, instead of simply reacting to crimes already committed.^{119,120} Because the proposed project would not add new residents or employees to the project area, the proposed project would not result in a substantial increase in police service hours that would generate a need for new or physically altered police facilities.

The additional police hours required as a result of the proposed project would be negligible and would not necessitate new or altered police facilities. Thus, the proposed project would result in a less-than-significant impact on police services. Mitigation measures are not necessary.

Fire Protection and Emergency Medical Services

The San Francisco Fire Department (SFFD), headquartered at 698 Second Street, is responsible for protecting life and property throughout San Francisco from fires, natural disasters, and hazardous materials incidents.¹²¹ The SFFD also provides emergency medical services and transport in the city, including basic life support (BLS) and advanced life support (ALS) services. The SFFD consists of three divisions that are subdivided into 10 battalions. There are currently 44 permanently staffed fire stations located strategically throughout the city. The Sixth Street public

¹¹⁹ The San Francisco Police Department has adopted the use of computer statistics to guide its deployment of resources to more effectively address crime throughout the city. Available online at <http://www.sf-police.org/index.aspx?page=3254>. Accessed February 26, 2016.

¹²⁰ San Francisco Planning Department, Transit Center District Plan and Transit Tower Final Environmental Impact Report, May 24, 2012, p. 546. Available online at <http://www.sf-planning.org/index.aspx?page=1893>. Accessed March 1, 2016.

¹²¹ San Francisco Fire Department, Annual Report: FY 2012-2013, p. 3. Available online at <http://www.sf-fire.org/modules/showdocument.aspx?documentid=3584>. Accessed March 1, 2016.

right-of-way is within the service area of SFFD Battalion 3, and the closest fire station is Fire Station No. 1 at 935 Folsom Street.¹²²

Construction of the proposed project could generate a temporary increase in demand for fire protection services during the construction phase because construction activities could increase the potential for accidental on-site fires from such sources as the operation of construction equipment and the use of flammable construction materials. Since the construction-related fire protection services (if needed) would be temporary in duration and sporadic in nature, the proposed project would not result in the need for altered or new SFFD facilities. Therefore, this impact would be less than significant.

As described in Initial Study Topic E.3, Population and Housing, the proposed project would not increase the residential population or introduce new commercial, office, or industrial uses that could have the potential to result in substantial new sources of temporary or permanent employment. Therefore, the proposed project would not generate a substantial demand for new fire protection services based on population or employment. The proposed project would not result in a substantial increase in demand for fire protection services such that new or physically altered SFFD facilities would be required.

Construction of the proposed project may require temporary detours and lane closures on existing roadways along the Sixth Street corridor, which could affect emergency response times and service standards. The temporary closures and circulation changes would temporarily alter the route that emergency service providers would take to respond to an emergency call and could increase emergency response times. Although construction of the proposed transportation network and streetscape changes would result in changes within the Sixth Street public right-of-way, the physical changes would not adversely affect response time for the emergency vehicles as there would be no change to the existing street grid.

Additionally, as described under Impact TR-2 on pp. 90-91, with implementation of the proposed project there would be fewer mixed-flow travel lanes on Sixth Street, which would reduce the available capacity for vehicles and thereby increase the number of vehicles in the remaining travel lanes. This would result in some additional vehicle delay along Sixth Street. However, the proposed project would not cause any complete roadway closures or disruption to emergency vehicle access. As noted above, one mixed-flow travel lane would be provided in each direction between Market and Folsom Streets and the bicycle lanes along this segment would not include any raised separation that would restrict emergency vehicle access to these lanes or prevent private vehicles from pulling out of the mixed-flow lanes in the event of an emergency. Between Folsom and Brannan Streets, multiple mixed-flow travel lanes in each direction and/or a center turn lane would be provided, which emergency vehicles could use to pass vehicle queues in the mixed-flow

¹²² San Francisco Fire Department, Fire Station Locations. Available online at <http://sf-fire.org/fire-station-locations>. Accessed March 1, 2016.

travel lanes. The design of all proposed project changes, including the new bicycle lanes, sidewalk widening, corner bulb-outs and raised crosswalks, would be reviewed by the SFFD as part of the TASC review, to make sure that they meet all applicable standards and to ensure that emergency vehicle access at specific locations is maintained. Therefore, no substantial new emergency vehicle delay or impediments to access would result, and the proposed project's impact on emergency vehicle access and responses times would be less than significant.

The proposed project would not generate demand for new fire protection or emergency medical services or require an increase in SFFD staff, and the construction-related fire protection services (if needed) would not necessitate new or altered SFFD facilities. In addition, the proposed transportation network and streetscape changes within the Sixth Street public right-of-way would not adversely affect response time for emergency vehicles. Therefore, the proposed project's impacts on fire protection and emergency medical services would be less than significant. Mitigation measures are not necessary.

Schools

The San Francisco Unified School District (SFUSD) operates San Francisco's public schools. The SFUSD managed 133 schools during the 2015-2016 academic year: 64 elementary schools (Grades K-5), 8 alternatively configured schools (Grades K-8), 13 middle schools (Grades 6-8), 19 high schools (Grades 9-12), 16 transitional kindergarten schools (preschool), and 13 active charter schools.¹²³ A list of all SFUSD schools and their addresses is available on the SFUSD web site.¹²⁴ The closest public schools to the proposed project are Bessie Carmichael Elementary School at 45 Cleveland Street and Bessie Carmichael Middle School at 824 Harrison Street.

According to the 2014 American Community Survey, there are approximately 81,119 children in San Francisco enrolled in schools, with approximately 32.4 percent of students attending private school and 67.6 percent attending public school.¹²⁵ Over the past five years, public elementary school student enrollment in the SFUSD has increased from approximately 21,663 to 23,047, while middle school and high school enrollment has decreased. Overall, public school student enrollment between the 2009-2010 and 2014-2015 academic years increased slightly from 55,240 to

¹²³ San Francisco Unified School District (SFUSD), SFUSD Profile. Available online at <http://www.sfusd.edu/en/about-sfusd/overview.html>. Accessed March 4, 2016.

¹²⁴ SFUSD, All Schools. Available online at <http://www.sfusd.edu/en/schools/all-schools.html>. Accessed March 4, 2016.

¹²⁵ U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates, San Francisco County, California, Children Characteristics. Available online at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_14_5YR_S0901&prodType=table. Accessed March 4, 2016.

approximately 56,544.¹²⁶ The SFUSD projects its overall enrollment will increase slightly through 2016, with the largest increases projected for the elementary and middle school level and a slight increase projected for the high school level.¹²⁷

The demand for additional school facilities is driven largely by increases in the city's residential population. As described in Initial Study Topic E.3, Population and Housing, the proposed project would not result in an increase in the city's residential population. An increase in construction workers is anticipated during the construction of the proposed project, but this increase would be temporary, would likely draw from a regional workforce, and would not result in the need for new school facilities. Therefore, the proposed project would not generate a substantial demand for new school facilities, and the proposed project would result in a less-than-significant impact on school services. Mitigation measures are not necessary.

Libraries

The San Francisco Public Library operates the Main Library at Civic Center, at 100 Larkin Street, and 28 neighborhood branches throughout San Francisco. The 28 community-based branch libraries, as well as the Main Library, provide reading rooms, book lending, information services, access to technology, and library-sponsored public programs.

As described in Initial Study Topic E.3, Population and Housing, the proposed project would not result in an increase in the city's residential population. An increase in construction workers is anticipated during the construction of the proposed project, but this increase would be temporary, would likely draw from a regional workforce, and would not result in the need for new library facilities. Therefore, the proposed project would not generate a substantial demand for library services, and the proposed project would result in a less-than-significant impact on library facilities. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-PS-1: The proposed project, in combination with other past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts on police protection services, fire protection and emergency medical services, schools, or libraries such that new or altered facilities are required. (*Less than Significant*)

¹²⁶ SFUSD, Research Planning and Accountability Data Center, School List and Summary – Student Enrollment. Available online at [http://web.sfusd.edu/Services/research_public/rpa_student_enrollment/SFUSD%20School%20Site%20List%20and%20Summary-%20Student%20Enrollment%20\[Most%20Current\].pdf](http://web.sfusd.edu/Services/research_public/rpa_student_enrollment/SFUSD%20School%20Site%20List%20and%20Summary-%20Student%20Enrollment%20[Most%20Current].pdf). Accessed March 4, 2016.

¹²⁷ SFUSD, SFUSD Recommended Budget for Fiscal Year 2015 – 2016, June 23, 2015, p. 22. Available online at <http://www.sfusd.edu/en/assets/sfusd-staff/about-SFUSD/files/budget/Budget%20Book%20Master%20Vol%20I.pdf>. Accessed March 4, 2016.

The geographic context for cumulative public service impacts is the proposed private and public development projects within a ¼-mile radius of Sixth Street identified in Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52. Most of these private projects would result in the redevelopment of underutilized sites, e.g., surface parking lots and vacant buildings, and others would replace existing structures with new residential, commercial, and retail uses. Future projects that may result in public service impacts typically relate to the addition of residential and employment-generating uses that contribute to the demand for police protection services, fire protection and emergency medical services, schools, and other services. These reasonably foreseeable projects would introduce a substantial number of new residents and employees to the area that could result in a substantial increase in demand for public services that could result in significant cumulative impacts on public services. Some future public projects, e.g., the Better Market Street Project and Muni’s TTRP.14 along Mission Street, would maximize the capacity of the surface public transit system and improve the safety and comfort of pedestrians and bicyclists. Other future public projects, e.g., the Gene Friend Recreation Center Improvement Project, would expand on or improve existing public uses. However, these future projects would not contribute to the demand for public services.

As discussed under Impact PS-1, implementation of the proposed project would not have a significant adverse impact related to public services because it would not introduce new land uses that would add residents or workers to the project area, and any usage of public services such as libraries by the proposed project’s construction workers would be temporary. Therefore, the proposed project in combination with past, present, and reasonably foreseeable projects would not contribute considerably to a significant cumulative impact on public services. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.13. BIOLOGICAL RESOURCES—					
Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Sixth Street public right-of-way is located within a densely developed urban environment and does not contain wetlands (as defined by Section 404 of the Clean Water Act) or wildlife habitat. There are no adopted habitat conservation plans, natural community conservation plans, or other approved local, state, or regional habitat conservation plans in the project area. Therefore, Initial Study Topics E.12c and E.12f are not applicable to the proposed project.

Impact BI-1: The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service and would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (No Impact)

The Sixth Street public right-of-way is located within a densely developed urban environment. The project area does not include any candidate, sensitive, or special-status species, any riparian habitat, or any other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Thus, implementation of the proposed project would not modify any natural habitat and would have no impact on any candidate, sensitive, or special-status species, or on any riparian habitat or other sensitive natural community. Mitigation measures are not necessary.

Impact BI-2: The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

There are approximately 400 resident and migratory species of birds in San Francisco, due to the diverse habitats of the Bay Area and its position on a coastal migration path known as the Pacific Flyway. Nesting birds, their nests, and eggs of most birds (excluding only starlings and English sparrows) are fully protected by the California Fish and Game Code (CFG Code) Sections 3503 and 3503.5 and the federal Migratory Bird Treaty Act (MBTA) (16 U.S. Code, Sec. 703 Supp. I, 1989).

The proposed project would involve the relocation of traffic signals and street lights between Market and Howard Streets and at Folsom and Harrison Streets as part of the construction of extended sidewalks and corner bulb-outs and the installation of new traffic signals at Stevenson and Natoma Streets. In a dense urban setting, traffic light signals and street lights are a common element of the environment and would not create hazards to birds or interfere with their migration. The proposed project could also include limited replacement/relocation of street trees within the existing public right-of-way between Market and Howard Streets and at Folsom and Harrison Streets as part of the proposed sidewalk widening and curb bulb-out construction. Although the proposed project would be designed to minimize tree removal and would likely not result in the relocation of any large or healthy street trees (even along the segment where sidewalk widening is proposed), any removals/relocations of existing street trees could affect migratory nesting birds. Thus, the proposed project would be subject to CFG Code Sections 3503 and 3503.5 and the MBTA.

Compliance with the requirements of the CFG Code and the MBTA would ensure that there would be no significant impact on migratory birds as a result of tree removal and construction disturbances. To ensure protection of nesting migratory birds, the SFMTA would be required to comply with CFG Code and MBTA requirements that vary depending on the time of year. Under these requirements, tree removal activities would be conducted during the non-breeding season (i.e., September through February), or a qualified ornithologist or wildlife biologist would conduct a survey of trees to be removed within three months of the proposed tree removal to determine whether any active nests are present and to identify measures to avoid impacts on nesting birds.

Since the proposed project would not involve the construction of new buildings and the proposed relocation of existing traffic signals and street lights as well as installation of new traffic signals along the Sixth Street corridor are typical elements that already exist and are common in public rights-of-way, the proposed project would have a less-than-significant impact on the movement of wildlife species and on migratory wildlife corridors. Impacts on nesting birds would be avoided through compliance with the requirements of the CFG Code and the MBTA. For these reasons, impacts would be less than significant and mitigation measures are not necessary.

Impact BI-3: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

The San Francisco Planning Department, DBI, and SFPW have established guidelines to ensure that the Urban Forestry Ordinance governing the protection of trees is implemented. San Francisco Public Works Code Section 8.02-8.11 requires disclosure and protection of landmark, significant, and street trees, collectively known as “protected trees,” located on private and public property anywhere within the territorial limits of the City and County of San Francisco. The San Francisco Board of Supervisors adopted legislation that amended the City’s Urban Forestry Ordinance to require a permit from SFPW to remove any protected trees.¹²⁸ Landmark tree, significant tree, and street tree designations are defined as follows:

- Landmark trees are designated by the Board of Supervisors upon the recommendation of the Urban Forestry Council, which determines whether a nominated tree meets the qualification for landmark designation by using established criteria (Section 810). Special permits are required to remove a landmark tree on private property or on City-owned property.
- Significant trees are those trees within the jurisdiction of SFPW, or trees on private property within 10 feet of the public right-of-way, that meet certain size criteria. To be considered significant, a tree must have a diameter at breast height of more than 12 inches, a height of more than 20 feet, or a canopy of more than 15 feet (Section 810(A)(a)). The removal of significant trees on privately owned property is subject to the requirements for the removal of street trees. As part of the determination to authorize removal of a significant tree, the Director of Public Works is required to consider certain factors related to the tree, including (among others) its size, age, species, and visual, cultural, and ecological characteristics (Section 810A(c)).
- Street trees are trees within the public right-of-way or on land within the jurisdiction of SFPW. Their removal by abutting property owners requires a permit.

The Sixth Street public right-of-way includes approximately 108 existing street trees, none of which are landmark trees (such as the palm trees within the Dolores Street median). The proposed project would retain, replace, or add street trees along the Sixth Street public-right-of-way in accordance with the requirements of the Urban Forestry Ordinance and the *Better Streets Plan*, and thus would not conflict with the City’s adopted plans concerning the preservation of trees. Furthermore, between Market and Howard Streets, the proposed project could result in the planting of new street trees in the extended portion of the sidewalk, as the current street spacing along certain segments of Sixth Street (e.g., east side of street between Market and Mission Streets) does not meet the *Better Streets Plan* guidance for planting at 20-foot intervals. As indicated above, the SFMTA would be required to obtain a permit from SFPW for the removal of significant trees and street trees within the public right-of-way. In addition, the San Francisco Public Works Code requires that another significant or street tree be planted in place of a removed tree or that an in-

¹²⁸ San Francisco Public Works Code, Article 16: Urban Forestry Ordinance, Section 808(a).

lieu planting fee be paid. The SFMTA would comply with these requirements. Therefore, the proposed project would have a less-than-significant impact related to the removal of significant trees or street trees under SFPW jurisdiction.

As a result, the proposed project would not conflict with any local policies or ordinances that protect biological resources, and this impact would be less than significant. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-BI-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to biological resources. (*Less than Significant*)

Cumulative development in the project vicinity (see Initial Study Section B, Project Setting, under “Cumulative Setting” on pp. 41-52) would result in the intensification of land uses within a dense urban environment that does not include any candidate, sensitive, or special-status species, any riparian habitat, or any other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Cumulative development would add tall buildings that can injure or kill birds in the event of a collision. In addition, nearby cumulative development projects could result in the removal of existing street trees or other vegetation. However, nearby cumulative development projects would be subject to the same species and habitat protection plans, policies, and regulations as well as bird-safe building and urban forestry ordinances applicable to the proposed project. As with the proposed project, compliance with these ordinances would reduce the effects of nearby cumulative development projects to less-than-significant levels. Therefore, none of the past, present, or reasonably foreseeable projects would contribute considerably to a significant cumulative impact. Implementation of the proposed project would not modify any natural habitat and would have no impact on any candidate, sensitive, or special-status species, any riparian habitat, or any other sensitive natural community. For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create a significant cumulative impact related to biological resources. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.14. GEOLOGY AND SOILS—					
Would the project:					
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Change substantially the topography or any unique geologic or physical features of the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Approach to Analysis

As discussed in the Approach to Analysis subsection of Initial Study Topic E.6, Noise, CEQA does not require lead agencies to consider how existing hazards or conditions might affect a project's users or residents, except where the project would significantly exacerbate an existing environmental hazard. Accordingly, hazards resulting from a project that places development in an existing or future seismic hazard area or an area with unstable soils are not considered impacts under CEQA unless the project would significantly exacerbate the seismic hazard or unstable soil conditions. Thus, the analysis below evaluates whether the proposed project would exacerbate future seismic hazards or unstable soils at the project site and result in a substantial risk of loss,

injury, or death. The impact is considered significant if the proposed project would exacerbate existing or future seismic hazards or unstable soils by increasing the severity of these hazards that would occur or be present without the project.

The proposed project would not generate wastewater, and therefore it would not include any septic tanks or alternative wastewater disposal systems. Further, the City has a combined sewer system and does not rely on the use of septic tanks or alternative wastewater disposal systems. Therefore, Initial Study Topic E.14e is not applicable to the proposed project.

Setting

The Sixth Street corridor is located almost ½ mile northwest of Mission Creek; it is relatively flat and slopes upward toward the northwest. The elevation ranges from a low of approximately -5 feet San Francisco City Datum (SFD, or 8 feet 1988 North American Vertical Datum [NAVD88]) at Sixth and Brannan Streets on the south to a high of approximately 30 feet SFD (43 feet NAVD88) at Sixth and Market Streets on the north.¹²⁹ The Sixth Street corridor is immediately underlain by artificial fill materials and Quaternary age Dune Sand, regionally described as clean, well-sorted fine to medium sand.^{130,131} Because much of the fill in the vicinity of the Sixth Street corridor was derived from the dune deposits that were leveled to facilitate development in the area during the mid to late 1800s, artificial fill in the vicinity of the Sixth Street corridor is expected to contain significant amounts of dune sand.

Project Impacts

Impact GE-1: The proposed project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving rupture of a known earthquake fault, seismic ground shaking, seismically induced ground failure, or landslides. (*Less than Significant*)

Fault Rupture

The Sixth Street corridor is not located within an Alquist-Priolo Earthquake Fault Zone, and no active or potentially active faults cross the Sixth Street corridor or the immediate vicinity.¹³² Therefore, impacts related to surface fault rupture would be less than significant.

¹²⁹ San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 11.35 feet above the 1988 North American Vertical Datum (NAVD88).

¹³⁰ United States Geological Survey (USGS), Geologic Map of the San Francisco North Quadrangle, San Francisco and Marin Counties, California, Professional Paper 782, 1974, Plate 1. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹³¹ The Quaternary is the most recent geologic period and spans the last 1.8 million years.

¹³² California Geological Survey, Alquist-Priolo Earthquake Fault Zones. Available online at <http://www.conservation.ca.gov/cgs/rghm/ap/Pages/affected.aspx>. Accessed March 1, 2016.

Ground Shaking, Liquefaction, Lateral Spreading, and Earthquake-Induced Settlement

The proposed project could be subject to both ground shaking and liquefaction-related damage in the event of an earthquake on one of the regional faults. These phenomena are described below, followed by procedures in place for the design and construction of the proposed changes that would ensure that impacts associated with these phenomena would be less than significant.

Ground Shaking. The intensity of the seismic shaking, or strong ground motion, within the Sixth Street corridor during an earthquake would depend on the distance between the Sixth Street corridor and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the Sixth Street corridor. Earthquakes occurring on faults closest to the Sixth Street corridor would most likely generate the largest ground motions.

The United States Geological Survey (USGS) estimates that it is nearly certain that a moment magnitude (Mw)¹³³ 6.7 or higher earthquake will occur on one of the regional faults in the 30-year period between 2014 and 2044.¹³⁴ The USGS considers the Hayward-Rodgers Creek and Calaveras Faults to be particularly ready to produce a strong earthquake. The likelihood of a Mw 6.7 or higher earthquake occurring on the Hayward-Rodgers Creek Fault before 2044 is 14.3 percent, and the likelihood of such an earthquake occurring on the Calaveras Fault is 7.4 percent. The northern segment of the San Andreas Fault is considered less likely to produce a strong earthquake, partly because of the relatively recent 1906 earthquake on that fault. The likelihood of a Mw 6.7 or higher earthquake occurring on this fault before 2044 is 6.2 percent.

Based on shaking hazard mapping prepared by the Association of Bay Area Governments (ABAG), the Sixth Street corridor would experience very strong ground shaking due to an earthquake along the peninsula segment of the San Andreas Fault or the northern and southern Hayward Fault, which are the faults closest to the corridor.¹³⁵ The intensity of earthquake-induced ground motions and the potential forces affecting structures along the Sixth Street corridor can also be described in terms of “peak ground acceleration,” which is represented as a fraction of the acceleration of gravity

¹³³ An earthquake is classified by the amount of energy released, expressed as the magnitude of the earthquake. Traditionally, magnitudes have been quantified using the Richter scale. However, seismologists now use a moment magnitude (Mw) scale because it provides a more accurate measurement of the size of major and great earthquakes. Moment magnitude is directly related to the average slip and fault rupture area.

¹³⁴ USGS and United States Department of the Interior, UCERF3: A New Earthquake Forecast for California’s Complex Fault System, Fact Sheet 2015–3009, March 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹³⁵ Association of Bay Area Governments Resilience Program, San Francisco County Earthquake Hazard. Available online at <http://resilience.abag.ca.gov/earthquakes/sanfrancisco/>. Accessed March 1, 2016.

(g).¹³⁶ The estimated peak ground acceleration in the project vicinity is approximately 0.5 to 0.6 g.¹³⁷

Liquefaction and Related Hazards. Liquefaction is a phenomenon in which saturated granular sediments such as sand and silt temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments and the magnitude of earthquakes likely to affect the site. Saturated, unconsolidated silts, sands, silty sands, and gravels within 50 feet of the ground surface are most susceptible to liquefaction. The primary liquefaction-related phenomena include vertical settlement¹³⁸ and lateral spreading.¹³⁹

The Sixth Street corridor is located in an area of liquefaction potential identified by the California Geological Survey under the Seismic Hazards Mapping Act of 1990¹⁴⁰ and on Map 4 of the 2012 Community Safety Element of the *San Francisco General Plan*. While the dune sand and artificial fill beneath the Sixth Street corridor could be subject to liquefaction because of their granular nature, the proposed project would include primarily at-grade transportation network and streetscape changes for the reconfiguration of Sixth Street and installation of new traffic signals and other streetscape changes. Although these at-grade transportation network and streetscape changes could be adversely affected by settlement and lateral displacement in the event of liquefaction, any damage would not create a hazard to life or health and would not be likely to cause damage to adjacent properties.

Conclusion. All proposed changes would be constructed within the public right-of-way and would therefore be subject to SFPW permitting requirements, including applicable health and safety requirements of San Francisco Public Works Code Article 2.4, Excavation in the Public Right-of-Way. In addition, the proposed changes would be designed to resist seismic and geologic hazards, in compliance with applicable codes and design standards that take into account the expected

¹³⁶ Acceleration of gravity (g) = 980 centimeters 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.

¹³⁷ California Geological Survey, San Francisco Probabilistic Seismic Hazards Map. Available online at http://www.conservation.ca.gov/cgs/rghm/psha/Map_index/Pages/san_francisco.aspx. Accessed March 8, 2016.

¹³⁸ During an earthquake, settlement can occur as a result of the relatively rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). Areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or bay mud.

¹³⁹ Of the liquefaction hazards, lateral spreading generally causes the most damage. This is a phenomenon in which large blocks of intact, non-liquefied soil move downslope on a liquefied substrate that extends across a large area.

¹⁴⁰ California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, November 17, 2000. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

seismic conditions. Further, the proposed design would be subject to review by SFPW as part of the permitting process. Construction of the proposed changes would not generally create new seismic hazards to people or structures. Therefore, impacts related to ground shaking as well as liquefaction and related effects would be less than significant.

Earthquake-Induced Landslides

The Sixth Street corridor is relatively flat and does not include any areas of mapped earthquake-induced landslide susceptibility identified by the California Geological Survey under the Seismic Hazards Mapping Act of 1990¹⁴¹ or on Map 4 of the 2012 Community Safety Element of the *San Francisco General Plan*. Therefore, impacts related to earthquake-induced landslides would be less than significant.

Conclusion

For the above reasons, the proposed project would have a less-than-significant impact on the exposure of people or structures to seismically induced adverse geological effects. Mitigation measures are not necessary.

Impact GE-2: The proposed project would not result in substantial erosion or loss of top soil. (*Less than Significant*)

The Sixth Street corridor is completely covered with impervious surfaces, including streets and sidewalks, the construction of which would have involved removal of any top soil (a fertile soil horizon that typically contains a seed base). Therefore, the proposed project would not result in any further loss of top soil and there would be no impact related to this topic.

Soil movement for repaving, sidewalk and bulb-out changes, and installation of new traffic signals and street trees could create the potential for wind- and water-borne soil erosion. However, construction of the proposed changes would involve the disturbance of more than 5,000 square feet of soil and would be subject to the erosion control measures of Article 4.2 of the San Francisco Public Works Code, Section 146, Construction Site Runoff. In accordance with Article 4.2, Section 146, the construction contractor would implement an erosion control plan that specifies erosion control measures to be implemented during construction. Once the proposed changes are constructed, the Sixth Street corridor would be completely paved or landscaped, and erosion would not occur. With implementation of the erosion control requirements during construction, which

¹⁴¹ California Department of Conservation, Division of Mines and Geology, State of California Seismic Hazard Zones, City and County of San Francisco, Official Map, Released November 17, 2000. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

are further described in Section E.15, Hydrology and Water Quality, the proposed project would have a less-than-significant impact related to erosion. Mitigation measures are not necessary.

Impact GE-3: The proposed project would not be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project. (*Less than Significant*)

The proposed project would not require construction dewatering, pile driving, or long-term dewatering, i.e., construction activities that could induce ground settlement or cause a geologic unit to otherwise become unstable. Furthermore, the proposed project would include excavation to a maximum depth of three feet for most features, and six feet for installation of traffic signals and street trees. Therefore, excavation activities under the proposed project would not induce ground settlement or cause a geologic unit to otherwise become unstable. Thus, the impacts related to location on a geologic unit or soil that could become unstable would be less than significant. Mitigation measures are not necessary.

Impact GE-4: The proposed project would not create substantial risks to life or property as a result of location on expansive soils. (*Less than Significant*)

Expansive soils are characterized by their ability to undergo significant volume change (shrink and swell) because of variations in soil moisture content. Changes in soil moisture can result from rainfall, landscape irrigation, utility leakage, roof drainage, and perched groundwater. Expansive soils are typically very fine grained with a high to very high percentage of clay. Expansive soils may cause differential and cyclical movements of foundations and other buried structures that can cause damage or distress to structures and equipment.

Soil materials underlying the Sixth Street corridor consist primarily of artificial fill of varying composition and dune sand. The dune sand is primarily fine-grained sand, and the artificial fill is likely composed largely of dune sand. Neither would be expansive. The presence of expansive soils is not an issue within the Sixth Street corridor, because the artificial fill and dune sand beneath the corridor are sandy and would not be expansive. Therefore, impacts related to expansive soils would be less than significant. Mitigation measures are not necessary.

Impact GE-5: The proposed project would not substantially change the topography or any unique geologic or physical features of the site. (*No Impact*)

The Sixth Street corridor is generally flat, and there are no unique topographic, geologic, or physical features within the corridor. The proposed project would involve excavation to a maximum depth of three feet for most features, and six feet for installation of traffic signals and street trees. Once the street features such as wider sidewalks and curb bulb-outs are installed, the excavations would be backfilled. The final street configuration would be much the same as existing conditions. Therefore, the proposed project would not permanently alter the topography of the Sixth Street corridor or change any unique geologic or physical features. The proposed project would have no impact related to these topics. Mitigation measures are not necessary.

Impact GE-6: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (*Less than Significant*)

The proposed project would include excavation to a maximum depth of three feet for most features, and six feet for installation of traffic signals and street trees. The Sixth Street corridor is located in an area that has been fully developed and has no unique geologic features. Surficial geologic materials in the project area include artificial fill that has been emplaced by human activities (and would not contain fossils or other paleontological resources) and Quaternary age dune sand. While the University of California Museum of Paleontology (UCMP) Specimen Collection contains five Quaternary age invertebrate fossil records from the Mission Creek area,¹⁴² project construction would primarily encounter materials that have already been disturbed as part of previous development activities. Therefore, there would be a low potential to encounter paleontological resources during construction, and this impact would be less than significant. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-GE-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to geologic hazards. (*Less than Significant*)

Although the entire Bay Area is located within a seismically active region with a high risk of seismic hazards and a wide variety of geologic conditions, the geographic scope of potential cumulative geology and soils impacts is restricted to the Sixth Street corridor and immediate vicinity because related risks are relatively localized or even site-specific.

As discussed above under Impacts GE-1 and GE-2, compliance with applicable regulatory requirements would ensure that the proposed project would not result in significant impacts related to seismicity or erosion. All cumulative development in San Francisco, including those projects listed in Table 6, shown on Figure 12, and described on pp. 41-52 in Initial Study Section B, Project Setting, under “Cumulative Setting”, would be subject to the same or equivalent regulatory framework, which would ensure that cumulative impacts related to seismicity and erosion would be less than significant.

Because the soils in the project area are not unstable or expansive as discussed under Impacts GE-3 and GE-4, the project would not contribute to any cumulative impacts related to construction on unstable or expansive soils. In addition, the proposed project would not contribute to any cumulative impacts related to the creation of unstable geologic units or soils. While other projects in the vicinity of the proposed project, listed in Table 6 and shown on Figure 12, could potentially encounter paleontological resources, the proposed project would not contribute to this potential

¹⁴² University of California Museum of Paleontology (UCMP), UCMP Specimen Search. Available online at <http://ucmpdb.berkeley.edu/>. Accessed March 1, 2016. A copy of the query results is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

cumulative impact because of the low potential to encounter paleontological resources, as discussed under Impact GE-6.

For the above reasons, the proposed project, in combination with other past, present, and reasonably foreseeable projects, would not result in a significant cumulative geology and soils impact. Mitigation measures are not necessary.

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
E.15. HYDROLOGY AND WATER QUALITY—					
Would the project:					
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Approach to Analysis

As discussed in the Approach to Analysis subsection of Initial Study Topic E.6, Noise, CEQA does not require lead agencies to consider how existing hazards or conditions might affect a project’s users or residents, except where the project would significantly exacerbate an existing environmental hazard. Accordingly, hazards resulting from a project that places development in an existing or future flood hazard area are not considered impacts under CEQA unless the project would significantly exacerbate the flood hazard. Thus, the analysis below evaluates whether the proposed project would exacerbate an existing or future flood hazard in the project area, resulting in a substantial risk of loss, injury, or death. The impact is considered significant if the proposed project would exacerbate flood hazards by increasing the frequency or severity of flooding or causing flooding to occur in an area that would not be subject to flooding without the project.

The Sixth Street corridor is not located within an existing 100-year flood hazard area, in a levee or dam inundation area,¹⁴³ or in a potential seiche, tsunami, or mudflow inundation zone.¹⁴⁴ The proposed project does not include the construction of housing within 100-year flood hazard area and would not result in the construction of any structure that would impede or redirect flood flows.¹⁴⁵ Thus, the proposed project would not expose people or structures to significant risk of loss, injury or death involving flooding or hazards. Therefore, Initial Study Topics E.15g, E.15h, E.15i, and E.15j are not applicable to the proposed project. Impacts related to future flooding as a result of climate change-induced sea level rise are discussed below under Impact HY-4.

¹⁴³ San Francisco Planning Department, San Francisco General Plan, Community Safety Element, October 2012, Map 6. A copy of this map is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁴⁴ California Emergency Management Agency, California Geological Survey, and University of Southern California, Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle, June 15, 2009. A copy of this map is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁴⁵ City and County of San Francisco, San Francisco Interim Floodplain Map, SE San Francisco, Preliminary, November 12, 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Project Impacts

Impact HY-1: The proposed project would not violate water quality standards, substantially degrade water quality, exceed the capacity of the storm drain system, or provide an additional source of polluted runoff. (*Less than Significant*)

This impact analysis addresses stormwater runoff during construction and post-construction that would have the potential to violate water quality standards or otherwise degrade water quality. Stormwater runoff following construction would have the potential to exceed the capacity of the storm drain system or provide an additional source of stormwater pollutants as also discussed below.

Groundwater dewatering would not be required for the proposed project because, based on the geotechnical investigation conducted for the Hall of Justice (adjacent to Sixth Street), the depth to groundwater in the project vicinity is approximately eight feet below ground surface¹⁴⁶ and the maximum depth of excavation under the proposed project would be approximately six feet. Therefore, there would be no discharges of dewatering effluent that could affect water quality and this topic is not discussed further in this impact analysis.

Construction-Related Stormwater Discharges

Soil movement for repaving, construction of wider sidewalks and curb bulb-outs, and installation of new traffic signals and street trees could create the potential for wind- and water-borne soil erosion, with excess sediments carried in stormwater runoff to the combined sewer system. Stormwater runoff from temporary on-site use and storage of vehicles, fuels, and wastes could also carry pollutants to the combined sewer system if these materials were improperly handled.

Stormwater runoff from the Sixth Street corridor is collected in the City's combined sewer system, and the federal Clean Water Act effectively prohibits discharges of stormwater from construction projects unless the discharge is in compliance with an NPDES permit. Accordingly, construction stormwater discharges to the City's combined sewer system would be subject to the requirements of Article 4.2 of the San Francisco Public Works Code, Section 146, which incorporates and implements the Bayside NPDES Permit for the Southeast Water Pollution Control Plant, North Point Wet-Weather Facility, and all of the Bayside wet-weather facilities.

Under Article 4.2, project construction activities would be subject to a Construction Site Runoff Control Permit. This permit is required for projects that include any land-disturbing activities such as building demolition, clearing, grading, grubbing, filling, stockpiling, excavating, and

¹⁴⁶ San Francisco Public Works, Geotechnical Investigation Report – Rehabilitation and Detention Facility, 820 Bryant Street, San Francisco, California, February 23, 2015, p. 5. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

transporting soil. The permit specifically requires easements for drainage facilities and provision of adequate dust controls in conformance with applicable air pollution laws and regulations. Proposed changes to any existing grading, ground surface, or site drainage must meet the requirements of Article 4.2 for new grading, drainage, and erosion control.

The application for the Construction Site Runoff Control Permit must include an Erosion and Sediment Control Plan that provides a vicinity map showing the location of the site in relationship to the surrounding area's water courses, water bodies, and other significant geographic features; a site survey; suitable contours for the existing and proposed topography; area drainage; proposed construction and sequencing; proposed drainage channels; proposed erosion and sediment controls; dewatering controls where applicable; soil stabilization measures where applicable; maintenance controls; sampling, monitoring, and reporting schedules; and any other information deemed necessary by the SFPUC.

As a condition of the Construction Site Runoff Control Permit, the project sponsor would be required to conduct daily inspections and maintenance of all erosion and sediment controls and must provide inspection and maintenance information to the SFPUC. The SFPUC would also conduct periodic inspections of the project site to ensure compliance with the plan. The project sponsor would be required to notify the SFPUC at least two days prior to the start of construction, completed installation of erosion and sediment control measures, completion of final grading, and project completion. At the SFPUC's discretion, sampling, metering, and monitoring of the runoff may also be required.

Implementation of the construction site runoff requirements of Article 4.2 of the San Francisco Public Works Code, Section 146, would ensure that water quality impacts related to violation of water quality standards or degradation of water quality due to discharge of construction-related stormwater runoff would be less than significant.

Post-Construction Stormwater Runoff

San Francisco's Stormwater Ordinance (Article 4.2 of the San Francisco Public Works Code, Section 147) and Stormwater Design Guidelines require development projects served by the City's combined sewer system to implement stormwater controls to minimize the flow and volume of stormwater into the combined sewer system. However, the proposed project would be exempt from these regulatory requirements because the proposed project would be implemented entirely within a public right-of-way.¹⁴⁷

¹⁴⁷ San Francisco Public Utilities Commission, Application of the Stormwater Design Guideline Requirements to the Public Right-Of-Way, Revised September 2013. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Regardless, post-construction stormwater runoff from the project site would not violate water quality standards, degrade water quality, or exceed the capacity of the combined sewer system. This is because the Sixth Street corridor is entirely covered by impervious surfaces (i.e., Sixth Street, sidewalks, curbs, and gutters) under existing conditions and would continue to be almost entirely covered with impervious surfaces once the proposed project is constructed. There would be no substantial change in the grade of the street. Therefore, there would be no increase in the volume or rate of stormwater runoff from the Sixth Street corridor. Rather, the proposed project includes the planting of street trees between Market and Howard Streets that would slightly increase the amount of stormwater infiltration relative to existing conditions, which would slightly decrease the volume of stormwater runoff to the sewer system.

The Sixth Street corridor is located in an area referred to as the South of Market flood zone, where sewer backups can result in flooding during wet weather as a result of increased stormwater flows to the combined sewer system.¹⁴⁸ However, because the proposed project would not increase the volume or rate of stormwater discharges to the combined sewer system, it would not exacerbate this flooding. In addition, Sixth Street would continue to be used as a public street as it is currently used, and there would be no new source of stormwater pollutants.

Conclusion

Based on the above analysis, impacts related to violating waste discharge requirements, degrading water quality, exceeding the capacity of the stormwater system, and providing an additional source of polluted runoff would be less than significant. Mitigation measures are not necessary.

Impact HY-2: The proposed project would not substantially deplete groundwater supplies or interfere with groundwater recharge. (No Impact)

The Sixth Street corridor is entirely covered by impervious surfaces (i.e., Sixth Street, sidewalks, curbs, and gutters) and the proposed project would not increase impervious surface coverage or otherwise reduce infiltration or groundwater recharge to the Islais Valley Groundwater Basin where the project is located. Project construction would require excavation to a maximum depth of six feet, and would not require groundwater dewatering during or following construction. Further, once constructed, the proposed project would not require the use of groundwater for any purposes. Therefore, the proposed project would not result in depletion of groundwater resources. There would be no impact related to interference with groundwater recharge and depletion of groundwater resources. Mitigation measures are not necessary.

¹⁴⁸ San Francisco Planning Department, Planning Director Bulletin No. 4, Review of Projects in Identified Areas Prone to Flooding, April 2007, reprinted October 2009. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

Impact HY-3: The proposed project would not alter the existing drainage pattern of the area in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. (*Less than Significant*)

The Sixth Street corridor does not include any existing streams or water courses that could be altered or diverted, and there are no surface impoundments, wetlands, natural catch basins, or settling ponds within the Sixth Street corridor. Therefore, the proposed project would have no impact related to alteration of drainage patterns by altering the course of a stream in a manner that would cause erosion or flooding on- or off-site.

The proposed project includes narrowing of Sixth Street between Market and Howard Streets from four lanes to two lanes, which could affect the ability of the street to convey flood flows in the event of a major storm. However, consistent with existing conditions and the SFPUC Asset Protection Standards,¹⁴⁹ the reconfigured street would be designed to convey the existing flood flow capacity at a minimum and the proposed design would be subject to review by the SFPUC. Therefore, the proposed project would not alter the existing drainage pattern of the area, and this impact would be less than significant. Mitigation measures are not necessary.

Impact HY-4: The proposed project would not redirect or impede future flood flows resulting from sea level rise. (*Less than Significant*)

Flooding conditions along San Francisco’s Bay shoreline, including areas around Mission Creek, will be exacerbated with sea level rise over the remainder of the 21st century. In its 2012 report titled *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, the National Research Council (NRC) provides the most recent regional sea level rise predictions for 2030, 2050, and 2100, relative to the year 2000 sea level.¹⁵⁰ In this report, the NRC projects that sea levels in the San Francisco Bay area will rise 11 inches by 2050 and 36 inches by 2100 as presented in Table 17: Sea Level Rise Estimates for San Francisco Bay Relative to the Year 2000. These sea level rise projections represent likely sea level rise values based on the current understanding of global climate change and assuming a moderate level of greenhouse gas (GHG) emissions as well as extrapolation of continued accelerating land ice melt patterns.

Table 17: Sea Level Rise Estimates for San Francisco Bay Relative to the Year 2000

Year	Projection	Upper Range
2030	6 inches	12 inches
2050	11 inches	24 inches
2100	36 inches	66 inches

Source: National Research Council, 2012

¹⁴⁹ San Francisco Public Utilities Commission, SFPUC Asset Protection Standards, December, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁵⁰ National Research Council, *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*. Washington, DC: The National Academies Press, 2012. Available online at http://www.nap.edu/catalog.php?record_id=13389. Accessed March 2, 2016.

The NRC report also includes ranges of sea level rise that could occur based on different estimates of GHG emissions and ice melt patterns. The extreme upper limit of the ranges represents unlikely but possible levels of sea level rise that are based on very high GHG emissions scenarios and significant ice melt that is not currently anticipated but could occur. Assuming the maximum level of greenhouse gas emissions and ice melt, the NRC anticipates that sea levels in the San Francisco Bay area could rise up to 24 inches by 2050 and 66 inches by 2100 as presented in Table 17.

These estimates represent the permanent increase in Mean Sea Level and the associated average daily high tide conditions (represented by Mean Higher High Water, or MHHW)¹⁵¹ that could result from sea level rise; they do not take into account storm surge, extreme tides, or waves, all of which can result in water levels that are temporarily higher than MHHW as discussed above.

Sea Level Rise Inundation Mapping

The SFPUC, as part of the planning for its Sewer System Improvement Program, developed a series of maps published in 2014 that represent areas of inundation along both the bay and ocean shorelines of San Francisco.¹⁵² These maps use a one-meter horizontal grid resolution¹⁵³ based on the 2010/2011 California Coastal Mapping Program LiDAR.¹⁵⁴ The inundation maps leverage data from the Federal Emergency Management Agency (FEMA) California Coastal Mapping and Analysis Project, which includes detailed coastal engineering analyses and mapping of the San Francisco Bay shoreline.

The SFPUC cautions that its maps represent a “do nothing” scenario, in which no site-specific measures are taken to prevent future flooding and no area-wide measures such as waterfront protection structures are constructed. In the event that the City undertakes area-wide measures to protect against inundation in the future, the mapping would need to be revised to reflect the modified inundation areas with construction of these measures. In addition, because the SFPUC sea level rise maps are based on 2010/2011 topographic mapping, they do not account for any increases in site elevations that could result from site development activities.

¹⁵¹ Mean Higher High Water is the higher of each day’s two high tides averaged over time.

¹⁵² SFPUC, Climate Stressors and Impact: Bayside Sea Level Rise Mapping. Final Technical Memorandum. June 2014. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁵³ The horizontal grid resolution of a digital elevation model (DEM) defines the scale of the features that are modeled; this is generally the minimum resolution necessary to depict levees, berms, and other topographic features important to diverting floodwaters.

¹⁵⁴ LiDAR (Light Detection and Ranging) is a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light. LiDAR is commonly used to create high-resolution terrain models, topography data sets, and topographic maps.

Impact Analysis

The SFPUC inundation maps indicate that the Sixth Street corridor would not be inundated with a permanent water level rise of 12 inches, which is expected by 2050, or a permanent water level rise of 36 inches, which is expected by 2100.¹⁵⁵ However, the Sixth Street corridor could be permanently inundated to depths of up to four feet with a water level rise of 66 inches, the maximum amount of sea level rise that is considered possible by the year 2100. When the effects of 100-year storm surge are considered, the Sixth Street corridor could be temporarily flooded under all three sea level rise scenarios.¹⁵⁶

The California Supreme Court has determined that CEQA does not *generally* require lead agencies to consider how existing hazards or conditions might affect a project's users or residents, except where the project would exacerbate an existing environmental hazard.¹⁵⁷ Accordingly, hazards resulting from a project that places development in an existing or future flood hazard area are not considered impacts under CEQA unless the project would exacerbate the flood hazard.

The proposed project would not exacerbate future flood conditions because the reconfigured Sixth Street corridor would be designed with the flood flow capacity of the existing street at a minimum in accordance with the SFPUC Asset Protection Standards, as described in Impact HY-3. While the Sixth Street corridor is completely paved under existing conditions, planting of street trees between Market and Howard Streets would slightly increase the infiltration of flood waters. This would alleviate some of the flooding, albeit a small effect. While the proposed project could be subject to future flooding, it would not exacerbate this flooding. Therefore, impacts related to future flooding as a result of sea level rise would be less than significant. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-HY-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on hydrology and water quality. (*Less than Significant*)

Impacts resulting from the proposed project are limited to potential water quality impacts on the Bayside drainage area of the City's combined sewer system and lower San Francisco Bay where

¹⁵⁵ SFPUC Climate Stressors and Impact: Bayside Sea Level Rise Mapping, Final Technical Memorandum, June 2014. Appendix A and supplemental maps provided for scenarios representing 52 and 77 inches of sea level rise. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁵⁶ Storm surge occurs when persistent high winds and changes in air pressure push water toward the shore, which can raise the water level near the shoreline by several feet and may persist for several days. A 100-year storm surge has a one percent chance of occurring in any year.

¹⁵⁷ *California Building Industry Association v. Bay Area Air Quality Management District* 62 Cal.4th 369. Opinion Filed December 17, 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

this system discharges. Therefore, the geographic scope of potential cumulative impacts on water quality encompasses these areas.

As discussed in Impact HY-1, the proposed project’s impacts related to degradation of water quality during construction would be less than significant with implementation of the requirements of Article 4.2 of the San Francisco Public Works Code, Section 146. Other cumulative projects listed in Table 6, shown on Figure 12, and described on pp. 41-52 in Initial Study Section B, Project Setting, under “Cumulative Setting” would be required to implement the same regulatory requirements, and cumulative water quality impacts related to construction-related erosion would be less than significant. The proposed project would not increase the rate or volume of stormwater runoff from the project site or introduce a new source of stormwater pollutants, as also discussed in Impact HY-1. While cumulative projects listed in Table 6 could result in these effects, the proposed project would not contribute to any related cumulative impacts, and the proposed project’s contribution would not be cumulatively considerable. Similarly, while the cumulative projects could alter the drainage pattern of the area, or exacerbate future flooding, the proposed project would not contribute to either of these conditions as discussed under Impacts HY-3 and HY-4, and the proposed project’s contribution would not be cumulatively considerable.

For the above reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create significant cumulative impacts related to hydrology and water quality. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.16. HAZARDS AND HAZARDOUS MATERIALS—					
Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Sixth Street corridor is located approximately 10 miles from San Francisco International Airport and 11 miles from Oakland International Airport. The Sixth Street corridor is not located within an airport land use plan area or in the vicinity of a private airstrip and would not interfere with air traffic in any way. Therefore, Initial Study Topics E.16e and E.16f are not applicable to the proposed project.

The proposed project would be constructed in a developed area of San Francisco that lacks an “urban-wildland fire interface,” and the proposed project would not include construction of any new structures or facilities that would increase the risk of fires. The Sixth Street corridor is not located in a fire hazard zone identified by the California Department of Forestry and Fire Protection.¹⁵⁸ Therefore, Initial Study Topic E.16h is not applicable to the proposed project.

Impact HZ-1: The proposed project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (No Impact)

Although project construction would involve the use of common hazardous materials such as fuels, paints, and solvents and would require off-site disposal of some excavated soil and pavement, these

¹⁵⁸ California Department of Forestry and Fire Protection, Draft Fire Hazard Severity Zones in LRA, October 5, 2007. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

activities would be restricted to the construction period and would not be considered routine transport, use, or disposal of hazardous materials. During operation, the proposed project would not require the use of hazardous materials or generate hazardous wastes. Therefore, there would be no impact related to the routine transport, use, or disposal of hazardous materials during construction or operation.

Impact HZ-2: The proposed project would be constructed adjacent to a site identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, but excavation activities would not expose workers and the public to adverse effects from a release of hazardous materials. (*Less than Significant*)

Naturally occurring asbestos can be associated with Franciscan ultramafic rocks containing serpentinite¹⁵⁹ or Franciscan mélange.¹⁶⁰ As discussed in Initial Study Section E.14, Geology and Soils, the Sixth Street corridor is primarily underlain by dune sands and artificial fill that was likely derived from the dune sands. These are deposits that would not contain naturally occurring asbestos, and no bedrock of the Franciscan Complex would be encountered during construction. Therefore, impacts related to exposure to naturally occurring asbestos would be less than significant.

Potential to Encounter Hazardous Materials in Soil

Demolition of the existing sidewalks, curbs, and concrete gutters within the Sixth Street corridor would require excavation to a depth of three feet; installation of traffic signals, related hardware, and street trees would require excavation to a depth of six feet. There is a high potential to encounter hazardous materials in the soil during excavation based on historic land uses and the presence of numerous permitted hazardous materials uses¹⁶¹ and environmental cases¹⁶² located adjacent to the corridor, as described below. Previously unidentified underground storage tanks (USTs) could also be encountered in the deeper excavations. Workers and the public could be exposed to hazardous materials during construction and the excavated soil could require special handling/disposal procedures.

¹⁵⁹ Serpentine is a naturally occurring group of minerals that can be formed when ultramafic rocks are metamorphosed during uplift to the earth's surface. Serpentinite is a rock consisting of one or more serpentine minerals. This rock type is commonly associated with ultramafic rock along earthquake faults. Small amounts of chrysotile asbestos, a fibrous form of serpentine minerals, are common in serpentinite.

¹⁶⁰ Mélange is a mixture of rock materials of differing sizes and types typically contained within a sheared matrix.

¹⁶¹ Permitted hazardous materials uses are those that use hazardous materials or handle hazardous wastes and operate under appropriate permits in accordance with current hazardous materials and hazardous waste regulations.

¹⁶² Environmental cases are sites where a release of hazardous materials has occurred that may have affected soil and/or groundwater quality.

Site conditions related to the potential presence of hazardous materials and previously unidentified USTs are described below, along with regulatory requirements that would be required and would ensure that workers and the public do not experience adverse effects related to hazardous materials exposure during construction. Once the proposed project is constructed, the Sixth Street corridor would be completely paved and landscaped with street trees and there would be no potential for exposure to hazardous materials in the soil, except for maintenance workers who may need to excavate below the pavement or within landscaped areas to make routine repairs.

Historic Land Uses. Aerial photographs of the Sixth Street corridor between 1931 and 2012 indicate that the corridor has been completely built out since before 1931.¹⁶³ I-80, which crosses over the Sixth Street corridor, was constructed between 1946 and 1956.

Sanborn maps for the Sixth Street corridor indicate that the corridor has been completely built out since 1887, the earliest Sanborn Map available.¹⁶⁴ Between Market and Folsom Streets, historic land uses have primarily consisted of hotels, other forms of lodging, and associated uses such as laundries. South of Folsom Street, there are several historic uses that were introduced after the 1906 earthquake and fire that could have involved the use of hazardous materials. These include a used automobile facility, automobile service stations, gas and oil facilities, pattern shops, sheet metal shops, plating facilities, machine shops, and a plastic products manufacturing facility. In 1887, there was one coal yard located near the intersection with Clara Street.

Because the Sixth Street corridor has been used as a street since at least 1887, soil that has been exposed within the corridor could also contain aerially deposited lead from historic tail pipe emissions before leaded gasoline was outlawed in the 1980s.

Permitted Hazardous Materials Uses and Environmental Cases. An environmental database review conducted by Environmental Data Resources identified a number of permitted hazardous materials uses, historic dry cleaners and automotive facilities, and environmental cases in close proximity to the Sixth Street corridor.¹⁶⁵ Individual facilities and sites identified by the database

¹⁶³ Environmental Data Resources, The EDR Aerial Photo Decade Package, Sixth Street Pedestrian Safety Project, Sixth Street/Market Street, San Francisco, CA 94103, Inquiry Number 4554866.5, March 4, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁶⁴ Environmental Data Resources, Certified Sanborn Map Report, Sixth Street Pedestrian Safety Project, Sixth Street/Market Street, San Francisco, CA 94103, Inquiry Number: 4554866.3, March 9, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁶⁵ Environmental Data Resources, The EDR Radius Map Report with GeoCheck, Sixth Street Pedestrian Safety Project, Sixth Street/ Market Street, San Francisco, CA 94103, Inquiry Number 4554866.2s, March 3, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

review are compiled by address.¹⁶⁶ Many facilities have more than one permitted hazardous materials use or are identified in more than one historic land use or environmental case database, and therefore the total number of physical sites identified in the vicinity of the Sixth Street corridor is less than the total identified in individual databases. The environmental database review identified a total of 97 permitted hazardous materials uses, historic dry cleaners and automotive facilities, and environmental cases adjacent to and in close proximity to the Sixth Street corridor.

Permitted Hazardous Materials Uses. There are a 26 permitted hazardous materials uses located along and adjacent to the Sixth Street corridor. The environmental databases reviewed that include permitted hazardous materials uses are described in Table 18: Summary of Permitted Hazardous Materials Uses along with the number of sites identified in each database.

Nine of these facilities handle hazardous materials in accordance with the federal Resource Conservation and Recovery Act (RCRA). Because the use and handling of hazardous materials at these permitted sites are subject to strict regulation, the potential for a release of hazardous materials from these sites is considered low. However, if there had been a release of hazardous materials, it would have been handled in accordance with applicable regulatory requirements, and the site would have been identified as an environmental case below.

A total of 23 of the identified sites have generated hazardous wastes that were transported under manifest for off-site disposal (HAZNET database). Sometimes hazardous wastes were produced as a result of normal business activities. In other cases, the hazardous wastes include soil excavated for the development of new projects or demolition of existing structures that included hazardous building materials such as asbestos-containing materials.

Five of the listed facilities reported emissions of toxic and criteria air pollutants to the BAAQMD as of December 31, 2013 as part of an Emissions Inventory Data (EMI) database. Many of the emissions result from diesel generators used at the facilities.¹⁶⁷

Both the Facility Index System/Facility Registry System (FINDS) and Enforcement & Compliance History Information (ECHO) databases are a compilation of sites listed in other compliance databases. All of the 10 sites identified in these databases are also identified as either a RCRA generator or a facility that has reported air pollutant emissions via the EMI database.

Fuel-Related Sites and Historic Land Uses. There are 84 fuel-related sites and identified historic hazardous material use sites adjacent to or in close proximity to the Sixth Street corridor. The environmental databases reviewed that include fuel-related sites and identified historic hazardous material use sites are described in Table 19: Fuel-Related and Identified Historic Hazardous

¹⁶⁶ Permitted Hazards Materials Uses in Vicinity of the Sixth Street Corridor. A copy of this table is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁶⁷ Additional information regarding these sites can be found at <http://www.arb.ca.gov/ei/disclaim.htm>.

Material Use Sites, along with the number of sites identified in each database. For this analysis, fuel-related sites include those identified as a historic automobile service station, historic or current UST site, or leaking UST site where a release of petroleum products has occurred. Other historic uses identified by the database review include historic dry cleaning facilities and historic manufactured gas plant sites.

Table 18: Summary of Permitted Hazardous Materials Uses

Environmental Database	Number of Sites Identified
RCRA Treatment, Storage, and Disposal Facility (RCRA TSDF) – facilities that treat, store, and/or dispose of hazardous wastes as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator to a facility that can recycle, treat, store, or dispose of hazardous wastes. Maintained by the United States Environmental Protection Agency (US EPA) (last updated June 9, 2015).	1
RCRA Large Quantity Generator (RCRA LQG) – facilities that generate over 1,000 kilograms of RCRA hazardous waste or 1 kilogram of acutely hazardous waste per month. Maintained by the US EPA (last updated June 9, 2015).	1
RCRA Small Quantity Generator (RCRA SQG) – facilities that generate between 100 kilograms and 1,000 kilograms per month of RCRA hazardous waste. Maintained by the US EPA (last updated June 9, 2015).	6
RCRA Non Generators/No Longer Regulated (RCRA NONGEN/NLR) – facilities that are permitted to generate hazardous wastes under RCRA but do not at present generate hazardous waste. Maintained by the US EPA (last updated June 9, 2015).	2
Facility and Manifest Data (HAZNET) – sites that have submitted hazardous waste manifests to the California Department of Toxic Substances Control (DTSC) for the off-site disposal, recycling, or treatment of hazardous wastes. Maintained by the California Environmental Protection Agency (California EPA) (last updated December 31, 2014).	23
Facility Index System/Facility Registry System (FINDS) – includes both facility information and pointers to other sources that contain more detailed information. Eight databases are included in FINDS for this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System). All of these facilities are also identified as a hazardous waste generator under RCRA or as a source of toxic or criteria pollutant emissions in the Emissions Inventory Data (EMI) database (last updated July 20, 2015).	10
Enforcement & Compliance History Information (ECHO) – integrated compliance and enforcement information about regulated facilities (last updated September 20, 2015).	10
Emissions Inventory Data (EMI) – facilities that emit toxic and criteria pollutants as compiled by the California Air Resources Board (ARB) and local air pollution agencies (the Bay Area Air Quality Management District [BAAQMD] in the San Francisco Bay Area). Maintained by the ARB (last updated December 31, 2013).	5

Sources: Environmental Data Resources, *The EDR Radius Map Report with GeoCheck, Sixth Street Pedestrian Safety Project, Sixth Street/ Market Street, San Francisco, CA 94103, Inquiry Number 4554866.2s*, March 3, 2016; Orion Environmental Associates.

Table 19: Fuel-Related and Identified Historic Hazardous Material Use Sites

Environmental Database and Last Date Updated	Number of Sites Identified
EDR Exclusive Historic Gas Stations (HIST AUTO) – a proprietary listing of historic auto service stations compiled from national collections of historic business directories by Environmental Data Resources (undated).	28
Hazardous Substance Storage Container Database (HIST UST) – a historic listing of underground storage tanks (USTs) maintained by the State Water Resources Control Board (last updated October 15, 1990).	4
Facility Inventory Database (CA FID UST) – a historical listing of active and inactive UST sites maintained by the State Water Resources Control Board (last updated October 31, 1994).	6
Statewide Environmental Evaluation and Planning System (SWEEPS UST) – a listing of historic UST sites previously maintained by a company contracted by the State Water Resources Control Board (last updated June 1, 1994).	6
Active Underground Storage Tank Facilities (UST) – UST facilities that have a permit from a local agency, maintained by the State Water Resources Control Board (last updated December 14, 2015). Five of the UST facilities are also listed in the Leaking Underground Storage Tank (LUST) database.	9
Fuel Leak List (LUST) – sites that have experienced a release from a UST, maintained by the Regional Water Quality Control Board (RWQCB) (last updated September 30, 2004). Also includes sites identified in the listing of San Francisco Local Oversight Facilities (last updated September 19, 2008).	11
Recovered Government Archive Leaking Underground Storage Tank (RGA LUST) – a list of leaking underground storage tank incidents derived from historical databases that includes many records that no longer appear in current government lists. The list is compiled from records formerly available from the State Water Resources Control Board (undated). All but one of the sites identified in this database are also identified in the LUST or RGA LUST databases	8
Hazardous Waste and Substances Site List (HIST CORTESE) – sites included on the Leaking Underground Storage Tank site list maintained by the RWQCB, solid waste landfill list maintained by the Integrated Waste Board, and the CalSites database maintained by the Department of Toxic Substances Control (DTSC) (last updated April 1, 2001). This list is no longer updated, and all but two of the sites identified in this database are also identified in the LUST database.	8
Proposition 65 Records (NOTIFY 65) – Proposition 65 incidents that have been reported to the State Water Resources Control Board or RWQCB (last updated September 10, 2015). This site was reported because of a release of fuels and is also identified in the LUST database.	1
EDR Exclusive Historic Dry Cleaners (HIST CLEANERS) - a proprietary listing of historic dry cleaning facilities compiled from national collections of business directories by Environmental Data Resources (undated).	41
EDR Proprietary Manufactured Gas Plants (EDR MGP) – a proprietary listing of manufactured gas plant sites compiled by Environmental Data Resources based on historic sources (undated).	1

Sources: Environmental Data Resources, *The EDR Radius Map Report with GeoCheck, Sixth Street Pedestrian Safety Project, Sixth Street/ Market Street, San Francisco, CA 94103, Inquiry Number 4554866.2s*, March 3, 2016; Orion Environmental Associates.

Although a release has occurred at the 11 UST sites identified in the vicinity of the Sixth Street corridor, these sites are discussed in this section (separately from other environmental cases that have involved a release of hazardous materials, which are described below) because petroleum

products are more commonly found in soil and/or groundwater, pose less of a health risk than many other hazardous materials, and are generally more easily remediated.

At fuel-related sites, there would be the potential to encounter petroleum products in the soil during construction. At former dry cleaning facilities, there would be the potential to encounter volatile organic compounds, particularly perchloroethylene. As a result, special handling of soil could be required during construction to ensure that there are no unacceptable health risks to construction workers or the public.

The identified historic hazardous materials use site with the greatest potential for the presence of residual hazardous materials is the manufactured gas plant site referred to as Pacific Gas & Electric (PG&E) Station T, located at 465 Stevenson Street. Residues from former manufactured gas plant sites have commonly been left in place with fill materials placed over the residues. The residues typically contain polynuclear aromatic hydrocarbons (PAHs), petroleum hydrocarbons, benzene, cyanide, metals, and phenols that could have remained at the site and affected soil quality.¹⁶⁸ This site is also identified as an environmental case and is discussed below.

Environmental Cases. There are seven environmental cases in the vicinity of the Sixth Street corridor where a release of hazardous materials has occurred. The environmental databases reviewed that include environmental cases are described in Table 20: Environmental Cases on p. 193, along with the number of sites identified in each database. The California Hazardous Material Incident Report System (CHMIRS) database includes sites with spills of oil, hazardous materials, or other substances reported to the California Office of Emergency Services or the U.S. Coast Guard. Any spills with effects that would require further investigation or cleanup would be tracked in one of the other databases that track environmental cases. Therefore, the spill site identified in this database is not discussed separately below.

Variable information is available in the database review report regarding existing site conditions for the other environmental cases. Those with site-specific information are as follows:

- The property at 241 Sixth Street is identified in the ENVIROSTOR, VCP, and DEED databases. The site was previously used for a number of residential uses,¹⁶⁹ including as a tourist hotel/motel with a theater and laundromat on the first floor. A preliminary endangerment assessment report completed in 1993 found elevated levels of PAHs as well as arsenic, lead, and other metals in the soil. Low levels of contaminants were also detected in the groundwater. The previous structures were demolished in 1990 and the site was cleaned up under the Voluntary Clean Up program implemented by the DTSC. In 1994, a

¹⁶⁸ U.S. Environmental Protection Agency, A Resource for MGP Site Characterization and Remediation, Expedited Site Characterization and Source Remediation at Former Manufactured Gas Plant Sites, May 1999. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁶⁹ Harding Lawson Associates, Site Assessment, 241 Sixth Street, San Francisco, California, June 28, 1993. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

four-foot-thick reinforced concrete cap with a vapor barrier was installed as part of the site remediation to prevent contact with the soil. The DTSC issued a deed restriction at that time, and entered into an operations and maintenance agreement with the property owner requiring maintenance of the cap. A new residential building was constructed on this site in 1995; residential units at this site start on the second floor, and the ground floor is used for office and support space. Annual inspections are conducted to confirm that the cap remains intact and protective of public health, and the DTSC found that as recently as January 2016, the property was in compliance with the deed restriction issued for the property.¹⁷⁰

- The former C&M Plating Works at 598 Sixth Street was a permitted treatment, storage, and disposal facility under RCRA and is identified in the CERCLIS NFRAP, CORRACTS, ENVIROSTOR, and HWP databases. The facility has been closed. In 2001, the DTSC issued a RCRA Facility Assessment (RFA) for the property that concluded that no further action was needed for the four solid waste management units at the facility.¹⁷¹ Lead was identified at elevated concentrations in the soil during the closure but is considered to be associated with the fill materials rather than past site activities. As summarized in the RFA, groundwater samples showed no contamination, and releases to the air were not likely. The former buildings at the facility had been demolished by 2001, and the site was capped with a slab foundation.
- PG&E Station T, a former manufactured gas plant at 465 Stevenson Street, is identified in the ENVIROSTOR and RESPONSE databases. A preliminary endangerment assessment report¹⁷² was prepared and PAHs, lead, and arsenic were reported in the soil. The site was recommended for a medium priority preliminary assessment. However, the database review report indicates that no further action is recommended.
- The Habitat for Humanity building located at 1009 Mission Street is identified in the ENVIROSTOR database. The database review report includes no other information, and the San Francisco Bay RWQCB Geotracker database indicates that, in 2001, this site was under the jurisdiction of the City and County of San Francisco.
- The Minna Street Apartments at 518 Minna Street are identified in the ENVIROSTOR, RESPONSE, and DEED databases. The database review report indicates that PAHs and lead have been identified in the soil. A cap has been emplaced at the site, and a deed restriction was placed on the site in 1994 and modified in 2007. As of 2013, the site was found to be in compliance with the deed restriction and the cap was noted to be in good condition.

¹⁷⁰ California Department of Toxic Substances Control, e-mail from Claude Jemison, Project Manager, Brownfields and Environmental Restoration Program – Berkeley Office, to Janet Thompson, Department of Toxic Substances Control, January 11, 2016. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁷¹ California EPA, Department of Toxic Substances Control, RCRA Facility Assessment Document for Former C&M Plating Works, March 29, 2001. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

¹⁷² A preliminary endangerment assessment report is a report prepared to document sampling and analysis conducted at a site and evaluate human and ecological risks in accordance with guidance from the DTSC.

Table 20: Environmental Cases

Environmental Database and Last Date Updated	Number of Sites Identified
Comprehensive Environmental Response, Compensation and Liability Information System No Further Action Planned (CERCLIS NFRAP) – sites that have been removed from the Comprehensive Environmental Response, Compensation, and Liability Information System because the United States Environmental Protection Agency (US EPA) has determined that no further action will be taken to list this site on the National Priorities List. Maintained by the US EPA (last updated October 25, 2013).	1
Corrective Action Report (CORRACTS) – hazardous waste handlers permitted under the Resource Conservation and Recovery Act (RCRA) undergoing corrective action. Maintained by the US EPA (last updated June 9, 2015).	1
EnviroStor Database (ENVIROSTOR) – sites that have known contamination or sites for which there may be reason to investigate. This database includes properties with deed restrictions, as well as formerly contaminated sites that have been released for reuse. Maintained by the Department of Toxic Substances Control (DTSC) (last updated November 7, 2015).	6
State Response Sites (RESPONSE) – a list that is considered the equivalent of the federal National Priorities List. It includes sites where the DTSC is involved in remediation, either as the lead agency or in an oversight capacity. These are generally considered high priority sites. Maintained by the DTSC (last updated November 7, 2015).	2
EnviroStor Permitted Facilities Listing (HWP) – detailed information on permitted hazardous waste facilities and corrective actions tracked in EnviroStor. Maintained by the DTSC (last updated November 23, 2015).	1
Voluntary Cleanup Program Properties (VCP) – low-risk properties with either confirmed or unconfirmed releases, and where the project proponent has requested that the DTSC provide oversight of the investigation and/or cleanup activities. Maintained by the DTSC (last updated November 7, 2015).	2
Deed Restriction Listing (DEED) – sites cleaned up under DTSC oversight that have a deed restriction to prevent unacceptable exposure to hazardous materials left in place after remediation has been completed. Maintained by the DTSC (last updated December 7, 2015).	3
California Hazardous Material Incident Report System (CHMIRS) – accidental releases or spills of hazardous materials reported to the California Office of Emergency Services. Maintained by the California Office of Emergency Services (last updated September 25, 2015).	1

Sources: Environmental Data Resources, *The EDR Radius Map Report with GeoCheck, Sixth Street Pedestrian Safety Project, Sixth Street/ Market Street, San Francisco, CA 94103, Inquiry Number 4554866.2s*, March 3, 2016; Orion Environmental Associates.

The McDonald’s property at 820 Bryant Street is identified in the ENVIROSTOR, VCP, and DEED databases. This site formally included the Construction Device Company hardware store as well as a parking lot used by the SFPD. An environmental investigation conducted in 1994 encountered primarily artificial fill with lead concentrations up to 3,500 milligrams per kilogram (mg/kg). The average lead concentration was 600 mg/kg. The maximum lead concentration is greater than the total threshold limit concentration (TTLC) of 1,000 mg/kg for the classification of hazardous wastes, but the average lead concentration is below this value. Soluble lead concentrations in the excavated soil exceeded the soluble threshold limit concentration (STLC) of 5.0 milligrams per

liter (mg/L) for lead but not the toxicity characteristic leaching procedure (TCLP).¹⁷³ A substantial amount of soil has been excavated from the site, and the site has subsequently been paved with five-inch-thick reinforced concrete, which restricts contact with soil containing lead that remains on the site. Landscaped areas were lined with plastic and backfilled with clean soil, and excess irrigation water is directed to the sanitary sewer system rather than being infiltrated. There is a deed restriction on the property.

Hazardous Materials Regulatory Framework

DPH provides oversight for the assessment and remediation of contaminated sites in the City and County of San Francisco under the Site Assessment and Mitigation Program. Three types of sites are included under this program: (1) sites subject to the Maher Program, (2) sites with known contamination that are being addressed on a voluntary basis under the Voluntary Cleanup Program, and (3) sites affected by a release from a UST being addressed under the Local Oversight Program. DPH also administers UST closure requirements. The proposed project would not be subject to the Voluntary Cleanup Program. Therefore, this program is not further discussed.

Maher Program. Article 22A of the San Francisco Health Code (also known as the Maher Ordinance), as amended in August 2013, requires the project sponsor of a project that involves excavation of 50 cubic yards of soil or more to retain the services of a qualified professional to prepare a Phase I Environmental Site Assessment (ESA) that meets the requirements of Health Code Section 22.A.6. The Phase I ESA would determine the potential for hazardous materials to be present in the soil and level of exposure risk associated with the project. Based on that information, the project sponsor may be required to conduct soil sampling and analysis. Where such analysis reveals the presence of hazardous substances in excess of state or federal standards, the project sponsor is required to submit a site mitigation plan (SMP) to DPH or other appropriate state or federal agency(ies), and to remediate any site contamination in accordance with an approved SMP prior to the issuance of any building permit. For departments, boards, commissions and agencies of the City and County of San Francisco that authorize construction or transportation network and streetscape changes on land under their jurisdiction where no building or grading permit is required, the ordinance requires protocols be developed between that entity and DPH that will achieve the environmental and public health and safety goals of Article 22A.

¹⁷³ Levine Fricke, Implementation Report for Environmental Services Conducted at McDonald's Corporation, 820 Bryant Street, San Francisco, California, December 15, 1995. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

The Sixth Street corridor is located within the Maher Area¹⁷⁴ and would include the excavation of more than 50 cubic yards of soil. Therefore, the requirements of the Maher Program apply to the proposed project.

Construction Dust Control Requirements. San Francisco Health Code Article 22B, Construction Dust Control, requires a dust control plan for projects that are greater than half an acre in size and have sensitive receptors within 1,000 feet. The plan must be submitted to DPH for approval prior to starting construction, and must specify elements such as watering plans, particulate matter monitoring, establishment of a complaint hotline, enforcement of speed limits on the construction site, and other measures. Under Article 22B, projects of all sizes and in all locations must prevent visible dust from leaving the interior of the site.

The Sixth Street corridor is greater than half an acre in size, and sensitive receptors are located within a 1,000 feet of the Sixth Street public right-of-way. Therefore, the requirements of Article 22B apply to the proposed project.

UST Closure. Article 21 of the San Francisco Health Code addresses closure of USTs. To close a UST, a closure plan must be prepared that identifies how the need for future maintenance of the facility will be eliminated, how the threat to the environmental and public health and safety will be eliminated, and how all hazardous materials in the facility will be removed and appropriately disposed. The plan must be submitted to the City for approval prior to closure. This article also requires that soil from the UST excavation, and possibly the groundwater, be sampled. Upon completion of closure, a final report documenting UST removal activities and any residual contamination left in place must be submitted to the City. Upon approval of this report, the City would issue a Certificate of Completion. If a release were indicated, the site owner would be required to assess the extent of any contamination and conduct a site remediation, as needed, in compliance with DPH Local Oversight Program requirements. DPH could approve abandonment of the UST in place if removal were infeasible.

Based on numerous historic automobile service sites and historic USTs identified in the vicinity of the Sixth Street corridor, the deeper excavations could potentially encounter previously undetected USTs, and the requirements of this program would apply to closure of any USTs encountered.

Impacts Related to Exposure to Hazardous Materials in Soil

Based on the number of historic and current land uses in the vicinity of the Sixth Street corridor that involved hazardous materials use, the presence of artificial fill throughout most of the area, the potential presence of aerially-deposited lead, and the number of fuel-related and environmental

¹⁷⁴ San Francisco Planning Department, Expanded Maher Area, March 2015. A copy of this document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2014.1010E.

cases within the area, there is a high potential to encounter hazardous materials in the soil during project-related construction activities. Without proper precautions, workers or the community could be exposed to hazardous materials during excavation and grading. However, implementation of the Maher Program and dust control requirements along with UST closure requirements would ensure that impacts associated with construction would be less than significant, as discussed below.

Closure of Previously Unidentified USTs. As discussed above, there are numerous sites in the vicinity of the Sixth Street corridor that have historically included USTs. Therefore, there is a high potential to encounter USTs within deeper excavations within the Sixth Street corridor. Without proper precautions, workers and the public could be exposed to petroleum products potentially remaining in the USTs or in the surrounding soil. However, if a previously unidentified UST were encountered in the excavation area, the project sponsor would be required to close the UST in accordance with Article 21 of the San Francisco Health Code. This article would require a closure plan identifying appropriate requirements for disposition of any remaining hazardous materials in the tank and the tank itself. The closure plan would be submitted to the City for approval prior to removal of the UST.

Soil from the UST excavation, and possibly the groundwater, would also be sampled in accordance with Article 21. Upon completion of closure, a release or contamination report would be submitted to DPH if a release were indicated on the basis of visual observations or sampling, and a final report documenting tank removal activities and any residual contamination left in place would be submitted to DPH. Upon approval of this report, DPH would issue a Certificate of Completion. If a release were indicated, the project sponsor or tank owner would be required to submit a corrective action plan, including a health and safety plan, to the DPH and the RWQCB, and remediation would be required in accordance with federal, state, and local regulations. Alternatively, the tank could be abandoned in place if removal were infeasible. Implementation of the measures required in accordance with Article 21 of the San Francisco Health Code would ensure that hazardous materials impacts associated with encountering previously unidentified USTs would be less than significant. Mitigation measures are not necessary.

Construction within Soil Containing Hazardous Materials. The proposed project would be subject to Article 22A of the San Francisco Health Code, also known as the Maher Ordinance, which is administered and overseen by DPH. Accordingly, the project sponsor would be required to retain the services of a qualified professional to prepare a Phase I ESA; conduct soil sampling and analysis, if warranted by the Phase I ESA; and implement an SMP to remediate any site contamination in accordance with agreed-upon protocols. The SMP would address measures required to restrict contact with hazardous materials in soil by maintenance workers once the project is constructed. In addition, the proposed project would be subject to Article 22B of the San Francisco Health Code, which would require implementation of a dust control plan and measures to ensure that dust does not cross the project boundary. Thus, the proposed project would not result in a significant hazard to the public or environment from contaminated soil, and the proposed

project would result in a less-than-significant impact related to construction within soil containing hazardous materials. Mitigation measures are not necessary.

Soil Disposal. Where remediation or tank removal requires off-site transport of contaminated soil or groundwater, these materials could be classified as a restricted or hazardous waste under state or federal regulations depending on the specific characteristics of the materials. However, the generator of the hazardous wastes would be required to follow state and federal regulations for manifesting the wastes, using licensed waste haulers, and disposing the materials at a permitted disposal or recycling facility. With implementation of these regulatory requirements, impacts related to disposal of hazardous wastes would be less than significant. Mitigation measures are not necessary.

Impact HZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant*)

Hazardous materials emissions near schools are a particular concern because children, due to their size and stage of development, are more susceptible to many potential health risks from hazardous materials. The northern terminus of the Sixth Street corridor is within approximately 0.2 mile of the De Marillac Academy, a fourth- through eighth-grade private school located at 175 Golden Gate Avenue. Bessie Carmichael Elementary School at 45 Cleveland Street is located approximately 0.1 mile from the Sixth Street corridor. However, construction of the proposed project would use only common hazardous materials – paints, solvents, cements, adhesives, and petroleum products (such as asphalt, oil, and fuel) on a temporary basis – and none of these materials is considered extremely hazardous. Further, operation of the proposed project would not involve the use of any hazardous or extremely hazardous materials. Therefore, hazardous materials impacts related to the use of hazardous materials and hazardous emissions within a ¼-mile radius of a school would be less than significant. Mitigation measures are not necessary.

In addition, construction and operation of the proposed project would not involve emissions of toxic air contaminants as identified by the ARB and BAAQMD, with the exception of diesel particulate matter (DPM) from the use of construction-related equipment. The effects of construction-related DPM emissions are addressed in the analysis of air quality impacts in Initial Study Topic E.7, Air Quality.

Impact HZ-4: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

The City has published (although not adopted by legislative action) an Emergency Response Plan, prepared by the Department of Emergency Management as part of the City's Emergency Management Program, that also includes plans for hazard mitigation and disaster preparedness and

recovery.¹⁷⁵ The Emergency Response Plan identifies hazards to which San Francisco is particularly susceptible, such as earthquake, hurricane, tsunami, flood, winter storm, and acts of terrorism, including use of chemical, biological, radiological, nuclear, and explosive weapons. The Emergency Response Plan complies with several relevant state and federal directives for emergency planning, including the California Standardized Emergency Management System and the Incident Command System. The Emergency Response Plan includes sections on operations, including management and procedures; staffing, operations, and logistics regarding the City's emergency operations center; and mutual aid involving other agencies. The Emergency Response Plan assigns responsibilities for disaster planning, operations (including fire and rescue, law enforcement, human services, infrastructure, transportation, communications, and community support), and logistics, as well as finance and administration, to City agencies and departments. The Emergency Response Plan also identifies volunteer agencies, such as the American Red Cross, that are integral to disaster response efforts.

During construction of the proposed project, some surface traffic on Sixth Street would be detoured to surrounding streets as a result of temporary lane closures; however, closures of all traffic lanes are not anticipated as part of the construction of the proposed changes. The temporary lane closures would result in traffic increases on the detour streets, potentially interfering with access for emergency response vehicles. However, as discussed in Initial Study Topic E.5, Transportation and Circulation, this impact would be less than significant with implementation of the legally required Construction Management Plan.

Once constructed, the proposed project would reduce the number of lanes on Sixth Street from four to two between Market and Bryant Streets, which would reduce the street capacity. However, as discussed in Initial Study Topic E.5, Transportation and Circulation, Sixth Street would continue to provide ample access for emergency responders and egress for the general population. Therefore, impacts related to interfering with emergency response would be less than significant. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-HZ-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to hazardous materials or emergency response. (*Less than Significant*)

Hazardous materials impacts related to implementation of the proposed project include conducting construction activities within potentially contaminated soil. This impact would be primarily

¹⁷⁵ San Francisco Department of Emergency Management, City and County of San Francisco Emergency Response Plan, December 2010. Available online at <http://sfdem.org/sites/default/files/FileCenter/Documents/1154-CCSF%20Emergency%20Response%20Plan.pdf>. Accessed March 9, 2017.

restricted to the Sixth Street corridor and immediate vicinity; therefore, the geographic scope for cumulative impacts related to hazards includes the Sixth Street corridor and immediate vicinity.

As discussed above, hazardous materials impacts related to construction within soil containing hazardous materials would be less than significant with implementation of the Maher Program and UST closure requirements specified in Article 21 of the San Francisco Health Code. All cumulative development in San Francisco, including those projects listed in Table 6, shown on Figure 12, and described on pp. 41-52 in Initial Study Section B, Project Setting, under “Cumulative Setting”, would be subject to the same regulatory framework as would the proposed project, and these existing regulations would serve to avoid any significant cumulative impacts.

The proposed project would implement the legally required Construction Management Plan, as would other future projects listed in Table 6 and shown on Figure 12, with particular attention to overlapping construction schedules. Implementation of the construction traffic control measures specified in the plans would ensure that cumulative impacts related to interference with emergency response during construction would be less than significant. Once constructed, the proposed project would facilitate access for emergency response vehicles and would not contribute to cumulative impacts related to interference with emergency response.

For the above reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects in the project vicinity to create significant cumulative impacts related to hazards and hazardous materials. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
E.17. MINERAL AND ENERGY RESOURCES— Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impact ME-1: The proposed project would not result in the loss of availability of a known mineral resource or a locally-important mineral resource recovery site. (No Impact)

The proposed project would be implemented within the Sixth Street public right-of-way. All land under the jurisdiction of the City and County of San Francisco, including the Sixth Street corridor,

is designated Mineral Resource Zone 4 (MRZ-4) by the California Division of Mines and Geology under the Surface Mining and Reclamation Act of 1975.¹⁷⁶ This designation signifies that the land is not located within a designated area of significant mineral deposits. There are no designated mineral resource recovery sites within the Sixth Street corridor whose operations or accessibility would be affected by the construction or operation of the proposed project. Therefore, the proposed project would not have an impact on mineral resources, since there are no designated areas of significant mineral deposits or mineral resource recovery sites that would be affected. Mitigation measures are not necessary.

Impact ME-2: The proposed project would not encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (*Less than Significant*)

The construction of curb ramps and expanded sidewalks and the installation and/or relocation of streetscape features, including new traffic signals, would result in increased fuel, water, and energy use for the construction vehicles and equipment and increased water use for construction site activities, such as dust control and equipment wash downs. Specifically, electricity would be used to operate construction equipment such as hand tools and lighting. Construction vehicles and equipment would primarily use diesel fuel, and construction workers would use gasoline, diesel, and electricity to travel to and from the various construction sites along the Sixth Street corridor. However, the amounts of fuel and energy used during construction would be typical of public works projects and would not be used in a wasteful manner. As explained in Initial Study Topic E.11, Utilities and Service Systems, under Impact UT-2, non-potable water is required to be used for construction dust control pursuant to Article 21 of the San Francisco Public Works Code. The proposed project would also be required to comply with the Construction and Demolition Debris Recovery Ordinance, the Resource Efficiency and Green Building Ordinance, and the Construction Recycled Content Ordinance, which indirectly reduces energy use by reducing the need to extract, transport, and manufacture new construction materials.

The objectives of the proposed project include improving pedestrian safety, comfort, and mobility along and across Sixth Street from Market to Brannan Streets, as well as improving safety, comfort, and mobility of bicyclists between Market Street and the Howard Street/Folsom Street bicycle lanes. Although the proposed project would not generate new vehicle trips, implementation of the proposed lane reductions (from four to two) and the rescinding of the peak-period tow-away lanes (between Howard and Brannan Streets) would reduce the vehicular capacity along Sixth Street, which could increase idling time due to congestion and intersection delays on Sixth Street and along other streets in the immediate vicinity of the Sixth Street corridor. As a result, following construction of the proposed project, energy and fuel may be used less efficiently than under

¹⁷⁶ California Division of Mines and Geology, Open File Report 96-03, 1996, and Special Report 146 Parts I and II, 1986. Available online at ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_96-03/OFR_96-03_Text.pdf. Accessed February 26, 2016.

existing conditions. However, as a result of the proposed project and the realization of its objectives, which promote pedestrian and bicycle safety along Sixth Street, some people may shift from vehicles to transit, bicycling, or walking, which would reduce fuel and energy use. Thus, on balance, the proposed transportation network and streetscape changes along the Sixth Street corridor would offset the limited increase in fuel and energy use from the increase in idling time due to congestion and intersection delays related to the reduction in the vehicular capacity of Sixth Street.

Therefore, the proposed project would not encourage activities that result in the use of large amounts of fuel, water, or energy, or use them in a wasteful manner. This impact would be less than significant. Mitigation measures are not necessary.

Cumulative Impacts

Impact C-ME-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact on mineral and energy resources. (*Less than Significant*)

The geographic context for cumulative mineral and energy impacts is the San Francisco Bay Area. As discussed above under Impact ME-1, the land under the jurisdiction of the City and County of San Francisco does not include any designated areas of significant mineral deposits and does not have locally important mineral resource recovery sites. Therefore, no impact on mineral resources, either individually or cumulatively, would occur as a result of the implementation of the proposed project.

As discussed under Impact ME-2, energy resources used during construction of the proposed project would not be used in a wasteful manner and would not result in a significant project-related impact. As a result, the proposed project in combination with other past, present, or reasonably foreseeable projects would not cause a wasteful use of energy or other non-renewable natural resources and would contribute considerably to a significant cumulative impact on mineral and energy resources. Mitigation measures are not necessary.

<u>Topics:</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>	<u>Not Applicable</u>
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E.18. AGRICULTURE AND FOREST RESOURCES:

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

—Would the project

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Impact AF-1: The proposed project would not have a substantial adverse effect on agriculture or forest resources. (No Impact)

The proposed transportation network and streetscape changes would be implemented within the Sixth Street public right-of-way in downtown San Francisco, an urban area. According to the California Department of Conservation’s Farmland Mapping and Monitoring Program, land within the City and County of San Francisco is categorized as “Urban and Built-up Land.”¹⁷⁷ Additionally, no land within the city is zoned for agricultural or forest uses.¹⁷⁸ Because the public

¹⁷⁷ California Department of Conservation, San Francisco Bay Area Important Farmland 2010. Available online at ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/regional/2010/bay_area_fmmp2010.pdf. Accessed February 26, 2016.

¹⁷⁸ City and County of San Francisco, San Francisco Planning Code, as amended, Section 201, Classes of Use Districts.

right-of-way does not contain agricultural or forest uses and no proposed locations are zoned for such uses, the proposed project would not convert any land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with any existing agricultural zoning or a Williamson Act contract; or involve any changes to the environment that could result in the conversion of farmland to a non-agricultural use. The proposed project would not be located within any known forest land or timberland areas (as defined by Public Resources Code Sections 12220(g) and 4526, respectively).

For the reasons discussed above, the proposed project would not adversely affect agriculture or forest resources, and there would be no impact with respect to agriculture or forest resources because San Francisco does not contain agriculture or forest land or land zoned for these purposes. Mitigation measures are not necessary.

<u>Topics:</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
E.19. MANDATORY FINDINGS OF SIGNIFICANCE—Would the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that would be individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The construction and operation of the proposed project have been determined to have less-than-significant impacts or no impacts regarding all topics and would not make a considerable contribution to significant cumulative impacts.

As described in Initial Study Topic E.13, Biological Resources, construction and operation of the proposed project would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or

animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

As described in Initial Study Topic E.4, Cultural Resources, the proposed project would not result in a substantial adverse change in the significance of historic architectural resources, and would have a less-than-significant impact on historic and prehistoric archeological resources, including human remains and tribal cultural resources. This finding was based primarily on the shallow depths of excavation (3 to 6 feet) and the fact that excavation would occur within the public right-of-way at locations that have been previously disturbed as part of a series of transportation network, streetscape infrastructure changes along portions of Sixth Street and intersecting alleyways. As discussed under Initial Study Topic E.6, Noise, under Impact NO-2, vibration-related construction effects on historic buildings along the Sixth Street corridor would be less than significant because the project would adhere to the vibration limits included in the SFMTA's project-specific contract specifications. As described in Initial Study Topic E.14, Geology and Soils, under Impact GE-6, paleontological resources would not be affected by the proposed project's construction activities, primarily due to the shallow depths of excavation.

As discussed under Initial Study Topic E.6, Noise, under Impact NO-1, construction activities would be required to meet all noise reduction regulations. Although temporary construction noise could affect humans it would not cause substantial adverse effects, either directly or indirectly, and adherence to all noise reduction regulations would ensure that construction noise impacts would be less than significant. As described in Initial Study Topic E.8, Greenhouse Gas Emissions, the proposed project's GHG emissions would not conflict with state, regional, or local GHG reduction plans and regulations, and the proposed project's contribution to GHG emissions would not be cumulatively considerable. Thus, the proposed project would not result in GHG emissions that would cause substantial adverse effects on human beings. As described in Initial Study Topics E.5, Transportation and Circulation, and E.12, Public Services, changes to and redesign of existing transportation and streetscape infrastructure would not result in substantial adverse physical impacts associated with the ability of public service agencies to provide emergency response. As such, the proposed project's impacts related to public services would not cause substantial adverse effects on human beings. As described in Initial Study Topic E.16, Hazards and Hazardous Materials, implementation of the existing hazardous material requirements described under Impact HZ-1 would require the safe use, storage, and disposal of flammable materials during construction of the proposed project, which would minimize potential fire risks. During operation of the proposed project, adherence to the San Francisco Public Works Code and SFPW permit and coordination requirements would ensure that the proposed project would not expose persons or structures to significant impacts from increased fire risks or interfere with emergency response. Thus, the proposed project would not result in hazards or hazardous materials impacts that would cause substantial adverse effects on human beings.

F. MITIGATION MEASURES AND IMPROVEMENT MEASURES

For all topics fully analyzed in this Initial Study, the proposed project would have no impact or less-than-significant impacts without mitigation. The following improvement measure has been identified to reduce less-than-significant impacts during project construction.

Improvement Measure

Improvement Measure I-TR-4: Construction Management Plan

Construction Coordination – To reduce potential conflicts between construction activities and pedestrians, bicyclists, transit and autos, the San Francisco Municipal Transportation Agency, or its contractor, shall prepare a Construction Management Plan for the project construction period. The preparation of a Construction Management Plan could be a requirement included in the construction bid package. Prior to finalizing the Construction Management Plan, the project sponsor/construction contractor(s) would meet with San Francisco Public Works, the San Francisco Municipal Transportation Agency, the San Francisco Fire Department, Muni Operations, and other City agencies to coordinate feasible measures to include in the Construction Management Plan to reduce traffic congestion, including temporary transit stop relocations and other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the proposed project. This review could consider other ongoing construction in the project vicinity, including development and transportation infrastructure projects.

Carpool, Bicycle, Walk, and Transit Access for Construction Workers – To minimize parking demand and vehicle trips associated with construction workers, the construction contractor could include as part of the Construction Management Plan methods to encourage carpooling, bicycling, walking, and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in the free-to-employee-ride matching program from www.511.org, participating in the emergency ride home program through the City and County of San Francisco (www.sferh.org), and providing transit information to construction workers).

Construction Worker Parking Plan – As part of the Construction Management Plan that would be developed by the construction contractor, the location of construction worker parking, as well as the person(s) responsible for monitoring the implementation of the proposed parking plan, could be identified. The use of on-street parking to accommodate construction worker parking would be discouraged. All construction bid documents could include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on site, identification of the location, number of parking spaces, and area where vehicles would enter and exit the site could be required. If off-site parking is proposed to accommodate construction workers, identification of the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between the off-site facility and the project site could be required.

Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access for nearby residents and businesses, the project sponsor could provide nearby residences and adjacent businesses with regularly updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Construction Management Plan, a regular e-mail

notice could be distributed by the project sponsor that would provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

G. PUBLIC NOTICE AND COMMENT


On December 5, 2016, the Planning Department mailed a Notification of Project Receiving Environmental Review to owners of buildings on and adjacent to Sixth Street, interested parties, and neighborhood groups. During the public review and comment period, the Planning Department did not receive any comment letters.

On August 30, 2016, the Planning Department mailed a Notice of Availability of and Intent to Adopt a Negative Declaration to owners of buildings on and adjacent to Sixth Street, interested parties, and neighborhood groups. During the 30-day public review and comment period, which ended on September 29, 2017, the Planning Department did not receive any comment letters.

H. DETERMINATION

On the basis of this Initial Study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.



for Lisa M. Gibson
Environmental Review Officer
for
John Rahaim
Director of Planning

DATE 10/23/2017

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SAN FRANCISCO
MUNICIPAL TRANSPORTATION AGENCY
BOARD OF DIRECTORS

RESOLUTION No. 181016-140

WHEREAS, The San Francisco Municipal Transportation Agency is committed to achieving Vision Zero goals and implementing safety improvements on 6th Street; and,

WHEREAS, The San Francisco Municipal Transportation Agency is committed to making San Francisco a Transit First city that prioritized non-private automobile transportation; and,

WHEREAS, The San Francisco Municipal Transportation Agency has proposed parking and traffic modifications along the 6th Street between Market Street and Brannan Street corridor as follows:

- A. RESCIND – PASSENGER LOADING ZONE, AT ALL TIMES - 6th Street, east side, from 17 feet to 61 feet south of Market Street, 6th Street, east side, from 26 feet to 70 feet north of Minna Street, Minna Street, south side, from 6th Street to 80 feet westerly
- B. RESCIND – PASSENGER LOADING ZONE, 7 AM TO 10 PM, DAILY - 6th Street, east side, from 32 feet to 54 feet north of Jessie Street, 6th Street, west side, from 35 feet to 93 feet north of Mission Street
- C. RESCIND – METERED YELLOW 6-WHEEL COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH SATURDAY - 6th Street, west side, from 22 feet to 66 feet north of Minna Street
- D. RESCIND – METERED YELLOW 6-WHEEL COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 61 feet to 103 feet south of Market Street, 6th Street, east side, from 22 feet to 44 feet south of Jessie Street, 6th Street, west side, from 12 feet to 56 feet north of Stevenson Street
- E. RESCIND – METERED YELLOW 6-WHEEL COMMERCIAL LOADING ZONE, 7 AM TO 11 AM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 15 feet to 61 feet north of Natoma Street
- F. RESCIND – METERED YELLOW COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH SATURDAY - 6th Street, east side, from 23 feet to 49 feet south of Stevenson Street, 6th Street, west side, from 12 feet to 53 feet south of Natoma Street
- G. RESCIND – METERED YELLOW COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 44 feet to 90 feet south of Jessie Street, 6th Street, east side, from 22 feet to 91 feet south of Mission Street, 6th Street, west side, from 56 feet to 100 feet north of Stevenson Street, 6th Street, west side from 5 feet to 89 feet south of Stevenson Street, 6th Street, west side, from 27 feet to 45 feet north of Jessie Street, 6th Street, west side, from 44 feet to 67 feet south of Jessie Street
- H. RESCIND – METERED YELLOW COMMERCIAL LOADING ZONE, 7 AM TO 11 AM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 38 feet to 78 feet south of Minna Street
- I. RESCIND – SHORT TERM PARKING, 30 MINUTE LIMIT - Bryant Street, north side, from 3 feet to 89 feet west of 6th Street

- J. RESCIND – BLUE ZONE, DISABLED PARKING ONLY, AT ALL TIMES - 6th Street, west side, from Jessie Street to 21 feet southerly, Stevenson Street, south side, from 9.5 feet to 28 feet east of 6th Street
- K. RESCIND – TOW AWAY NO STOPPING ANYTIME EXCEPT MARKED POLICE VEHICLES - 6th Street, west side, from 21 feet to 44 feet south of Jessie Street
- L. RESCIND – NO LEFT TURN, 7 AM TO 7 PM EXCEPT SATURDAY AND SUNDAY, EXCEPT MUNI - 6th Street, northbound, at Mission Street
- M. RESCIND – NO LEFT TURN, 7 AM TO 7 PM EXCEPT SATURDAY AND SUNDAY - 6th Street, northbound, at Howard Street
- N. RESCIND – TOW-AWAY NO STOPPING, 7 AM TO 9 AM AND 3 PM TO 7 PM, MONDAY THROUGH FRIDAY - 6th Street, both sides, from Folsom Street to Brannan Street, 6th Street west side, from Howard Street to Folsom Street
- O. ESTABLISH – TOW AWAY NO STOPPING ANYTIME, ESTABLISH –6th Street, east side, from Market Street to 70 feet southerly, 6th Street, east side, from Stevenson Street to 30 feet northerly, 6th Street, east side, from Stevenson Street to 28 feet southerly, 6th Street, east side, from Jessie Street to 34 feet northerly, 6th Street, east side, from Jessie Street to 25 feet southerly, 6th Street, east side, from Mission Street to 20 feet northerly, 6th Street, east side, from Mission Street to 20 feet southerly, 6th Street, east side, from Minna Street to 26 feet northerly, 6th Street, east side, from Minna Street to 22 feet southerly, 6th Street, east side, from Natoma Street to 26 feet northerly, 6th Street, east side, from Natoma Street to 28 feet southerly, 6th Street, east side, from Howard Street to 23 feet northerly, Howard Street, north side, from 6th Street to 17 feet easterly, 6th Street, east side, from Howard Street to 36 feet southerly, 6th Street, east side, from Folsom Street to 42 feet northerly, 6th Street, east side, from Folsom Street to 50 feet southerly, Harrison Street, north side, from 6th Street to 24 feet easterly, Harrison Street, south side, from 6th Street to 27 feet easterly, 6th Street, west side, from Market Street to 70 feet southerly, 6th Street, west side, from Stevenson Street to 26 feet northerly, 6th Street, west side, from Stevenson Street to 35 feet southerly, 6th Street, west side, from Jessie Street to 25 feet northerly 6th Street, west side, from Jessie Street to 25 feet southerly, 6th Street, west side, from Mission Street to 20 feet northerly, 6th Street, west side, from Mission Street to 20 feet southerly, 6th Street, west side, from Minna Street to 30 feet northerly, 6th Street, west side, from Minna Street to 23 feet southerly, 6th Street, west side, from Natoma Street to 23 feet northerly, 6th Street, west side, from Natoma Street to 31 feet southerly, 6th Street, west side, from Howard Street to 35 feet southerly, 6th Street, west side, from Folsom Street to 25 feet northerly, 6th Street, west side, from Folsom to Street to 27 feet southerly, 6th Street, west side, from Harrison Street to 53 feet southerly, Harrison Street, south side, from 6th Street to 49 feet westerly
- P. ESTABLISH – PASSENGER LOADING ZONE, AT ALL TIMES - 6th Street, east side, from 30 feet to 74 feet north of Stevenson Street, 6th Street, east side, from 26 feet to 70 feet north of Minna Street
- Q. ESTABLISH – PASSENGER LOADING ZONE, 7 AM TO 10 PM, DAILY - 6th Street, east side, from 34 feet to 55 feet north of Jessie Street, 6th Street, west side, from 20 feet to 86 feet north of Mission Street

- R. ESTABLISH – METERED YELLOW 6-WHEEL COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 70 feet to 96 feet south of Market Street, 6th Street, east side, from 22 feet to 78 feet south of Minna Street, 6th Street, west side, from 26 feet to 93 feet north of Stevenson Street, 6th Street, west side, from 45 feet to 89 feet south of Mission Street
- S. ESTABLISH – METERED YELLOW COMMERCIAL LOADING ZONE, 7 AM TO 6 PM, MONDAY THROUGH FRIDAY - 6th Street, east side, from 28 feet to 91 feet south of Stevenson Street, 6th Street, east side, from 25 feet to 85 feet south of Jessie Street, 6th Street, east side, from 20 feet to 90 feet south of Mission Street, 6th Street, west side, from 25 feet to 45 feet north of Jessie Street, 6th Street, west side, from 65 feet to 89 feet south of Stevenson Street, 6th Street, west side, from 47 feet to 73 feet south of Jessie Street, 6th Street, west side, from 30 feet to 74 feet north of Minna Street, 6th Street, west side, from 31 feet to 68 feet south of Natoma Street
- T. ESTABLISH – SHORT TERM PARKING, 30 MINUTE LIMIT - 6th Street, east side, from 30 feet to 75 feet north of Mission Street
- U. ESTABLISH – BLUE ZONE, DISABLED PARKING ONLY, AT ALL TIMES - 6th Street, east side, from 26 feet to 61 feet north of Natoma Street, 6th Street, west side, from 35 feet to 65 feet south of Stevenson Street, 6th Street, west side, from 20 feet to 45 feet south of Mission Street
- V. ESTABLISH – TOW AWAY NO STOPPING ANYTIME EXCEPT MARKED POLICE VEHICLES - 6th Street, west side, from 25 feet to 47 feet south of Jessie Street
- W. ESTABLISH – TOW AWAY NO PARKING ANYTIME - Stevenson Street, south side, from 6th Street to 30 feet easterly, Jessie Street, south side, from 6th Street to 30 feet easterly, Minna Street, south side, from 6th Street to 30 feet easterly, Minna Street, south side, from 6th Street to 80 feet westerly, Natoma Street, south side from 6th Street to 30 feet easterly, Natoma Street, north side, from 6th Street to 30 feet westerly
- X. ESTABLISH – TOW AWAY NO STOPPING ANYTIME - 6th Street, west side, from 45 feet to 61 feet north of Jessie Street, 6th Street, east side, from 20 feet to 30 feet north of Mission Street, 6th Street, east side, from 61 feet to 77 feet north of Natoma Street, 6th Street, west side, from Howard Street to 80 feet northerly, 6th Street, west side, from Harrison Street to 125 feet northerly, 6th Street, east side, from Harrison Street to Ahern Way, 6th Street, east side, from Bryant Street to 125 feet southerly, Bryant Street, north side, from 6th Street to 89 feet westerly, 6th Street, west side, from Brannan Street to 125 feet northerly
- Y. ESTABLISH – NO LEFT TURN - 6th Street, southbound, at Jessie Street, 6th Street, southbound, at Natoma Street
- Z. ESTABLISH – NO LEFT TURN, 6 AM TO 10 PM, DAILY - 6th Street, southbound, at Stevenson Street
- AA. ESTABLISH – NO LEFT TURN AT ALL TIMES EXCEPT MUNI - 6th Street, northbound, at Mission Street
- BB. ESTABLISH – CROSSWALK - 6th Street, north crosswalk, at Stevenson Street, 6th Street, south crosswalk, at Stevenson Street, 6th Street, north crosswalk, at Minna Street, 6th Street, north crosswalk, at Natoma Street, 6th Street, south crosswalk, at Natoma Street; and,

WHEREAS, On September 13, 2018, the San Francisco Planning Department determined that the proposed Sixth Street Safety Project is within the scope of the Sixth Street Safety Project Final Negative Declaration (FND, Case No. 2014.1010E) issued by the Planning Department on October 23, 2017; and

WHEREAS, As part of approval of this item, the SFMTA Board of Directors has reviewed and considered the FND and the record as a whole and finds that the FND is adequate, accurate and objective, and that there is no substantial evidence that the proposed project will have a significant effect on the environment; and

WHEREAS, A copy of the CEQA determination is on file with the Secretary to the SFMTA Board of Directors, and may be found in the records of the Planning Department at 1650 Mission Street in San Francisco, and is incorporated herein by reference; and

WHEREAS, The public has been notified about the proposed modifications and has been given the opportunity to comment on those modifications through the public hearing process; now, therefore, be it


RESOLVED, That the SFMTA Board of Directors has reviewed and considered the Sixth Street Safety Project Final Negative Declaration and the record as a whole and finds that there is no substantial evidence that the proposed project will have a significant effect on the environment; and, be it further

RESOLVED, That the Board further finds that since the Sixth Street Safety Project Final Negative Declaration was finalized, there have been no substantial project changes and no substantial changes in project circumstances that would require major revisions to the FND due to the involvement of new significant environmental effects or an increase in the severity of previously identified significant impacts, there is no new information of substantial importance that would change the conclusions set forth in the FND, and that the proposal would not require the preparation of a subsequent negative declaration under CEQA Guidelines section 15162; and, be it further

RESOLVED, That the SFMTA Board of Directors finds on the basis of the whole record before it that there is no substantial evidence that the proposed 6th Street Pedestrian Safety Project may have a significant effect on the environment, and therefore no further environmental review is required; the Board also finds that the Sixth Street Safety Project Final Negative Declaration reflects the Board's independent judgment and analysis; and the Board adopts the Sixth Street Safety Project Final Negative Declaration; no Mitigation Monitoring and Reporting Program is required for the proposed project; thus, there are no mitigation measures to adopt as conditions of approval; and, be it further

RESOLVED, That the San Francisco Municipal Transportation Agency Board of Directors approves parking and traffic modifications, as set forth in items A through BB above, along 6th Street between Market Street and Brannan Street as part of the 6th Street Pedestrian Safety Project.

I certify that the foregoing resolution was adopted by the San Francisco Municipal Transportation Agency Board of Directors at its meeting of October 16, 2018.



Secretary to the Board of Directors
San Francisco Municipal Transportation Agency