APPENDICES

A. Notice of Preparation
B. Initial Study
C. Historical Resources
D. Noise
E. Shadow Modeling Results
F. Proposed Street Network Changes Detail Drawings

APPENDIX A
Notice of Preparation

SAN FRANCISCO
PLANNING DEPARTMENT

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PUBLIC NOTICE

Availability of Notice of Preparation of Environmental Impact Report and Notice of Public Scoping Meeting

Date:	April 24, 2013
Case No.:	**2011.1356E**
Project Title:	**Central Corridor Plan**
Zoning:	Multiple Use and Height and Bulk Districts
Block/Lot:	Multiple Blocks and Lots
Project Sponsor:	Joshua Switzky, Project Manager San Francisco Planning Department (415) 575-6815
Staff Contact:	Jessica Range – (415) 575-9018 Jessica.Range@sfgov.org

A notice of preparation (NOP) of an environmental impact report (EIR) has been prepared by the San Francisco Planning Department in connection with this project. The report is available for public review and comment on the Planning Department's Negative Declarations and EIRs web page (http://tinyurl.com/sfceqadocs). Paper copies are also available at the Planning Information Center (PIC) counter on the first floor of 1660 Mission Street, San Francisco. Referenced materials are available for review by appointment at the Planning Department's office on the fourth floor of 1650 Mission Street. (Call (415) 575-9018)

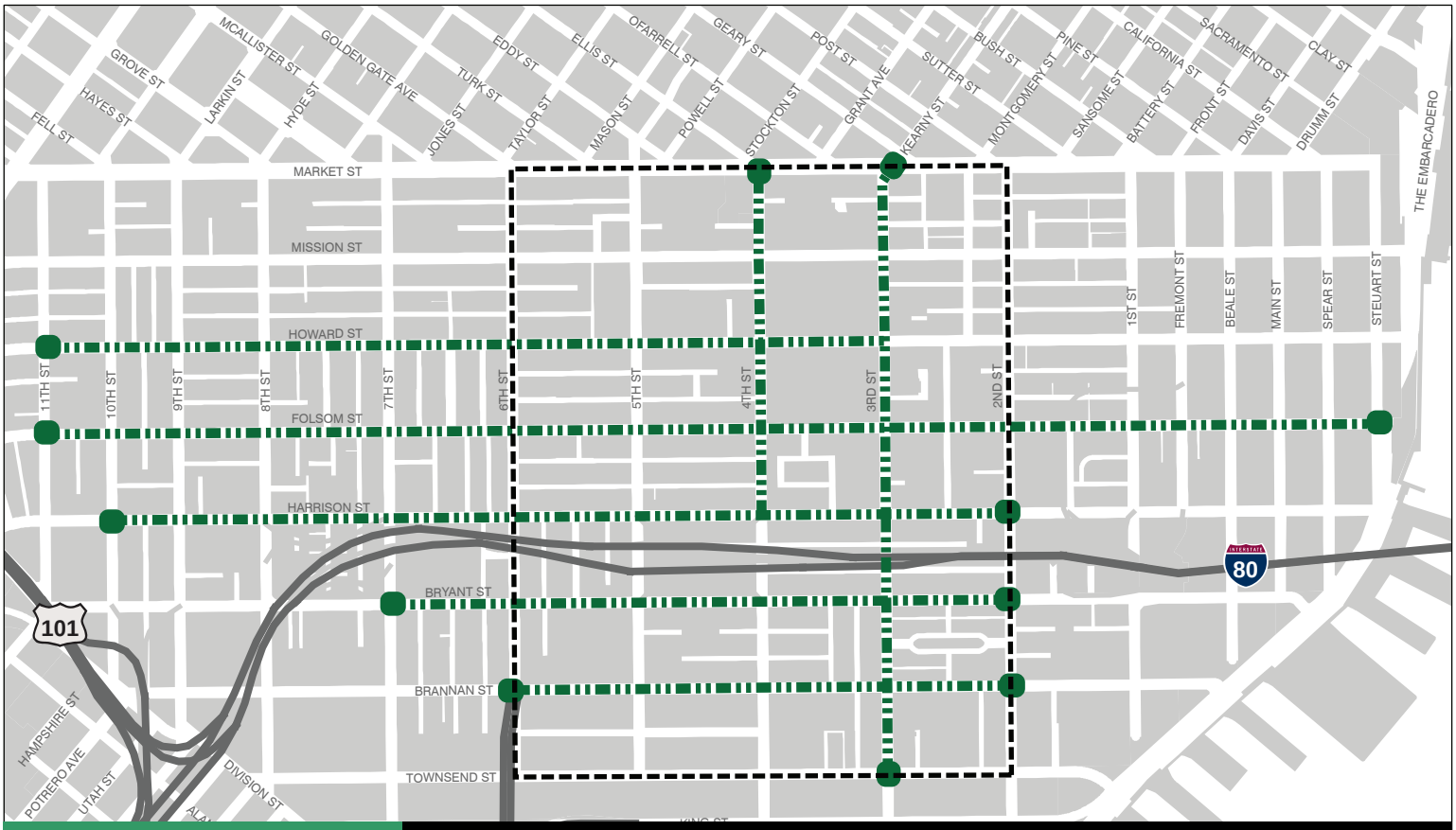
Project Description: The Central Corridor Plan is a comprehensive plan for the southern portion of the Central Subway transit line, an extension of the Third Street light rail line, in the South of Market neighborhood (SoMa). The Plan area encompasses approximately 260 acres, and is bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south. The project to be analyzed is the draft Central Corridor Plan published in April 2013, as well as street network changes throughout the Plan area, including specific designs within, and in some cases extending beyond, the Plan area for the following streets: Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth streets. The Central Corridor Plan identifies two height options for the Plan area. The EIR will analyze the Plan's Mid-Rise Height Option (Option A), the Plan's High-Rise Height Option (Option B), and alternatives to these options as required by CEQA, including a No Project Alternative. Together, the Plan and public realm improvements encompass the proposed project that will be analyzed in the EIR.

The Planning Department has determined that an EIR must be prepared for the proposed project prior to any final decision regarding whether to approve the project. The purpose of the EIR is to provide information about potential significant physical environmental effects of the proposed project, to identify possible ways to minimize the significant effects, and to describe and analyze possible alternatives to the proposed project. Preparation of an NOP or EIR does not indicate a decision by the City to approve or to disapprove the project. However, prior to making any such decision, decision-makers must review and consider the information contained in the EIR.

The Planning Department will hold a **PUBLIC SCOPING MEETING** on **May 15, 2013** beginning at **6:00 p.m.** at The Mendelson House located at 737 Folsom Street, San Francisco, CA 94107. The purpose of this meeting is to receive oral comments to assist the Planning Department in reviewing the scope and content of the environmental impact analysis and information to be contained in the EIR for the project. Written comments will also be accepted until 5:00 p.m. on **May 24, 2013.** Written comments should be sent to Sarah Jones, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103, or sent by email to Jessica Range, the CEQA Coordinator for this project, at jessica.range@sfgov.org. Referenced materials are available for review by appointment at the Planning Department's office on the fourth floor of 1650 Mission Street. (Call (415) 575-9018).

If you work for an agency that is a Responsible or a Trustee Agency, we need to know the views of your agency as to the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency. If you have questions concerning environmental review of the proposed project, please contact **Jessica Range** at **(415) 575-9018**.

APPENDIX B
Initial Study



INITIAL STUDY

Central SoMa Plan

PLANNING DEPARTMENT
CASE NO. 2011.1356E
STATE CLEARINGHOUSE NO. 2013042070

SAN FRANCISCO
PLANNING
DEPARTMENT

Feb. 12, 2014	Initial Study Publication Date: February 12, 2014 Public Comment Period: February 12 to March 14, 2014

Written comments should be sent to:
Sarah B. Jones, Environmental Review Officer
1650 Mission Street, Suite 400 | San Francisco, CA 94103

ENVIRONMENTAL PLANNING | SAN FRANCISCO PLANNING DEPARTMENT

SAN FRANCISCO
PLANNING DEPARTMENT

PUBLIC NOTICE
Availability of Initial Study

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Date:	February 12, 2014
Case No.:	**2011.1356E**
Project Title:	**Central SoMa Plan (formerly "Central Corridor Plan")**
Zoning:	Multiple Use and Height and Bulk Districts
Block/Lot:	Multiple Blocks and Lots
Project Sponsor:	Steve Wertheim, Project Manager San Francisco Planning Department 415-558-6612
Staff Contact:	Elizabeth Purl – (415) 575-9028 elizabeth.purl@sfgov.org

To Responsible Agencies, Trustee Agencies, and Interested Parties:

RE: NOTICE OF AVAILABILITY OF THE INITIAL STUDY FOR THE CENTRAL SOMA PLAN
PLANNING DEPARTMENT CASE NO. 2011.1356E; STATE CLEARINGHOUSE NO. 2013042070

This notice is to inform you of the availability of the Initial Study for the Central South of Market (SoMa) Plan (formerly, "Central Corridor Plan"), described below. The Planning Department previously determined that this project could have a significant effect on the environment, and required that an Environmental Impact Report (EIR) be prepared. A Notice of Preparation of an EIR was circulated for a 30 day public review period on April 24, 2013. The Planning Department held a public scoping meeting to receive comments on the scope and content of the environmental analysis on May 15, 2013. An Initial Study has now been prepared to provide more detailed information regarding the impacts of the proposed project and to identify the environmental issues to be considered in the Draft EIR. The Initial Study is either attached or is available upon request from **Elizabeth Purl**, the project environmental coordinator, whom you may reach at **(415) 575-9028**, at elizabeth.purl@sfgov.org, or at the address to the right. The report may also be viewed on-line at http://www.sf-planning.org/index.aspx?page=1570, starting February 12, 2014. Referenced materials are available for review by appointment at the Planning Department's office at 1650 Mission Street, Suite 400 (call 415-558-6377).

Project Description: The Central SoMa Plan is a comprehensive plan for the southern portion of the Central Subway transit line, an extension of the Third Street light rail line, in the South of Market neighborhood. The Plan area encompasses approximately 260 acres, and is bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south. The project analyzed is the draft Central Corridor Plan (as it was then known) published in April 2013, as well as street network changes throughout the Plan area, including specific designs within, and in some cases extending beyond, the Plan area for the following streets: Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth streets. The Central SoMa Plan identifies two height options for the Plan area. The EIR will analyze the Plan's Mid-Rise Height Option (Option A), the Plan's High-Rise Height Option (Option B), in addition to higher height increases south of Harrison Street, and alternatives to these options as

required by CEQA, including a No Project Alternative. Together, the Plan and street network changes encompass the proposed project that will be analyzed in the EIR.

A Notice of Preparation of an EIR and Public Scoping Meeting was issued on April 24, 2013, and a public scoping meeting was held on May 15, 2013. Based on the comments received, the Planning Department has determined that preparation of an Initial Study would be appropriate to focus the scope of the EIR. Preparation of an Initial Study or EIR does not indicate a decision by the City to approve or to disapprove the project.

Further comments concerning the scope of the EIR are welcomed, based on the content of the Initial Study. In order for your concerns to be considered fully, we would appreciate receiving them by March 14, 2014. Please send **written comments** to Sarah B. Jones, Environmental Review Officer, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. Comments may also be submitted via e-mail to Elizabeth Purl, the project environmental coordinator, at elizabeth.purl@sfgov.org.

If you work for an agency that is a Responsible or a Trustee Agency, we need to know the views of your agency as to the scope and content of the environmental information that is relevant to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering a permit or other approval for this project. We will also need the name of the contact person for your agency.

If you have questions concerning environmental review of the proposed project, please contact **Elizabeth Purl** at **(415) 575-9028** or elizabeth.purl@sfgov.org.

Members of the public are not required to provide personal identifying information when they communicate with the Commission or the Department. All written or oral communications, including submitted personal contact information, may be made available to the public for inspection and copying upon request and may appear on the Department's website or in other public documents.

INITIAL STUDY

Central SoMa Plan

PLANNING DEPARTMENT
CASE NO. 2011.1356E
STATE CLEARINGHOUSE NO. 2013042070

SAN FRANCISCO
PLANNING
DEPARTMENT

Feb. 12, 2014	Initial Study Publication Date: February 12, 2014 Public Comment Period: February 12 to March 14, 2014

Written comments should be sent to:
Sarah B. Jones, Environmental Review Officer
1650 Mission Street, Suite 400 | San Francisco, CA 94103

ENVIRONMENTAL PLANNING | SAN FRANCISCO PLANNING DEPARTMENT

INITIAL STUDY

Case Number 2011.1356E – Central South of Market (SoMa) Plan

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Initial Study

Central South of Market (SoMa) Plan
Planning Department Case No. 2011.1356E
State Clearinghouse No. 2013042070

A. Project Description

Overview

The Planning Department ("Department") is proposing to rezone the area of San Francisco around the southern portion of the Central Subway transit line in order to increase the amount of allowable development and to specifically allow for more job growth. The Department will prepare an Environmental Impact Report (EIR) in compliance with the California Environmental Quality Act (CEQA) that analyzes the environmental effects of the proposals in the Central SoMa Plan (referred to hereinafter as the "Plan"), drafted by the Department and published in April 2013. The Plan area is located within the South of Market (SoMa) neighborhood and encompasses approximately 260 acres that are bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south (see Figure 1 on page 2). The project analyzed in the EIR also includes street network changes throughout the Plan area, including specific designs within, and in some cases beyond, the Plan area for the following streets: Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth streets (see Figure 1 on page 2).

The Plan seeks to accommodate growth primarily by: (1) removing land use restrictions to support a greater mix of uses while also emphasizing office uses in the southern 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 Plan identifies two height options– a Mid-Rise Option (Option A) and a High-Rise Option (Option B). In general, Option A would increase heights along Fourth, Harrison, and Bryant streets from 65 feet to 85 feet. Option A would also allow for towers between 130 and 320 feet on certain sites, mostly located south of Harrison Street, increasing height limits on those sites by 45 to 235 feet. Option B would be similar to Option A, except that Option B would increase tower height limits for certain sites south of Harrison Street to between 115 and 400 feet, increasing height limits on those sites by about 60 to 315 feet. The EIR will also analyze a land use variant that would prohibit residential uses in a four-block area bounded by Bryant, Townsend, Fourth and Sixth streets. Additionally, the Plan proposes other public realm improvements, the provision of open space, and policies to preserve neighborhood character, historic structures, improve public amenities and promote sustainability.

The Plan also includes financial programs to support the Plan's public improvements through the implementation of one or more new fees, as well as possible taxes or assessments that would be applied to new development. The proposed Plan would result in a comprehensive plan and implementing mechanisms including *General Plan*, *Planning Code* and Zoning Map amendments, as necessary.



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 1

Central SoMa Plan Area Boundaries

The Department will prepare a "program-level" EIR for the Central SoMa Plan, and will include a "project-level" analysis of proposed street network changes, such that these improvements may be considered for adoption based on this EIR. Pursuant to CEQA Guidelines Section 15168, a program EIR may be prepared for a series of actions that can be characterized as one large project, related, as in this case, geographically; as logical parts in a chain of contemplated actions; and in connection with the issuance of rules, regulations, plans and other general criteria to govern the conduct of a continuing program.

Project Objectives

The project sponsor for the Central SoMa Plan is the San Francisco Planning Department. Through the Plan, the Department seeks to accommodate job and housing growth in close proximity to local and regional transit. Key objectives of the Plan are to increase development capacity, increase density, consider the future of parcels that currently retain industrial designations, and improve the physical, social and environmental surroundings. Critical to supporting that increased development capacity is a robust public realm and a substantial transformation of key streets to support transit, walking and biking.

Plan Area Objectives

The Plan sets forth five overriding goals:

1. Support transit-oriented growth, particularly workplace growth, in the Central SoMa area.
2. Shape the Central SoMa's urban form recognizing both City and neighborhood contexts.
3. Maintain the Central SoMa's vibrant economic and physical diversity.
4. Support growth with improved streets, additional open space, and other elements of "complete communities."
5. Create a model of sustainable growth.

Street Network Objectives

Building upon Plan Objective #4 (Support growth with improved streets), the Plan sets forth more detailed principles and goals for proposed street network improvements:

1. Provide a safe, convenient and attractive walking environment on all streets in the Plan area.
2. Configure transit routes to adequately serve the area and redesign streets that serve transit to lessen the impact of traffic on transit performance.
3. Make cycling an attractive transportation option throughout the Plan area for all ages and abilities.
4. Employ Transportation Demand Management measures to encourage mode-shift away from private automobile usage.
5. Accommodate regional and through traffic on a limited number of streets where necessary, but reduce the impacts of such traffic on local livability and circulation.

Background

The desire for a Central SoMa Plan began during the Eastern Neighborhoods planning process. In 2008 the City adopted the Eastern Neighborhoods Plan including new land use controls and proposed community improvements for the eastern part of SoMa, as well as the Central Waterfront, Mission, and Showplace Square/Potrero Hill neighborhoods. At that time, the City determined that the pending development of the Central Subway transit project and the development potential of the surrounding area necessitated a separate, focused planning process that took into account the city's growth needs as well as the transportation opportunity represented by the Central Subway.

The Planning Department initiated the Central SoMa Planning Process in earnest in early 2011 with funding from the California Department of Transportation (Caltrans) and the San Francisco Municipal Transportation Agency (SFMTA). In developing the draft Plan, the Department prepared two background documents: (1) the *Central Corridor Background Report* published in April 2011,[1] and (2) the *Public Realm Existing Conditions Report* published in October 2011.[2] During this planning process, it was determined that the Central SoMa Plan should incorporate areas proximal to the Central Subway, but which were not included in the Eastern Neighborhoods Plan. These include the blocks south of Harrison between 4th and 6th Street, which were part of the Western SoMa Plan (adopted April of 2013).[3]

The Central SoMa Planning Process was informed by intensive community outreach efforts and by growth projections. Throughout the process, the Department met with a range of community groups, and involved City and regional agencies as part of the Plan's Technical Advisory Committee (TAC), including one-on-one meetings with 18 stakeholder groups, multiple public meetings and public hearings, walking tours, a storefront charette, a print and web-format survey, and an interactive website.[4] The City's growth needs were identified through *Plan Bay Area*, the Bay Area's draft Sustainable Communities Strategy, developed jointly by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC).[5] *Plan Bay Area* projects about 92,400 additional housing units and 191,000 additional jobs for San Francisco by 2040, compared to existing conditions and represents roughly 15 percent of the region's total growth. These figures also represent a 25 percent increase in the number of housing units and a 34 percent increase in employment within San Francisco as compared to existing conditions. ABAG and MTC expect this growth to be planned in high density, transit-served locations.

While the City has planned for new housing, resulting in estimated capacity for over 75,000 new housing units, it has been less proactive in planning space for jobs. With substantial development occurring since the adoption of the Downtown Plan 20 years ago, relatively few Downtown building sites remain to

1 The Central Corridor Background Report is available for review online: http://www.sf-planning.org/ftp//files/Citywide/Central_Corridor/Central_Corridor_Background_Report.pdf. Accessed March 2013.

2 The Public Realm Existing Conditions Report is available for review online: http://www.sf-planning.org/ftp//files/Citywide/Central_Corridor/CC_PublicRealmExistingConditionsReport_Oct2011.pdf. Accessed March 2013.

3 Information on the Western SoMa Plan is available at http://www.sf-planning.org/index.aspx?page=3545.

4 A comprehensive overview of the Plan's public engagement process can be found in the Plan's Appendices, and is summarized online: http://www.centralcorridor.sfplanning.org.

5 *Plan Bay Area* was necessitated by the adoption of Senate Bill 375, which required regions to prepare a Sustainable Communities Strategy (or Alternative Planning Strategy) to reduce greenhouse gas emissions (GHGs) by linking growth to transit, resulted in higher jobs and housing growth projections.

support continued job growth. Remaining space in Mission Bay, and new space added in the Transit Center District Plan area, will not be sufficient to meet growth needs, as projected by *Plan Bay Area*. Current low-vacancy rates and high rents in SoMa indicate an area of high demand, and it is anticipated that companies in the information technology and digital media industries will increasingly seek to locate in this area, due to its central location, transit accessibility, urban amenities, and proximity to San Francisco's well-educated workforce.

Project Location

As shown in Figure 1 on page 2, the Plan area is located along the southern portion of the Central Subway transit line, and is bounded by Market Street to the north, Sixth Street to the west, Second Street to the east, and Townsend Street to the south. Altogether, the Plan area comprises approximately 260 acres and is bordered by the Transbay, Rincon Hill, Mission Bay and Downtown neighborhoods. It includes portions of the former Yerba Buena Redevelopment Plan Area, and the East and Western SoMa Plan Areas. This Plan area, plus streetscape changes extending from The Embarcadero to Eleventh streets along Folsom Street; Third to Eleventh streets along Howard Street; Second to Tenth streets along Harrison Street; from Second to Seventh streets along Bryant Street; from Market Street to Harrison Street along Fourth Street; and from Market Street to King Street along Third Street, represents the designated project area for this EIR.

Project Components

The EIR will analyze physical environmental impacts of the proposed Plan and associated street network changes. For some policy issues, the EIR will analyze options to those policy decisions in order for decision-makers and the public to compare the environmental impacts of each option. Specifically, the EIR will analyze the Plan's proposed land use and a land use variant that would restrict new residential uses within a four block area bounded by Bryant, Townsend, Fourth and Sixth streets. The EIR will also analyze the environmental impacts associated with two proposed height options (Option A and Option B) and proposed street network improvements on Folsom, Howard, Bryant, Brannan, Harrison, Third and Fourth streets. The EIR will also analyze two options for the operation of Folsom and Howard streets as described on page 3. Street network improvements will be analyzed in sufficient detail to allow for project-level CEQA clearance.

Land Use

The Plan area has potentially the most diverse mix of land uses in the city. The northern end of the Central SoMa Plan area features a number of large parcels with a concentration of higher density office and residential uses, including a substantial number of senior and affordable housing developments, regional-serving retail (such as the Westfield shopping center and the Metreon), as well as regionally important museums, and visitor and cultural facilities (e.g., Moscone Convention Center, Yerba Buena Center for the Arts, San Francisco Museum of Modern Art, Contemporary Jewish Museum). The Plan's southern end features residential, live/work, office, production/distribution/repair (PDR), retail, and entertainment uses, as well as several surface parking lots.

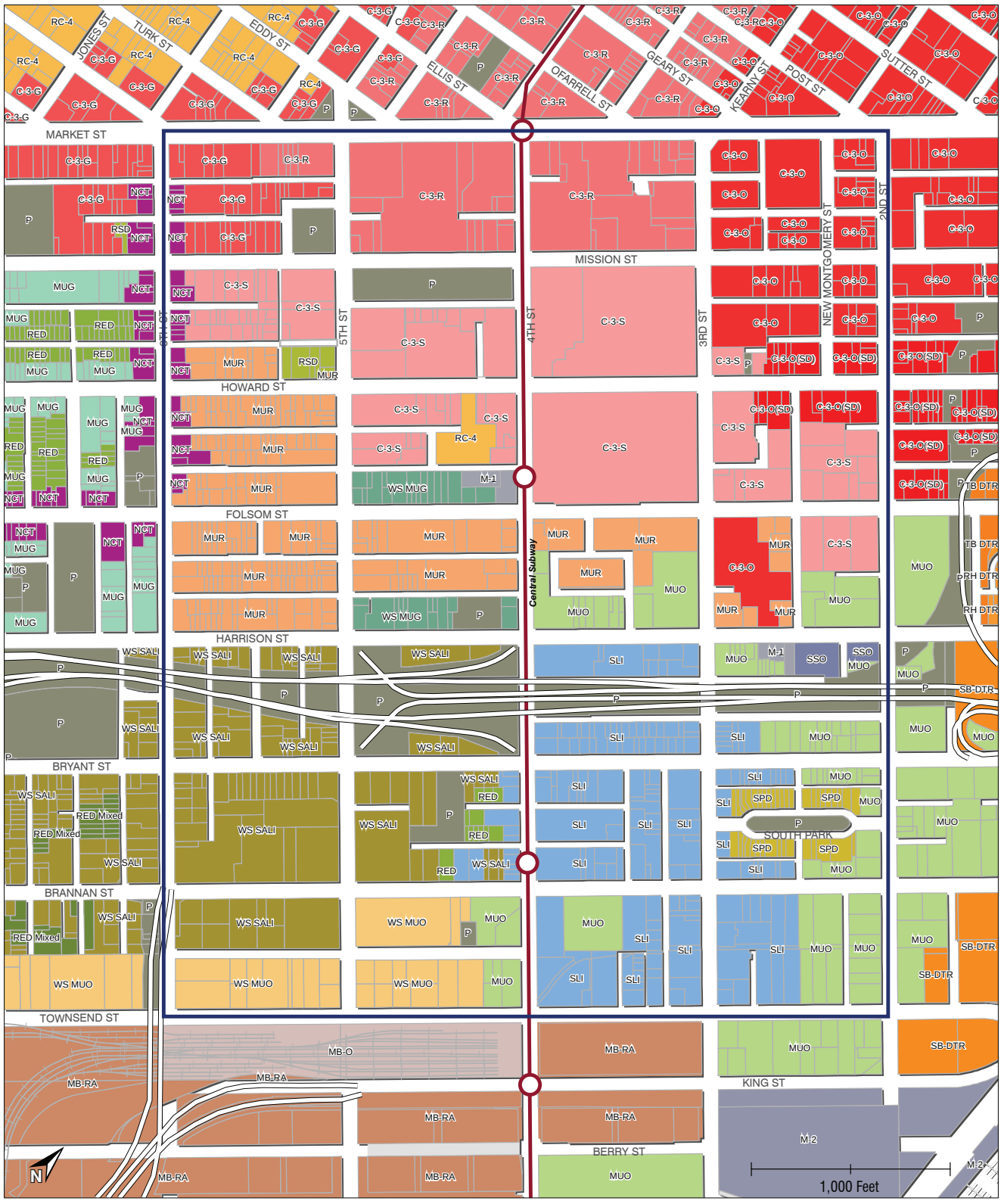
The existing use districts in the Plan area are shown in Figure 2 on page 7 (with an accompanying key in Table 1). The northern portion of the Central SoMa Plan area maintains a strong relationship to Downtown, reflected by the Downtown Commercial (C-3) and Mixed Use Office (MUO) use districts that support high-density office and residential uses with higher height limits (120 feet or greater). Much of this area was formerly part of the Yerba Buena Redevelopment Area. A swath of land ringing this area north of the freeway is currently zoned primarily for housing, designated Mixed Use Residential (MUR), Residential Service District (RSD), and Residential Enclave District (RED). The Service/Light Industrial District (SLI) and Western SoMa Service, Arts, Light Industrial (WS-SALI) predominate south of Harrison Street. The SLI and WS-SALI use districts permits neither new housing nor office uses, except in historic buildings. These use restrictions have effectively preserved this area with low-scale (one- to two-story) low density commercial uses.

TABLE 1
PLANNING CODE USE DISTRICT KEY

Use District Code	Use District
C-3-G	Downtown Commercial, General
C-3-O	Downtown Commercial, Office
C-3-R	Downtown Commercial, Retail
M-1	Light Industrial
M-2	Heavy Industrial
MB-O	Mission Bay Office
MB-RA	Mission Bay Redevelopment Area
MUG	Mixed Use, General
MUO	Mixed Use, Office
MUR	Mixed Use, Residential
NCT	Neighborhood Commercial Transit
P	Public
RC-4	Residential Commercial, High Density
RED	Residential Enclave District
RSD	Residential/Service Mixed Use District
SLI	Service/Light Industrial
SPD	South Park District
SSO	Service Secondary Office
TB-DTR	Transbay Downtown Residential
WS-MUG	West SoMa Mixed Use General
WS-MUO	West SoMa Mixed Use Office
WS-SALI	West SoMa Service, Arts, Light Industrial

SOURCE: San Francisco Planning Code.

The Plan's land use strategy seeks to accommodate transit-oriented growth while preserving and enhancing the Plan area's mix of uses (office, hotel, entertainment, industrial, retail, cultural and residential) and building types (lower-scaled development predominates in the southern portion of the Plan area with larger-scale development in the northern portion of the plan area). In general, proposed land use changes would remove land use restrictions (such as allowing residential uses in areas where this use is limited or allowed only with certain restrictions) to support a greater mix of uses while also



Central Corridor Plan Area

Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 2
Existing Plan Area Use Districts

emphasizing office uses in the southern portion of the Plan area (as shown by the MUO designation). The Plan would result in the following land use changes described below and shown in Figure 3 on page 9.

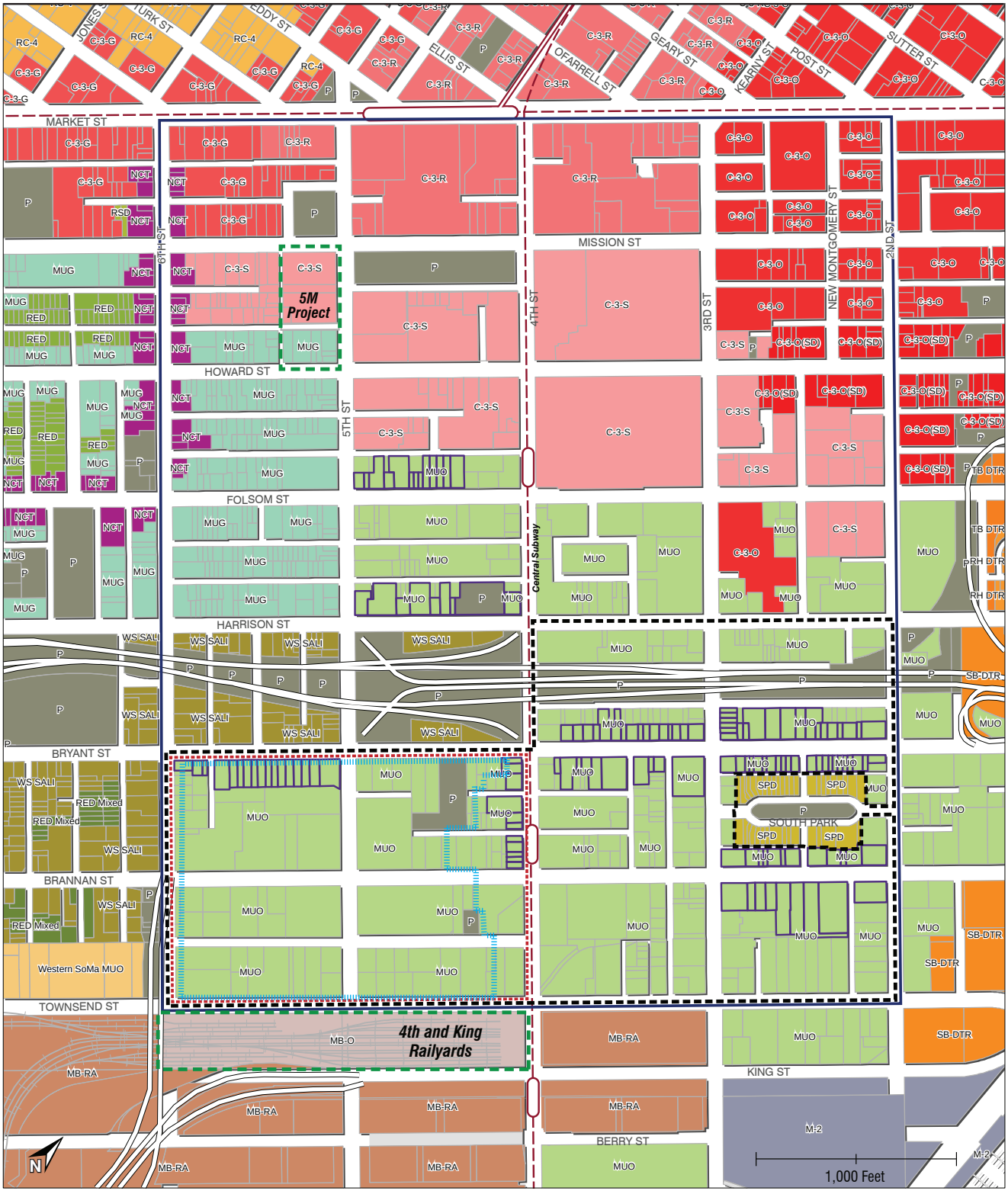
- The Residential Commercial, High Density (RC-4) zoning district would be converted to Downtown Commercial Support (C-3-S). Within the Plan area there is one parcel on the block bounded by Fourth, Fifth, Howard and Folsom streets zoned RC-4. The Plan proposes to rezone this area to C-3-S, consistent with the surrounding zoning district. Community facilities and commercial uses generally permitted in the C-3-S zoning district are either restricted by Conditional Use or not permitted in the RC-4 district. Changing this zoning district to C-3-S would allow for a greater mix of uses (including hotels, museums and cultural facilities, housing, retail, and offices) that are similar to this district's surroundings.

- The MUR and RSD zoning districts would be converted to a Mixed-Use General (MUG) zoning districts in the area bounded by Mission, Harrison, Fifth and Sixth streets. The MUR and RSD zoning districts require a ratio of three square feet of housing for every square foot of other uses. The MUG zoning designation would remove this restriction and allow for greater flexibility in the mix of land uses, including limited office development as well as new all-commercial buildings.

- The Western SoMa Mixed-Use General (WS-MUG), Light Industrial (M-1), and MUR zoning districts would be converted to MUO in the area bounded by Howard, Fifth, Harrison, and Fourth streets as well as the blocks bounded by Folsom, Fourth, Harrison and Second streets. A primary goal of the Plan is to accommodate job growth and these existing zoning districts either do not permit or limit office uses, whereas the MUO zoning designation would support a greater amount of job growth.

- South of Harrison Street, as shown in Figure 3, existing use districts would all be converted to an MUO zoning district; except for parcels currently designated SPD and the WS-SALI area west of Fourth Street north of Bryant Street which would retain their current zoning designations. Zoning districts in this area that would be converted to MUO include the Western SoMa Service, Arts, Light Industrial (WS-SALI), WS-MUO, RED, SLI, M-1, and Service Secondary Office (SSO) use districts. These existing use districts either limit or restrict office uses, or when office uses are allowed, other uses, such as entertainment or residential uses are restricted. For example, the RED use district permits housing as a principle use but requires Conditional Use authorization for most other uses. Converting these zoning districts to MUO would accommodate a mix of land uses that allow for greater flexibility as the MUO district generally allows office, residential, and most other uses without limitation. However, the Plan also proposes that most of this area also be included in a new South SoMa Special Use District that would require primarily commercial space on large parcels (e.g. greater than 20,000 square feet) to emphasize space for jobs.

Proposed zoning changes are supported by the Plan's four land use principles and corresponding implementation strategies, discussed below. The Plan includes other implementation strategies that are not cited below; however, those strategies would not result in direct or indirect physical environmental impacts (e.g., strategies that call for additional studies or continued implementation of existing controls within the Plan area- such as rent stabilization, eviction protections, and restrictions on unit demolition or mergers).



Central Corridor Plan Area
SoMa Entertainment SUD
South SoMa SUD
Restricted Lot Consolidation
Sites Under Separate Study
Land Use Variant Area

Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 3
Options A and B Proposed Plan Area Use Districts

1. Support substantial development in the Central SoMa Plan area.

In order to support substantial development in the Central SoMa, the Plan proposes the following strategies:

- Maintain growth oriented zoning where it exists. The Plan would not change existing zoning in the C-3 use districts. Much of the plan area is already zoned for density, particularly the area north of Harrison. The MUO zoning district in the southeast of the Plan area would be retained and the WS MUO zoning district, which does not permit residential uses, would be changed to MUO to allow such uses.

- Rezone the SLI use district and the WS-SALI use district enacted under the Western SoMa Plan (covering much of the Plan area south of Harrison Street), which does not permit residential or office uses but does allow for industrial and arts activities, to MUO—a use district that permits a broad range of uses from office uses and housing to small-scale light industrial and arts activities.

- Allow physical controls for height, bulk, setbacks, and open space to determine density. In much of San Francisco development density is not tied to height or other physical controls, often resulting in developments that do not reach their full development potential. For commercial uses, the amount of allowable development (Floor Area Ratio, or "FAR") would be correlated with allowable heights and bulk. For residential development, the Plan would eliminate FAR as a control on density and instead allow height, bulk, setbacks, etc., govern residential density, consistent with other recently adopted area plans; all major residential development would also be required to meet a minimum percentage of larger, family units.

2. Favor commercial development over other kinds of growth.

The Plan proposes the following to favor commercial development over other kinds of growth:

- Require commercial development on large parcels. The Plan proposes a South SoMa Special Use District (SUD), as illustrated in Figure 3 on page 9. The South SoMa SUD would require predominantly commercial development on large parcels to ensure that these parcels would be available for large floor plate commercial development. The exact mechanism utilized to require commercial development in this area would be developed as part of the zoning proposal for the Plan. Potential mechanisms could include a requirement for a minimum percentage (e.g. 50 percent) of new square footage to be commercial on all parcels over 20,000 square feet, or limiting the amount of residential development on these larger parcels.

- Rezone the MUR zoning district to enable workplace development as well as a more diverse set of uses (such as hotel and entertainment uses). As discussed above, the MUR zoning district's requirements preclude development of new all-commercial buildings. West of Fifth Street, where the area is typically more residential and fine-grained, the Plan proposes to rezone the MUR to MUG, a use district in which some office and retail development is allowed, but development is still expected to retain its predominantly residential character. East of Fifth Street, in the area that is already more jobs-oriented, the Plan proposes to rezone the MUR to an MUO zoning district, emphasizing office uses over other types of land use.

3. Support development of a diversity of housing especially below-market rate units.

While jobs are the primary focus of the draft Central SoMa Plan, housing is also an important component, particularly for creating a vibrant, 24-hour district. To support development of a diversity of housing, especially below-market rate units, and to create a "24-hour district" the Plan would:

- Maintain residential zoning for those areas that are already primarily residential. Mixed-use zoning that permits housing in the Plan area will be maintained, enabling new residential uses.

- Remove restrictive zoning in areas that can support additional housing. As noted above, the Plan proposes to rezone the SLI and SALI zoning districts to MUO, which permits housing in addition to commercial uses.

- Require larger, family-oriented units; new development in mixed-use districts would be required to provide at least 40 percent two-bedroom units or 30 percent three-bedroom units.

- Require increased levels of affordable housing in zoning districts where housing was not previously permitted (except for deed-restricted affordable housing and by Conditional Use only). The Plan proposes to increase inclusionary requirements in areas proposed to be rezoned from SLI, SALI (which currently do not permit housing) or M (which permits housing conditionally) to MUO or other districts that permit housing. For example the City's current requirement is for 12 percent of the units in new housing developments to be below market rate (i.e., for people earning up to 120 percent of the Area Medium Income or "AMI") if provided onsite, or 20 percent if provided off-site or through in-lieu fee payments. As in the Eastern Neighborhoods, former SLI, SALI and M parcels that are rezoned to allow residential uses would be required to provide increased affordable housing above these levels. The Plan may also consider increasing that amount in areas that receive a substantial increase in residential development potential through a greater increase in height limits.

5. Reinforce SoMa's mixed-use character by permitting a diversity of land uses.

In order to support and enhance the Plan area's vibrancy and identity, the Plan proposes to allow a wide range of uses while minimizing conflicts between those uses. Specifically, the Plan proposes to:

- Permit PDR uses. PDR would continue to be widely permitted throughout the Plan area. While much of the existing use districts such as SLI, WS-SALI, WS-MUO, and M-1 permit PDR uses, the RED zoning district does not permit PDR uses. The Plan would rezone the RED zoning district MUO, thereby allowing PDR uses in areas where it is currently not permitted.

- Permit retail, but not stand-alone big box retail, throughout the Plan area.

- Permit and support community facilities such as schools, child care, community centers, and public services (like police and fire) throughout the Plan area.

- Permit entertainment uses where appropriate. The Plan proposes to limit new entertainment uses to an area south of Harrison Street between Fourth and Sixth Streets, via the SoMa Entertainment SUD illustrated in Figure 3 on page 9.

Land Use Variant

Within the Central SoMa west of Fourth Street, in the area roughly bounded by Bryant, Townsend, Fourth and Sixth Streets, the WS-SALI and WS-MUO use districts applied as part of the Western SoMa Plan currently do not permit new housing. The Plan proposes to rezone the majority of those zoning districts to permit housing and thereby enable a lively 24-hour neighborhood. However, there is community concern that any allowance for new housing in this area could impinge upon existing and future commercial uses (particularly on smaller lots) and could create conflicts with potential new

entertainment uses that would also be permitted in this area. The Land Use Variant will study the ramifications of maintaining a restriction on new housing in the area roughly bounded by Bryant, Townsend, Fourth and Sixth streets that are currently zoned WS-SALI and WS-MUO (see Figure 3 on page 9).

Urban Form

Building heights in the Plan area vary considerably, ranging from single-story buildings to buildings of 20 stories or more. While the area's typical building height is considerably less than building heights in the Financial District to the north, its density of uses is substantially higher than those parts of the City further from downtown.

Existing height districts are shown in Figure 4, on page 13. Permitted heights in the northern portion of the Plan area are highest around Mission Street, reflecting the southern extent of Downtown's high-rise core. Height districts step down in the central portion of the Plan area to between 85 and 130 feet. Current residential zoning districts, including the MUR, RED, and RSD districts in the northern portion of the Plan area, mostly allow buildings up to 85 feet or 8 stories (though up to 120 feet are allowed in some places), with requirements for further height sculpting on alleys. On some block frontages where heights are permitted up to 85 feet, heights are limited on interior block frontages to 45 feet. Building heights within the southern portion of the Plan area, generally south of Bryant Street, are within the 50 to 85-foot range. Permitted heights in the SLI use district are lower than other portions of the Plan area and are typically 40 to 85 feet.

The Central SoMa Plan seeks to increase opportunities for growth through changes to height and density that are respectful of not only the City's skyline, but of local character and pattern. The Plan contains four high-level objectives: (1) Enhance the city skyline in harmony with, and being respectful of, the city pattern, including views across SoMa to and from the hills, Bay, and downtown; (2) Base height limits[6] should be reflective of the width of adjacent streets; (3) The Fourth Street corridor and rail stations should be reinforced by additional height; and (4) the greatest heights should be focused at the north and south, in proximity to regional transit. These high-level objectives are further articulated by several detailed principles related specifically to height, resulting in a Mid-Rise Height Option (Option A) and a High-Rise Height Option (Option B), as described below. Figure 5 on page 14, shows the change in height limits as compared to existing height limits for Options A and B.

Mid-Rise Height Option (Option A)

Height limits proposed under the Mid-Rise Height Option (Option A) are shown in Figure 6, on page 15. In general, Option A would increase heights along Fourth, Harrison, and Bryant streets from 65 feet to 85 feet.

[6] The base height of a building is the maximum permitted height of the front wall of a building before any required setback. A building is required to meet a minimum base height only when the height of the building will exceed the maximum base height.



Height District-Bulk District

Central Corridor Plan Area

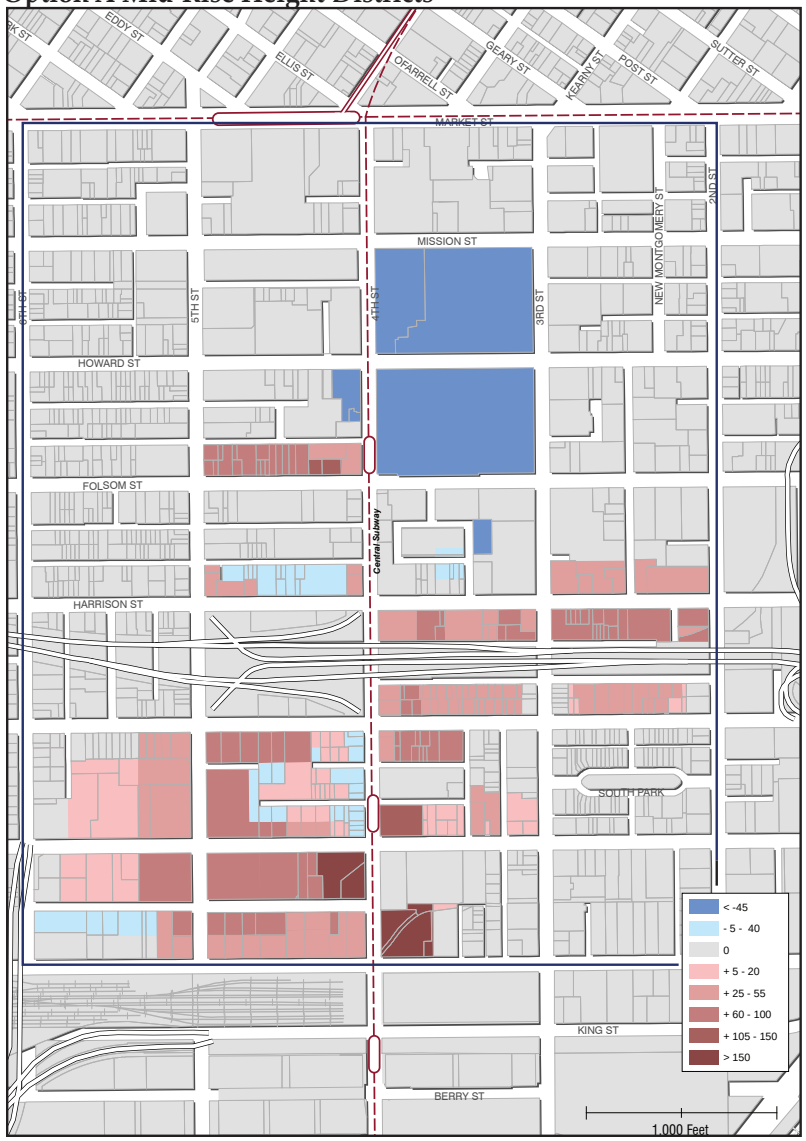
SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

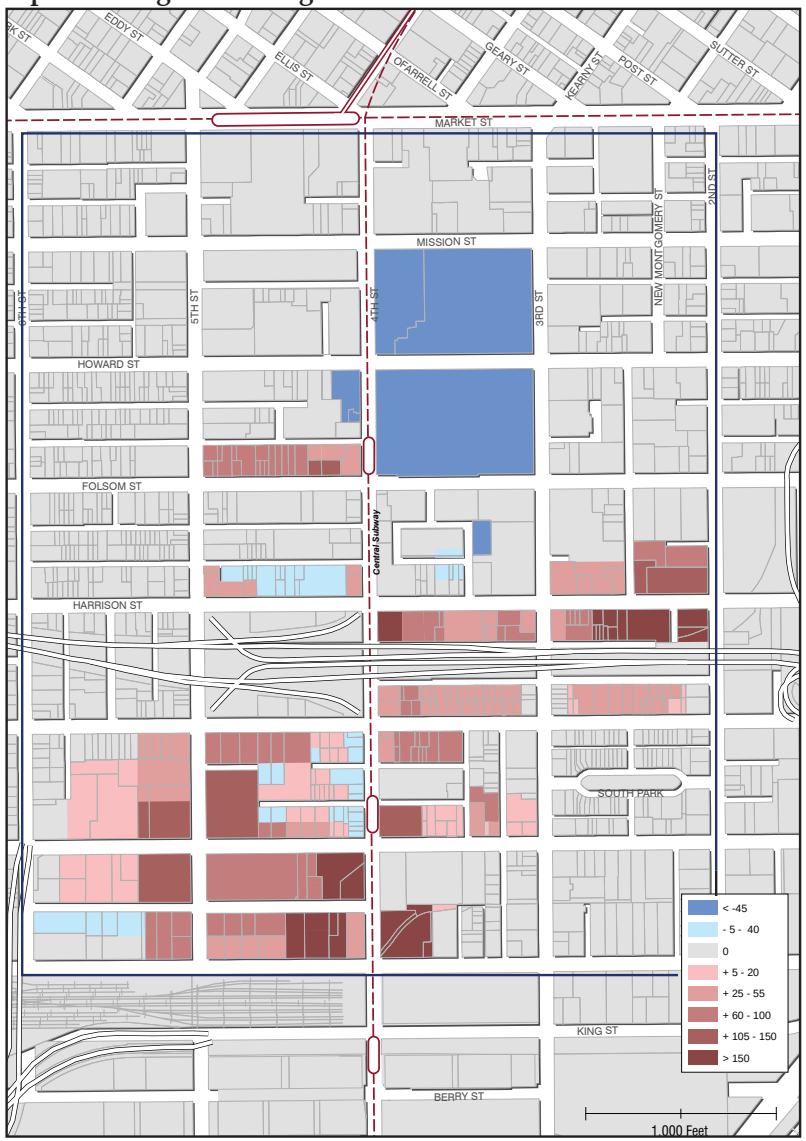
Figure 4

Existing Plan Area Height and Bulk Districts

Option A Mid-Rise Height Districts



Option B High-Rise Height Districts



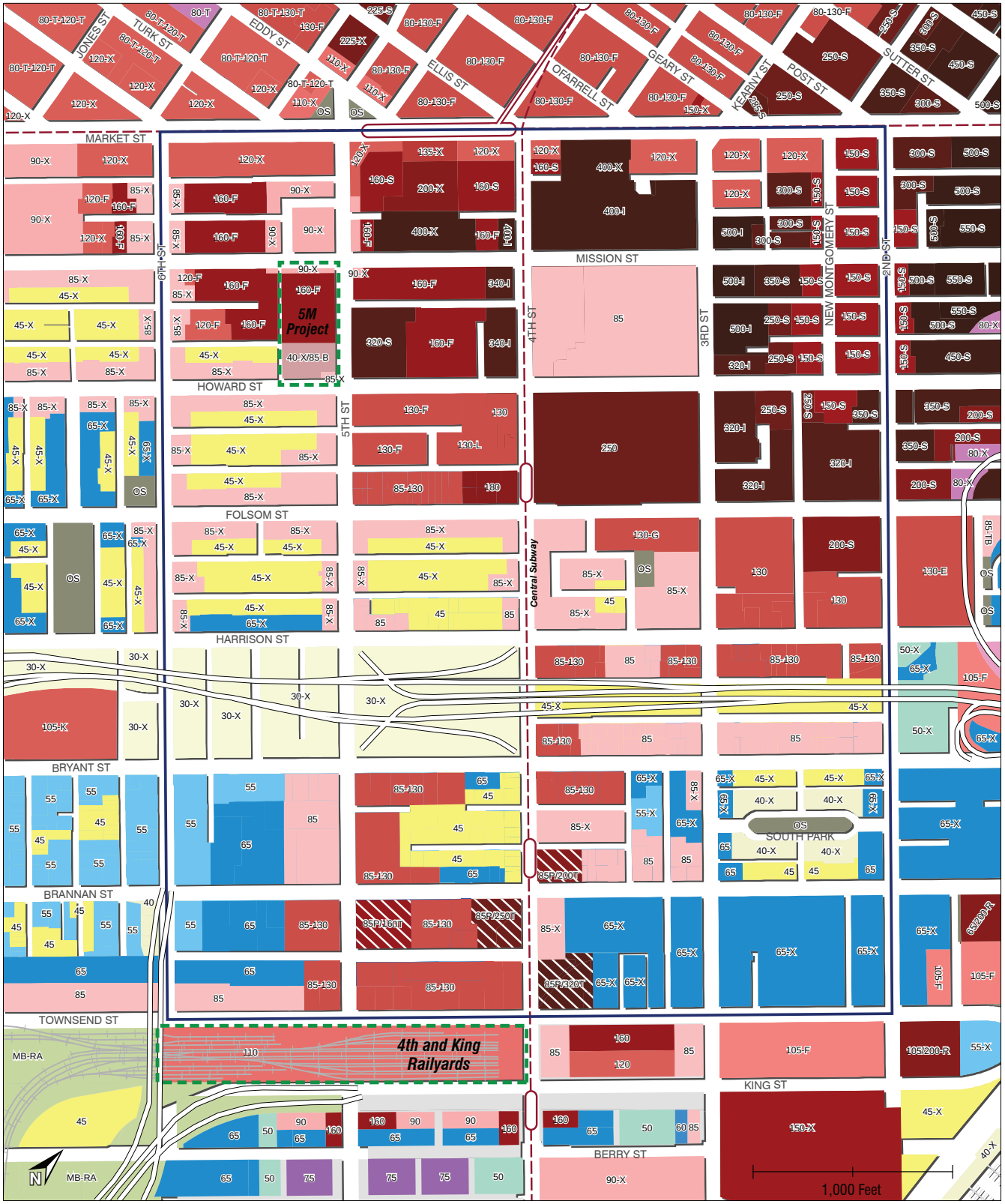
Central Corridor Plan Area

SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

Figure 5

Changes from Existing to Proposed Height Districts



Height District-Bulk District

Central Corridor Plan Area

Sites Under Separate Study

SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

Figure 6

Option A Mid-Rise Height Districts

This option would also allow for towers between 130 and 320 feet on certain sites, mostly located south of Harrison Street, increasing height limits on those sites by 45 to 235 feet. Proposed height changes under this option are supported by the following principles.

1. ***Heights should be sculpted in a manner mindful of views through and across the area from surrounding areas with views of the Bay, East Bay hills, and other key features.***

The Plan's urban form proposals intend to build on and reinforce existing patterns in SoMa. Height proposals in the Plan are based on a broad three-dimensional consideration of the placement and scale of buildings and potential development sites.

2. ***The predominant character of SoMa as a mid-rise district should be retained, and the presence of high-rises reduced by limiting their distribution to transit stations.***

In order to preserve the character of the Plan area and views across it, height limits taller than 130 feet are generally kept to the southern portion of the Plan area (Brannan Street southward), limited in distribution and widely spaced. Also, bulk limits would restrict floor plate sizes, and these bulk requirements would be supported by tower separation requirements. Adjacent towers would be required to vary in height (e.g. by 50 feet or more).

3. ***Addition of substantial new shading should be avoided on public open spaces to the extent feasible, balanced with other core objectives.***

To accomplish this, the height limits proposed in Option A have been sculpted to avoid additional shading to South Park beyond shadow that could occur with build out of existing height limits. Height limits are also intended to protect sunlight on Yerba Buena Gardens, Lapu Lapu Community Garden, the Bessie Carmichael School Yard, and, insofar as is feasible, a potential park site identified in the Plan and discussed further below, on the block bounded by Fourth, Fifth, Bryant, and Brannan streets (Assessor's Block 3777).

4. ***Building height limits should be adjusted in areas with a high concentration of historic buildings and unique character.***

To accomplish this, Option A does not propose to increase height limits in the South Park block and the western portion of the South End Historic District. Option A would reduce the height limit on the west side of Fourth Street between Bryant and Brannan streets from 65 feet to 45 feet, as this stretch contains one of the few cohesive blocks of small-scale neighborhood retail in the Plan area. Option A also requires sculpting and upper story setbacks along narrow streets as per *Planning Code* Section 261.1; and requires a minimum 10 foot setback above certain heights, as well as preservation of a 45-degree sun plane on the southern side of east-west streets. In areas where proposed height limits are 85 feet or higher, particularly in the area bounded by Bryant, Brannan, Fourth and Sixth street in the southwestern part of the Plan area, the sun angle requirement would be relaxed to instead require a minimum 10-foot setback similar to the north side of the street.

5. ***Height limits should be appropriate for the central city location and transit access and serve to diminish the dominant presence of the freeway in the neighborhood.***

To accomplish this, the Plan proposes a base height limit of 85 feet along the freeway in areas east of Fourth Street.

6. ***The diverse scale of buildings in the Plan area should be maintained, particularly areas with a fine grain concentration of smaller lots and buildings.***

The Plan seeks to accomplish this through the following implementation strategies:

- To preserve the few areas that maintain a pattern of small lots and buildings, the Plan would require Conditional Use authorization where a lot frontage greater than 100 feet would be created by the consolidation of two or more parcels that each have 50 feet or less in lot frontage. These areas exist along Folsom Street between Fourth and Fifth streets, Harrison Street between Fourth and Fifth streets, Bryant Street, and Brannan Street between Third and Fourth streets.

- Encourage maintenance of older buildings and allow substantial additions to them, through Design Guidelines, incentives, and other mechanisms such as: (1) a FAR bonus for the preservation of existing buildings through additions rather than demolition; and (2) higher FAR allowances for smaller lots than larger ones.

7. ***Reduce the scale of large blocks and parcels.***

The Plan seeks to ameliorate the pattern of large blocks and parcels through the following implementation strategies:

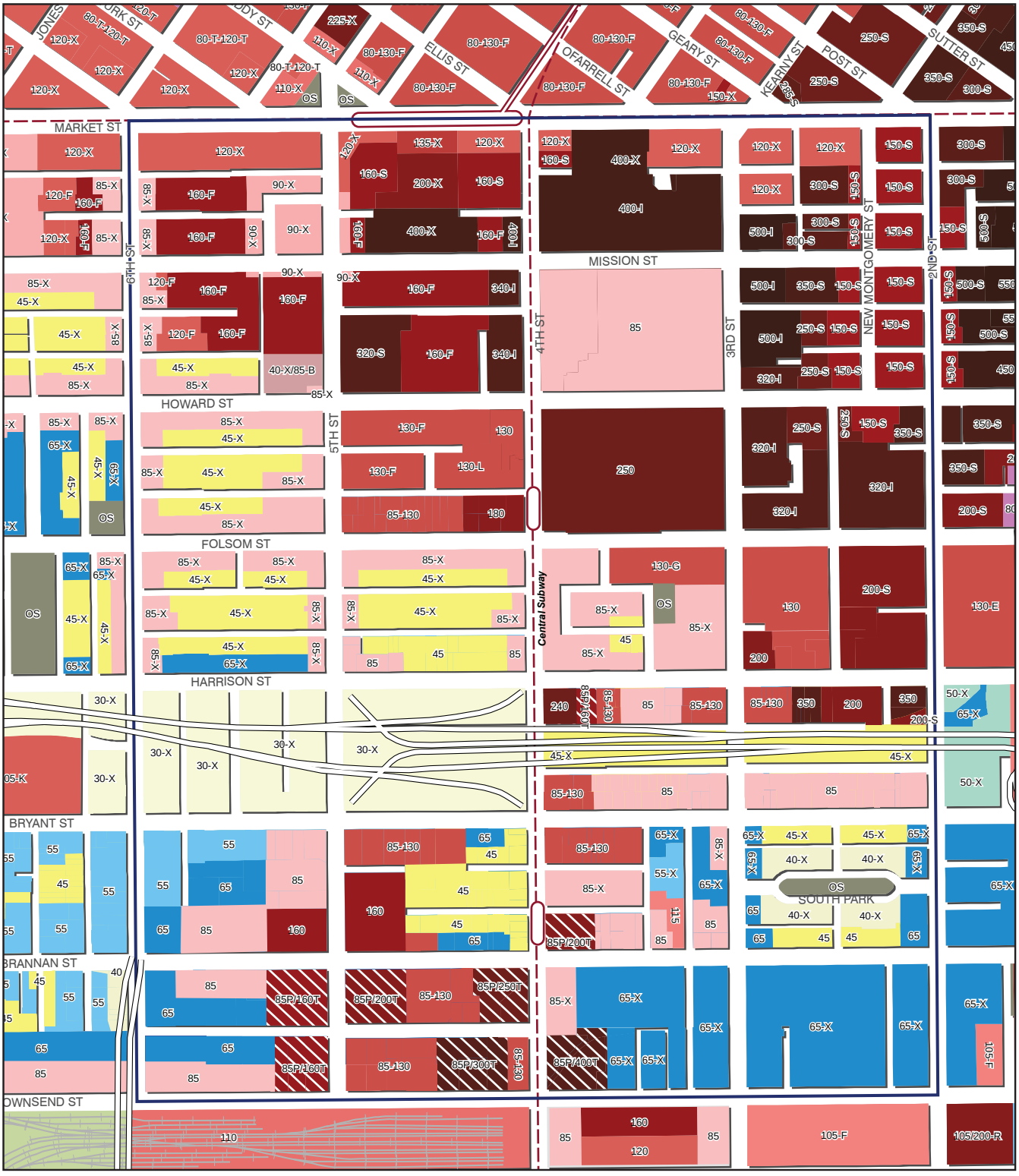
- The requirements of *Planning Code* Section 270.2, requiring new developments on large parcels on long blocks to include new publicly accessible mid-block alleys, now apply throughout mixed-use and C-3 zoning district and would be extended throughout the Central SoMa Plan area.

- Final zoning recommendations would include a set of guidelines for key development sites, highlighting desired locations for public open space, mid-block alleys, generalized building massing, vehicular access, and other key factors. These sites include:

  - Assessor's Block 3777 (Bryant/Fourth/Brannan/Fifth streets).
  - Parcels adjacent to the new Central Subway stations, particularly at the corners of Fourth Street at Folsom and Brannan streets
  - Parcels near the intersection of Fourth and Townsend streets, adjacent to and across from the Caltrain station
  - The Flower Mart/Assessor's Block 3778

High-Rise Height Option (Option B)

This option includes the Plan's policies as presented in Option A, with changes to Urban Form principles to reflect higher height limits as shown in Figure 7 on page 18. (Figure 5, above, depicts the proposed change in heights from existing height limits to those proposed under Option B.) The key difference in this scenario compared to Option A is that height and bulk districts would be amended to allow taller and larger buildings at a limited number of locations, primarily adjacent to, and south of, the elevated



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 7

Option B Mid-Rise Height Districts

I-80 freeway, than are considered under Option A. These height districts are based on the High-Rise Height Alternative contained in the draft Central SoMa Plan released April 2013 and modified to include further height increases on certain sites.

Option B maintains the same urban form principles and implementation strategies as Option A; however these options differ as follows:

- In Option B, heights taller than 130 feet are expanded to more locations south of the freeway along and near Fifth Street, including sites between Bryant and Brannan streets, at Fifth and Brannan streets, and at Fifth and Townsend streets; and one site midblock along Townsend Street between Fifth and Fourth streets. They are also expanded to three sites north of the freeway, at Fourth and Harrison, Third and Harrison, and Second and Harrison streets. Additionally, two sites designated for heights taller than 130 feet proposed in Option A, at Fifth and Brannan and Fourth and Townsend, have been increased to higher tower limits in Option B. Finally, heights along Brannan Street midblock between Fifth and Sixth streets are increased slightly beyond the heights proposed in Option A, to 85 feet in Option B.

- Height limits on the block bounded by Fourth, Fifth, Bryant, and Brannan streets (Block 3777) are sculpted to feature the tallest heights of 160 feet to the west of the proposed park site, while keeping the heights due south of the park site relatively lower at 130 feet to maintain some sunlight benefits during certain times of the year.

Circulation and Streetscape Improvements

The Plan area contains a diverse network of public transportation options, including (1) the Bay Area Rapid Transit (BART) and Caltrain regional rail lines, (2) the MUNI Metro light rail network; and (3) MUNI local bus service, which directly serves the entire Plan area via bus lines such as the 10, 12, 14, 27, 30, 45, and 47. Additionally, the Plan area is proximal to the Transbay Transit Center (both the temporary terminal at Beale and Howard streets and the permanent terminal under construction at First and Mission streets), which connects the Plan area to much of the East Bay (via Alameda-Contra Costa County Transit District (AC Transit) and Western Contra Costa Transit Authority (WestCAT), Marin County (via Golden Gate Transit), and San Mateo County (via SamTrans).

The Plan area is also well-served by the freeway system, including I-80, which bisects the Central SoMa Plan area into northern and southern portions and has a series of on-ramps and off-ramps at 4th and 5th Streets, and I-280, which feeds the south side of the Plan area from the on- and off-ramps at 6th and Brannan Street. A network of wide surface streets provides vehicular circulation within the Plan area.

As a result of the City's original 1847 O'Farrell survey, major streets in the Central SoMa Plan area and in SoMa in general are 82.5 feet wide, compared to 50 to 70 feet in width for most streets north of Market Street and 70 to 80 feet for most streets in the western residential neighborhoods; blocks within the Plan area are larger than elsewhere in the City. Major north-south streets[7] (numbered) are typically 825 feet apart, while major east-west streets (named) are 550 feet apart. These major streets form large "SoMa

[7] Streets in SoMa are generally parallel or orthogonal to Market Street, which is oriented at approximately 44 degrees off true north. However, streets parallel to Market Street are generally described as "east-west" streets, while streets orthogonal to Market Street are generally described as running "north-south."

blocks" of approximately 10.5 acres each. These blocks are usually subdivided into three long, narrow blocks by two minor 35 foot wide east-west streets. As a result of development, many minor streets that were originally through streets now dead-end in the interior of their large SoMa block.

Sidewalks are typically narrow—most are less than the 15 feet common elsewhere in San Francisco, and many are 10 feet or less—with the vast majority of the public right-of-way devoted to automobiles. Usually there are between four and five auto lanes traveling in one direction, more than in other San Francisco neighborhoods, with curb-side parking on both sides. Street trees, which are generally young and thus relatively small, help to soften the car-dominated streetscape, but they often narrow the already under-sized pedestrian path of travel. Intersections of major streets are signalized and have marked crosswalks on all sides; intersections of major streets with minor streets are usually not signalized and do not have any marked crosswalks. With signalized crossings almost exclusively located at the intersections of major streets, there are relatively fewer locations at which to safely cross major east-west streets than in other neighborhoods.

The Plan area's relatively high density is supportive of walking, although its wide, predominately one-way streets, long blocks, few amenities, and presence of an elevated freeway and associated ramps generally do not contribute to a positive pedestrian experience and presents many physical challenges for pedestrian circulation in the area. Bicycle lanes within the Plan area exist on Howard, Folsom, and Townsend streets, and the San Francisco Bicycle Plan designates additional lanes on Second and Fifth streets.[8]

Several projects are either in progress or proposed to improve the transportation network within the Plan area. The most important is the Central Subway, expected to be operational by 2018. The Central Subway is anticipated to move 76,000 daily riders through the Plan area by 2030, with a peak hourly capacity of almost 5,000 riders in each direction. Stations will include new underground facilities in Chinatown, at Union Square/Market Street, and at Moscone Center, with above ground stations at the intersections of Fourth/Brannan and Fourth/King streets. Additional transportation improvements include: the planned but not-yet-funded Caltrain Downtown Extension which, when complete, will extend Caltrain along the eastern Plan area boundary through a tunnel beneath Second Street to the Transbay Transit Center near First and Mission streets; improvements to MUNI made through the Municipal Transportation Agency's Transit Effectiveness Project (TEP); anticipated improvements to the bicycle network from implementation of the Bicycle Plan; and streetscape improvements under the Transit Center District Plan, Rincon Hill Plan, and East and Western SoMa Plans intended to improve walkability in SoMa.

The land use changes proposed in the Plan are expected to increase demand for travel in the Plan area, while safe and convenient pedestrian, transit, and bicycle access to and within the Central SoMa Plan area is necessary for the success of the envisioned land uses. The Plan includes the following proposals to improve pedestrian, transit, and cycling conditions on major streets in the Plan area:

[8] The San Francisco Bicycle Plan is available for review online: http://www.sfmta.com/cms/bproj/bikeplan.htm. Accessed March 2013.

1. Provide a safe, convenient and attractive walking environment.

As a major convention and tourism destination, employment center, and residential area, the Central SoMa Plan area attracts thousands of people daily, the overwhelming majority of whom will either begin or end their trip as pedestrians. Creating a complete, high quality walking network is necessary to make all aspects of the transportation system function well. The Plan proposes the following:

- Upgrade sidewalks to meet the standards in the Better Streets Plan standards where possible, provide corner sidewalk extensions to enhance pedestrian safety at crosswalks, and add street trees and furnishing wherever possible. Existing sidewalk conditions are shown in Figure 8 on page 22.

- Provide additional midblock crosswalks across major streets. The Plan proposes new pedestrian crosswalks throughout the Plan area as shown in Figure 8.

- Several signalized intersections of major streets in the Plan area prohibit pedestrians from crossing one leg of the intersection. The Plan recommends certain locations to open currently closed crosswalks as shown on Figure 8.

2. Configure transit routes to adequately serve the Plan area and redesign streets that serve transit to lessen the impact of traffic on transit performance.

The Plan proposes the following to prioritize transit:

- A network of dedicated transit lanes in order to enhance transit travel times and reliability. New dedicated transit lanes are proposed on Fourth, Harrison, Bryant, and Folsom streets. These are described further below in Street Network Changes beginning on page 26.

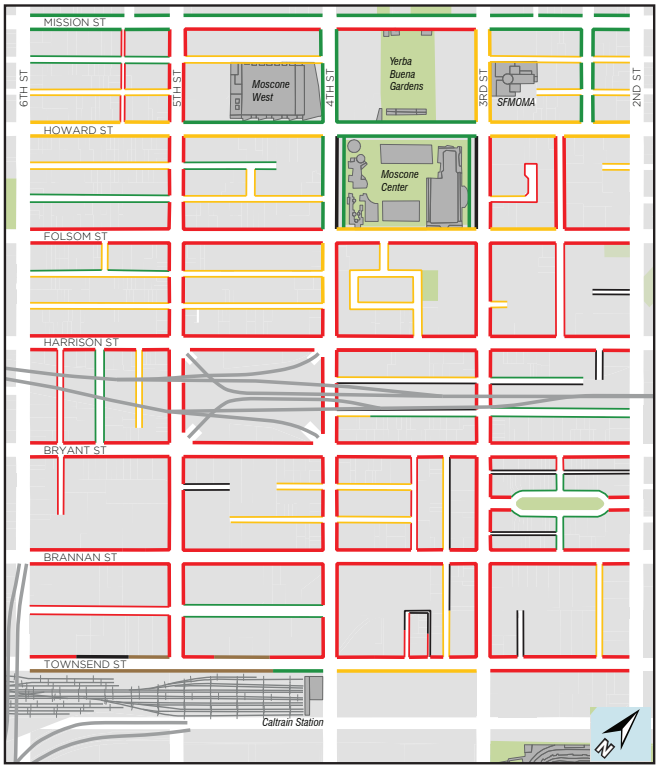
- Upgrade existing and planned dedicated transit lanes with self-enforcing mechanisms such as curbs, channelizers, and colored or textured pavements to discourage or prevent use by unauthorized private vehicles.

In addition to the above proposals, the Plan calls for the continued evaluation of the transit network to ensure that it adequately serves evolving needs within the Plan area. Existing and proposed dedicated transit lanes are shown in Figures 9 and 10 on pages 23 and 24, respectively.

The proposal for dedicated transit lanes vary depending upon whether Folsom and Howard streets are operated under a One-way or Two-way configuration (discussed further below) and would also vary with implementation of the TEP. Figure 10, on page 24, illustrates the proposed dedicated transit lanes under these various scenarios.

3. Make cycling an attractive transportation option throughout the Plan area for all ages and abilities.

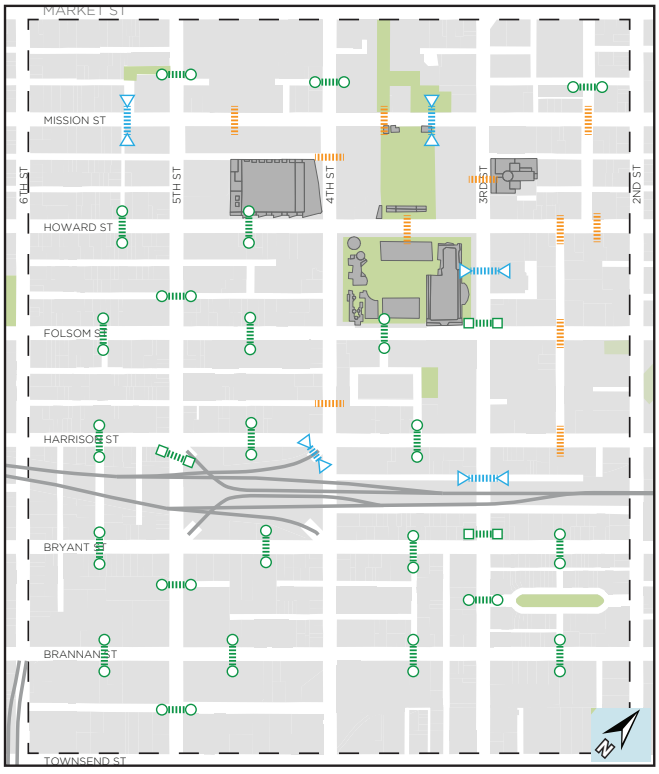
The Plan includes the following proposals to create a comprehensive network of safe and convenient bicycle routes, as well as destination amenities such as secure bicycle parking and shower facilities. The Plan proposes new or enhanced bicycle facilities on Folsom, Howard, Third, Fourth, and Brannan streets. Existing and proposed bicycle routes for Howard/Folsom One-way operation and Howard/Folsom Two-way operation (as discussed further below) are shown on Figure 11, on page 25. Protected bicycle lanes,



Existing Plan Area Sidewalk Conditions (Top Figure)

- No sidewalk
- No sidewalk, pedestrian walkway provided (no curb)
- Sidewalk width less than Better Streets Plan (BSP) minimum (12' for major streets, 9' other)
- Sidewalk width meets BSP minimum but less than recommended (15' for major streets, 12' other)
- Sidewalk width meets BSP recommended width

1,000 Feet



Proposed Pedestrian Crosswalks (Bottom Figure)

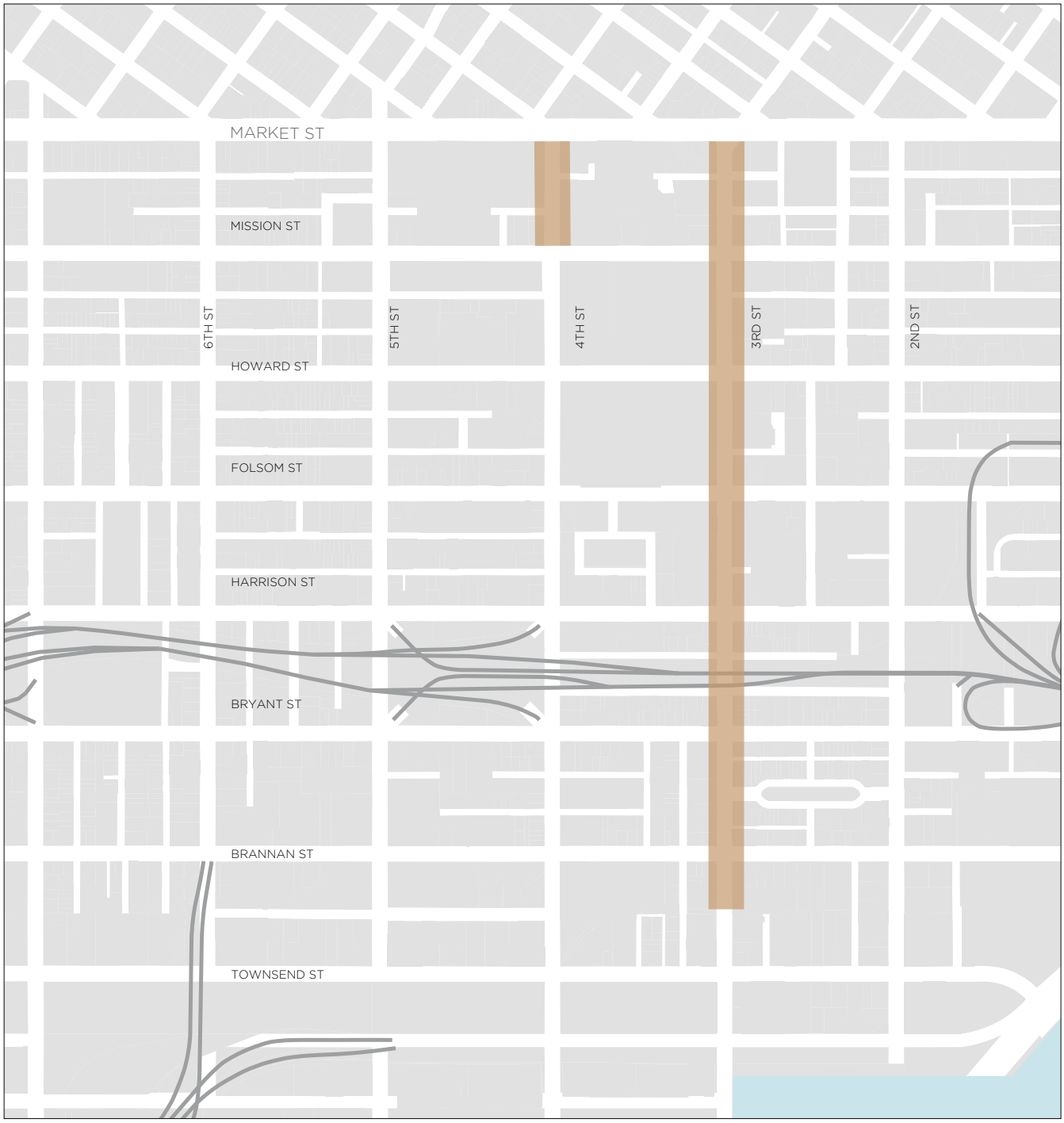
- New crosswalk
- New crosswalk proposed in other plans and projects
- Closed crosswalks at existing signalized intersection, to be opened
- Existing crosswalks across major streets at minor streets (existing crosswalks at the intersection of two major streets are not shown)

1,000 Feet

SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

Figure 8
Existing Plan Area Sidewalk Conditions and Proposed Pedestrian Crosswalks



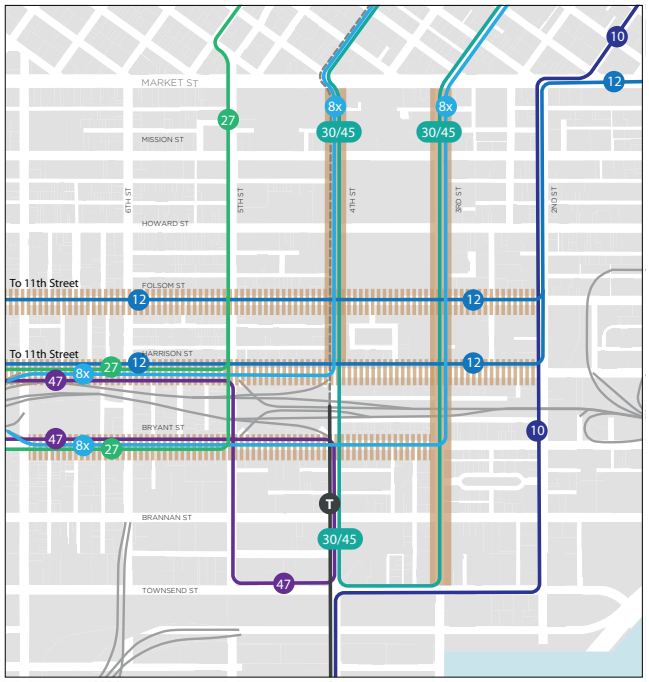
Existing dedicated transit lanes*

* Note: Existing and planned dedicated transit lanes on Mission and Market Streets and north of Market Street are not shown.

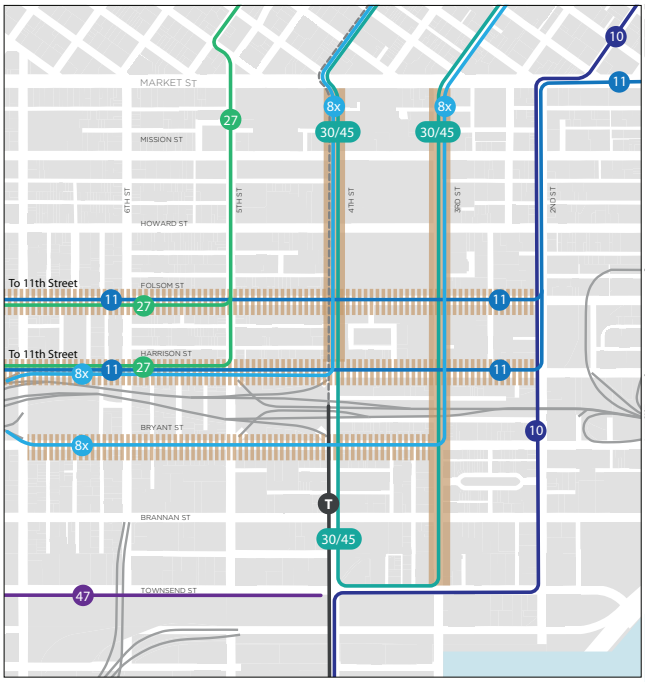
Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

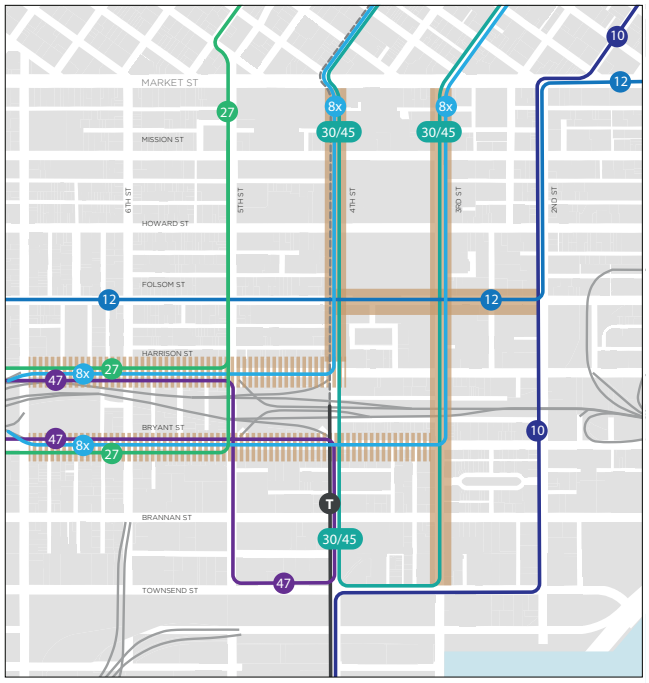
Figure 9
Existing Plan Area Dedicated Transit Lanes



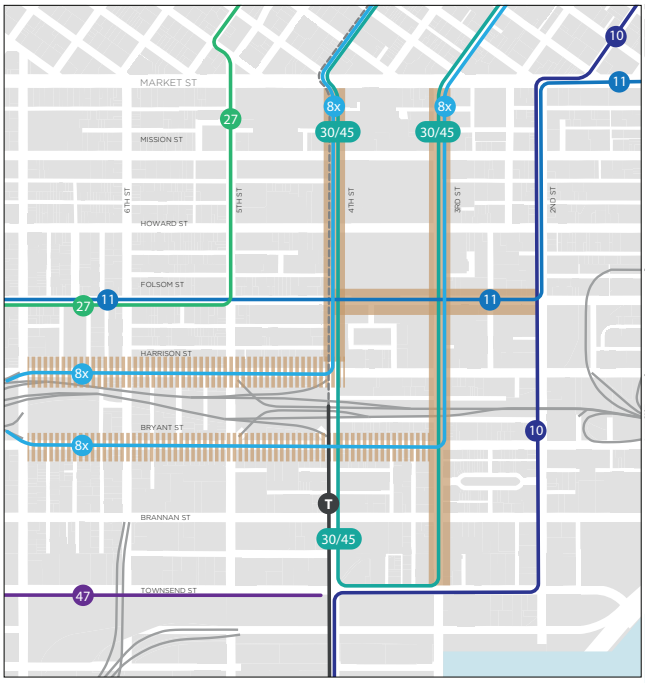
Howard/Folsom One-Way: Proposed Dedicated Transit Lanes



Howard/Folsom One-Way: Proposed Dedicated Tansit Lanes with TEP



Howard/Folsom Two-Way: Proposed Dedicated Transit Lanes



Howard/Folsom Two-Way: Proposed Dedicated Transit Lanes with TEP

Full-time dedicated transit lane

Peak period dedicated transit lanes

* Market and Mission streets dedicated transit lanes not shown

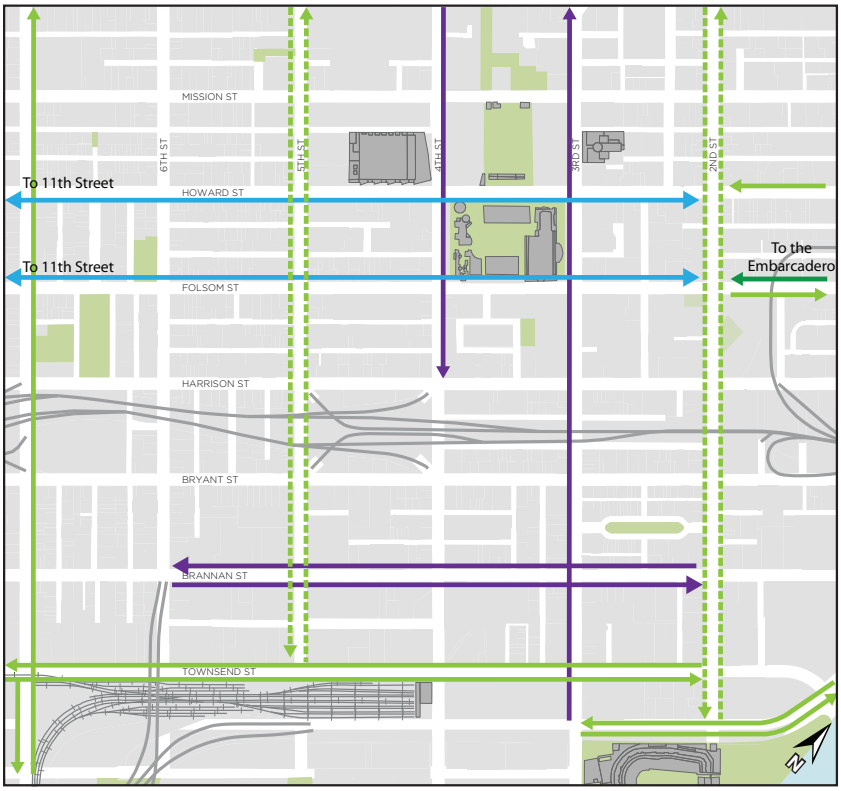
SOURCE: San Francisco Planning Department

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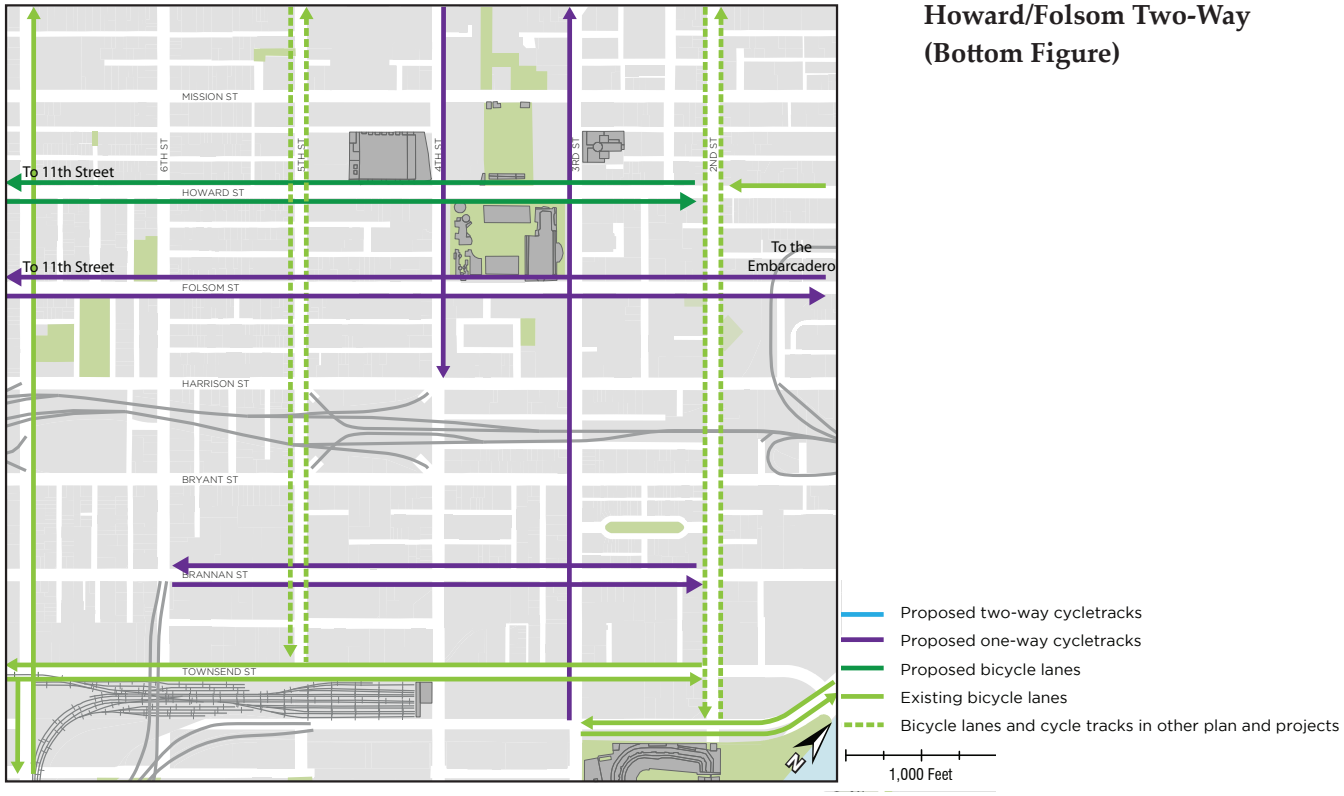
Figure 10

Proposed Plan Area Dedicated Transit Lanes

Howard/Folsom One-Way (Top Figure)



Howard/Folsom Two-Way (Bottom Figure)



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SOURCE: San Francisco Planning Department

Figure 11
Existing and Proposed Plan Area Bicycle Network

known as cycle tracks,[9] offer safer and calmer cycling conditions for a much wider range of cyclists and cycling purposes, especially on streets with large traffic volumes traveling at relatively high speeds. Existing and planned bicycle routes should be upgraded to cycle tracks or equivalent facilities, where possible.

4. ***Employ Transportation Demand Management measures to encourage a mode-shift away from private automobile use.***

The City has successfully used Transportation Demand Management (TDM) tools in the downtown area to achieve high pedestrian, transit and bicycle mode shares.

Large employers and commercial developments would be required to participate in a Travel Demand Association and any shuttle programs should be coordinated in the area to augment, rather than compete with public transit service.

5. ***Restrict curb cuts on key major streets to increase pedestrian comfort and safety, to provide a continuous building edge of ground floor uses, to provide continuous sidewalk for streetscape amenities, and to eliminate conflicts with transit, bicycles and general circulation.***

The Plan would prohibit new curb cuts on Mission, Folsom, Brannan, Townsend, Second, Third, Fourth and Sixth streets. New curb cuts would be subject to discretionary review (through a Conditional Use authorization) on Howard, Harrison, Bryant, and Fifth streets.

Street Network Changes (Analyzed at a Project-Level)

To implement the circulation and streetscape principles above, the proposed project includes a package of street network changes to support pedestrian and cycling modes and to lessen the impact of traffic on transit performance, while accommodating regional and through traffic on a limited number of streets where necessary. Proposals have been developed for Folsom, Howard, Third, Fourth, Harrison, Bryant, and Brannan streets, extending as far west as Eleventh Street (in the case of Howard and Folsom Streets) and east to The Embarcadero (Folsom Street only). (See Figure 1 on page 2.) The proposals for these streets include wider sidewalks, upgraded and/or new transit lanes, cycle tracks, and travel lane reductions, as described further below. The EIR will evaluate the environmental effects of the proposed street network changes at a project-level of detail to enable consideration of project approval following certification of the EIR.

The street network changes described below represent major investments that in their full condition would happen gradually over time. Reconfigurations to street operations (such as conversion from one-way to two-way operation, installation of transit and bicycle facilities, and changes in the number of travel lanes) could be initially implemented on a street-by-street or block-by-block basis using roadway striping, traffic signal modifications, corner bulb-outs and other low-cost tools. However, sidewalk widening (and the removal of some on-street parking in order to widen sidewalks) is a substantial capital expense, and therefore sidewalk widening is expected to be implemented gradually over time. Subsequent developments would be required to widen sidewalks in front of their respective buildings. On blocks without

[9] A cycle track is a bike lane that is separated from vehicle traffic and parked cars by a buffer zone.

development opportunity sites, sidewalk widening may need to be undertaken by the City as funding is available, and would have to compete with other transportation funding priorities. The following describes the specific proposals Folsom, Howard, Third, Fourth, Harrison, Bryant, and Brannan streets.

Howard/Folsom

Two different options are being analyzed for the couplet of Howard Street and Folsom Street. Howard Street would be modified between Eleventh and Third streets, while Folsom Street would be modified between Eleventh Street and The Embarcadero. Under the One-Way Option, both streets would retain a one-way configuration (except Folsom Street east of Second Street which would retain its existing two-way operation). Under the Two-way Option, both streets would be converted into two-way operation, and some modifications to Harrison Street would also occur as described below.

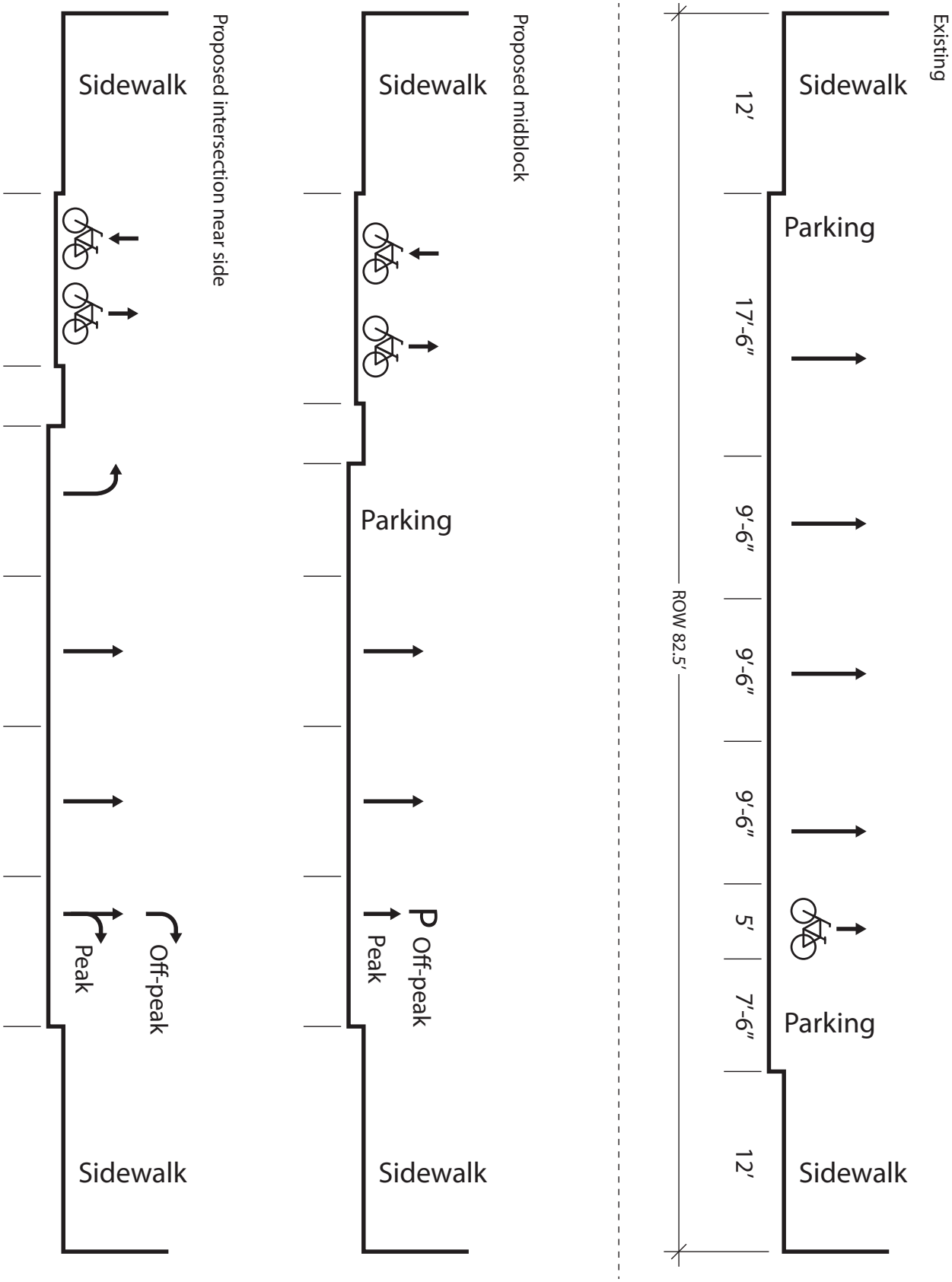
Currently, this section of Howard Street has four westbound travel lanes (three west of Sixth Street), a westbound bicycle lane, parallel parking along the north and south curbs, and 12 foot sidewalks. West of Second Street, Folsom Street has four eastbound travel lanes, an eastbound bicycle lane, parallel parking along the north and south curbs, and 10 foot sidewalks. Folsom Street east of Second Street is currently temporarily configured with a westbound transit lane to accommodate regional transit between the Temporary Transbay Terminal and the Bay Bridge. The current configuration changes block to block, but generally has two eastbound travel lanes and one transit-only westbound travel lane.

One-way Option

Under the One-way option, Howard Street between Eleventh and Third streets would be modified to have two westbound travel lanes and a two-way cycle track along the south curb. Parking would be permitted along the north curb during off-peak times, while during peak travel periods, parking would be prohibited to create a third westbound travel lane.

Alongside the cycle track, parking would be permitted at all times; however, at intersection approaches where left-turns are possible, parking would be removed in order to create a left-turn pocket which (along with a left-turn signal) would be necessary in order to separate left-turning vehicles from bicycles. The north sidewalk would be widened to about 15 feet, while the south sidewalk would remain at 12 feet. Figures 12 and 13 (on pages 28 and 29, respectively) show a typical cross section and plan graphic for Howard Street under the proposed One-way Howard Option.

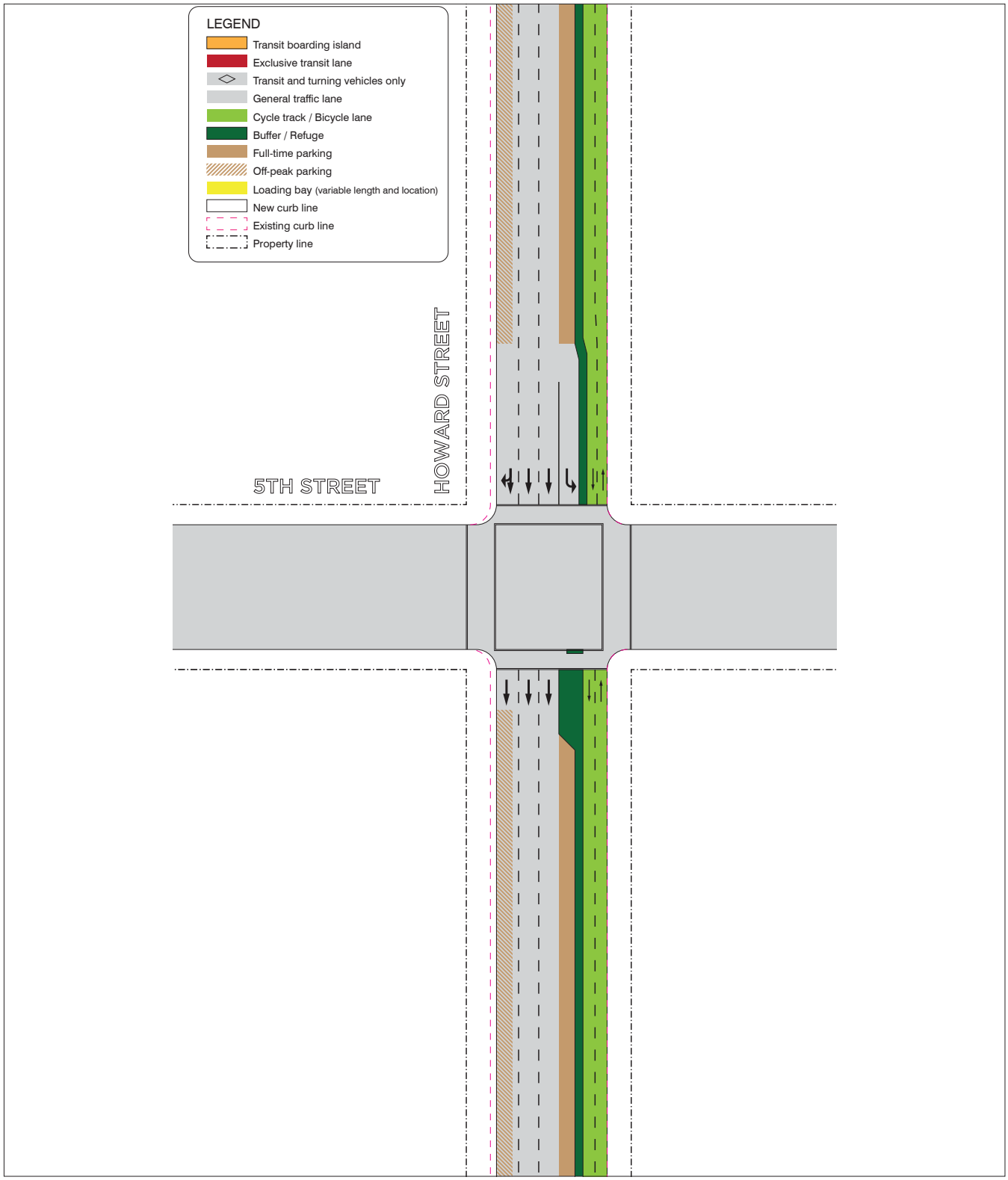
Under the one-way option, Folsom Street between Eleventh and Second streets would be modified to have two eastbound travel lanes and a two-way cycle track along the north curb. East of Sixth Street, parking would be permitted along the south curb during off-peak times, while during peak travel periods, parking would be prohibited to create an eastbound transit-only lane. Alongside the cycle track, parking would be permitted at all times; however, at intersection approaches where left-turns are possible, parking would be removed in order to create a left-turn pocket which (along with a left-turn signal) would be necessary in order to separate left-turning vehicles from bicycles. The south sidewalk



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SOURCE: San Francisco Planning Department

Figure 12
Howard/Folsom One-Way Option:
Howard Street Existing and Proposed Typical Cross Sections



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SOURCE: San Francisco Planning Department

Figure 13
Howard/Folsom One-Way Option:
Howard Street Proposed Plan View

would be widened to about 15 feet, while the north sidewalk would remain at 10 feet. See Figures 14 and 15 (on pages 31 and 32, respectively) for a typical cross section and plan graphic, respectively, of the proposed One-way Folsom Option west of Second Street.

Under the one-way option, Folsom Street between Second Street and the Embarcadero would be modified to have two eastbound and one westbound travel lane and bike lanes in both directions. In this segment, parallel parking would be provided on both sides of the street alongside the bicycle lanes at all times. Consistent with the TCDP, the north sidewalk would be widened to about 25 feet, and the south sidewalk would be widened to about 15 feet. See Figure 16, on page 33 for a typical plan view of the proposed One-way Folsom Option at Main Street.

Two-way Option

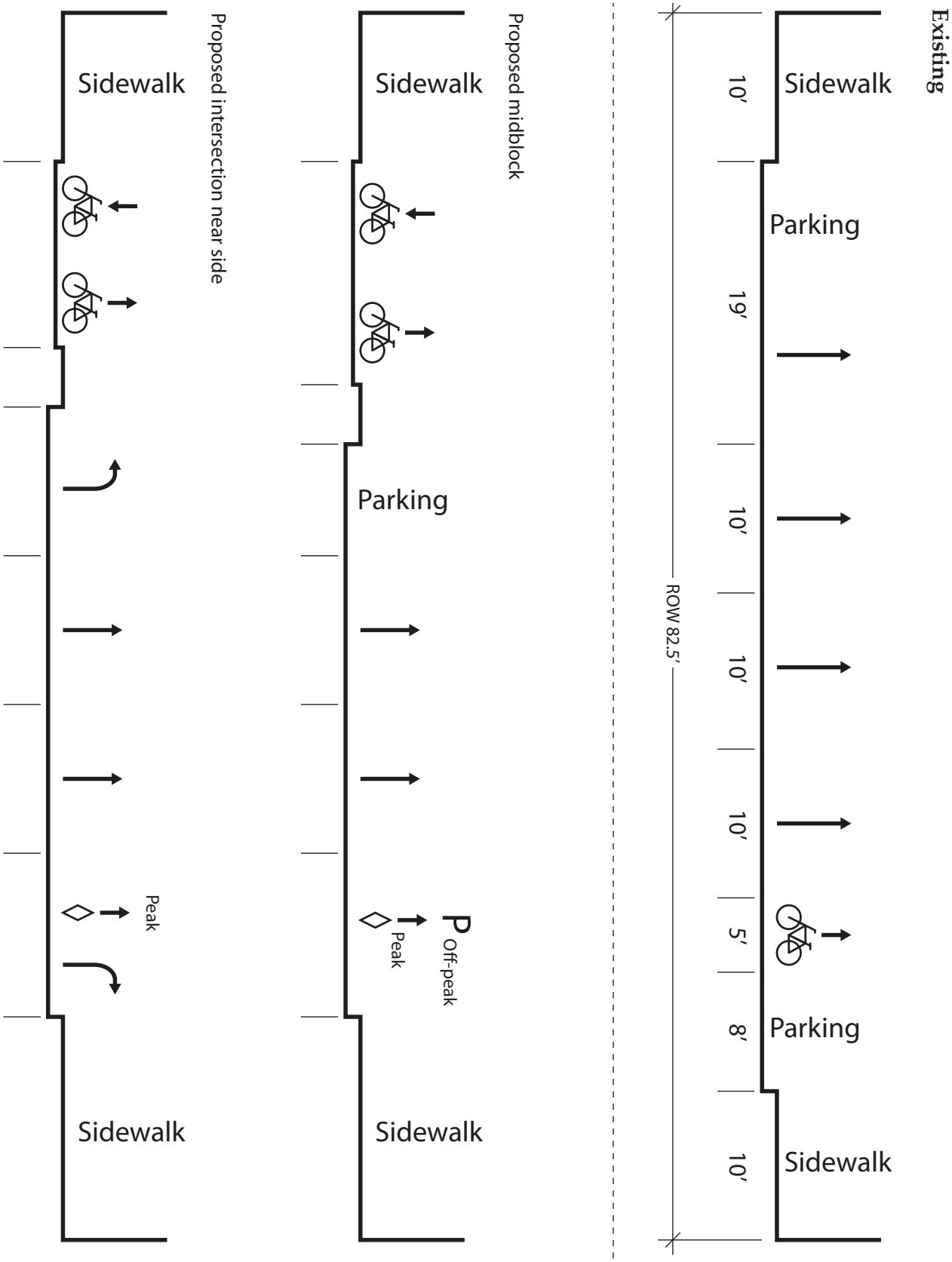
Under the two-way option, Howard Street between Eleventh and Third streets would be modified to have two westbound and two eastbound travel lanes, left-turn pockets where left turns are permitted, and bike lanes in each direction. Between Sixth and Fourth streets, at all times, two westbound and two eastbound travel lanes and one bike lane in each direction would be provided, in addition to parallel parking along either the north or south curb. Sidewalks between Fourth and Sixth streets would remain at 12 feet. Figures 17 and 18, on pages 34 and 35, respectively, depict a typical cross section and plan graphic for Howard Street between Fourth and Sixth streets under the two-way option.

Between Sixth and Eleventh streets, during off-peak hours, one travel lane and one bike lane would be provided in each direction in addition to parallel parking along the north and south curbs; during peak hours, parking would be prohibited in order to create a second travel lane in each direction.

Sidewalks between Eleventh and Sixth streets would be widened to about 15 feet. Figures 19 and 20 (on pages 36 and 37, respectively), depict a typical cross section and plan graphic for this segment of Howard Street under the two-way option.

Under the two-way option, Folsom Street between Eleventh and Fourth streets would be modified to have one eastbound and one westbound travel lane and one-way buffered or raised cycle tracks in both directions. Parallel parking would be provided on one side of the street at all times, but on block faces without parallel parking where on-street loading would be required, loading bays could be placed within the sidewalk. Right-turn pockets would be provided at intersections which (along with a right-turn signal) would be necessary in order to separate right-turning vehicles from bicycles. Sidewalks would be widened to about 15 to 18 feet. Figures 21 and 22 on pages 38 and 39 illustrate a typical cross section and plan view for Folsom Street between Eleventh and Fourth streets under the two-way option.

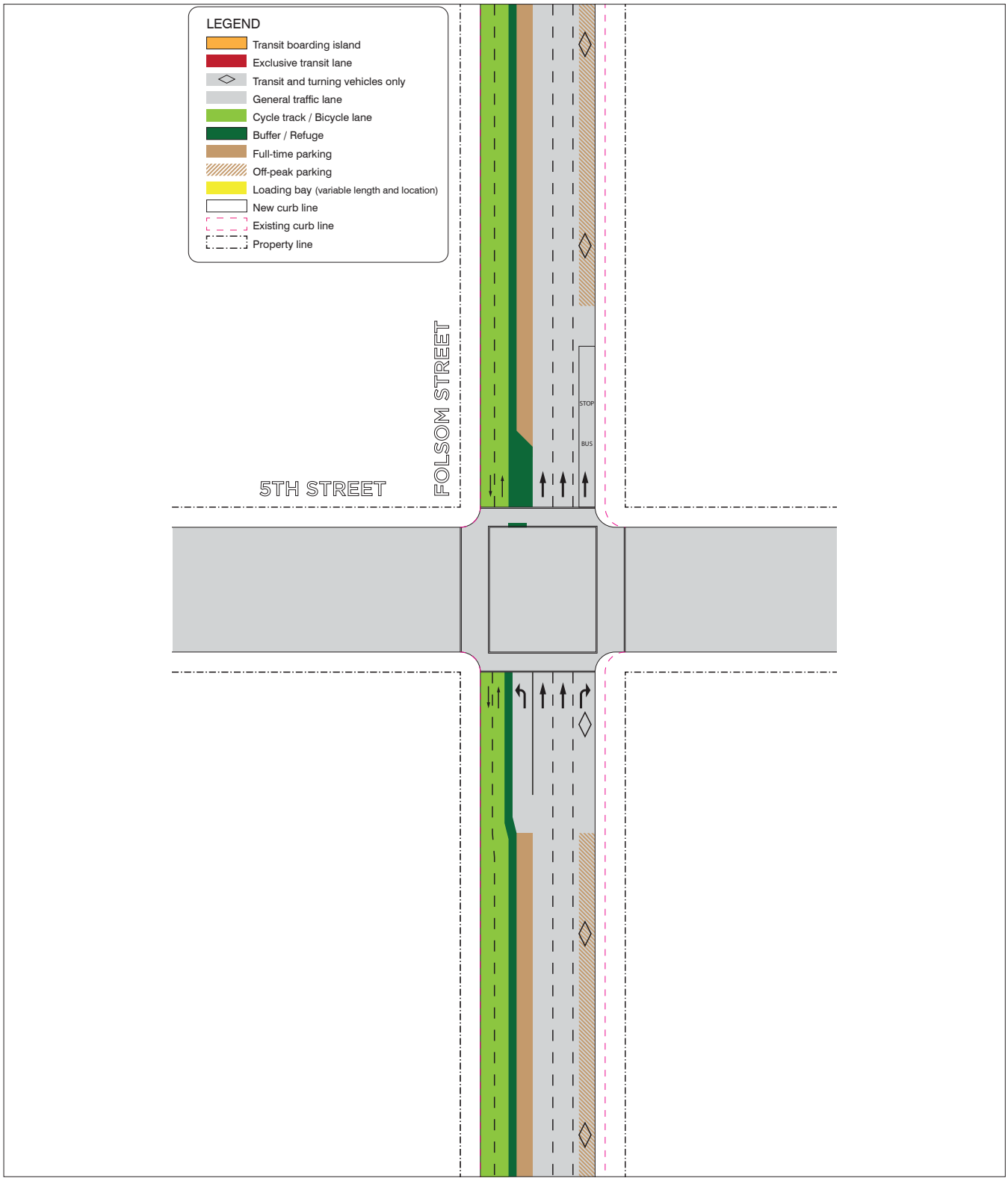
Under the two-way option, between Fourth and Second streets, Folsom Street would be modified to have one eastbound transit-only lane, one eastbound travel lane, one westbound travel lane, and one-way buffered or raised cycle tracks in both directions. Westbound auto traffic on Folsom Street would be required to turn right onto northbound Third Street during peak periods (vehicle access to the north curb of Folsom between Third and Fourth would be accommodated by turning left onto westbound Folsom



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SOURCE: San Francisco Planning Department

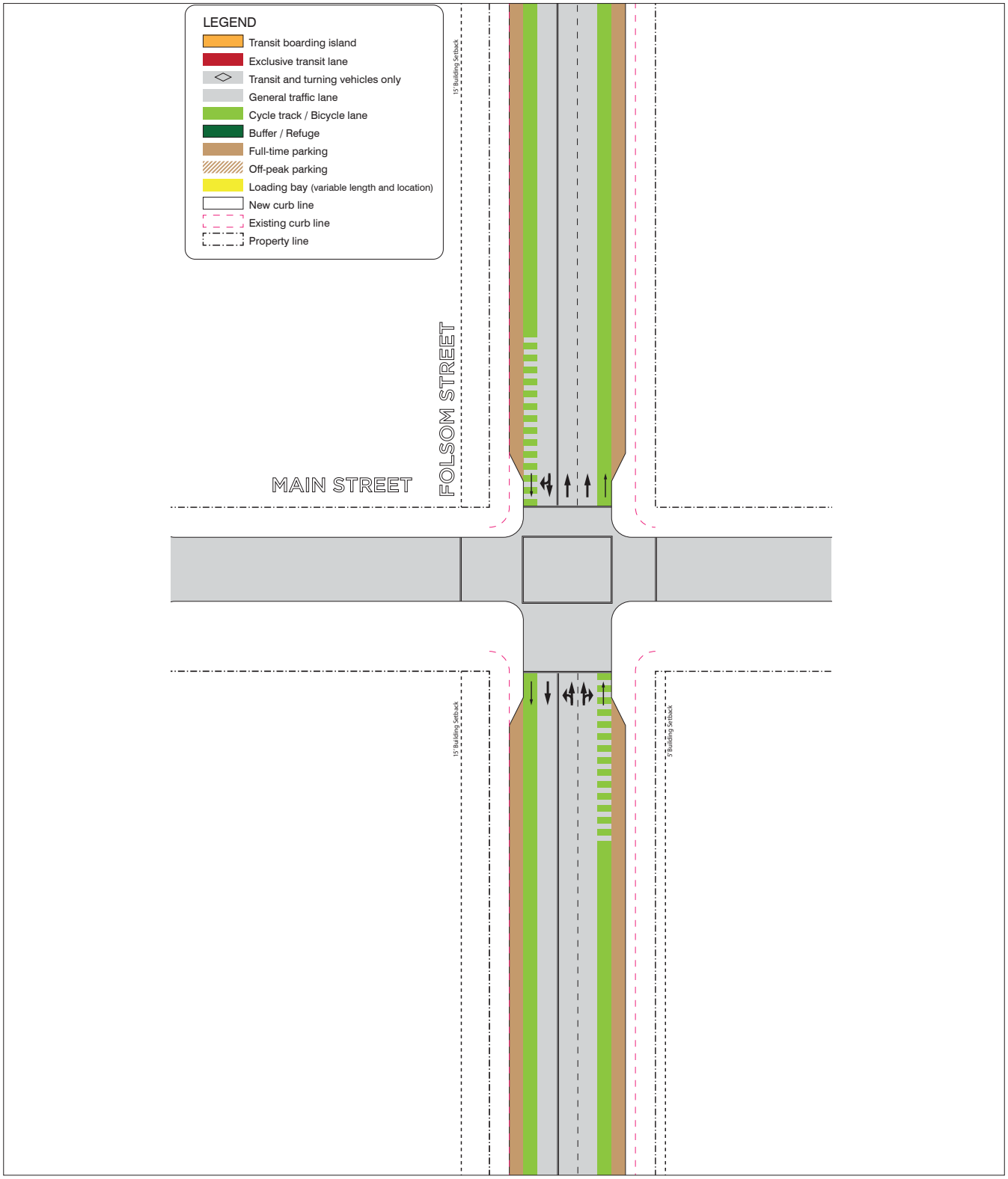
Figure 14
Howard/Folsom One-Way Option:
Folsom Street Existing and Proposed Typical Cross Sections



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SOURCE: San Francisco Planning Department

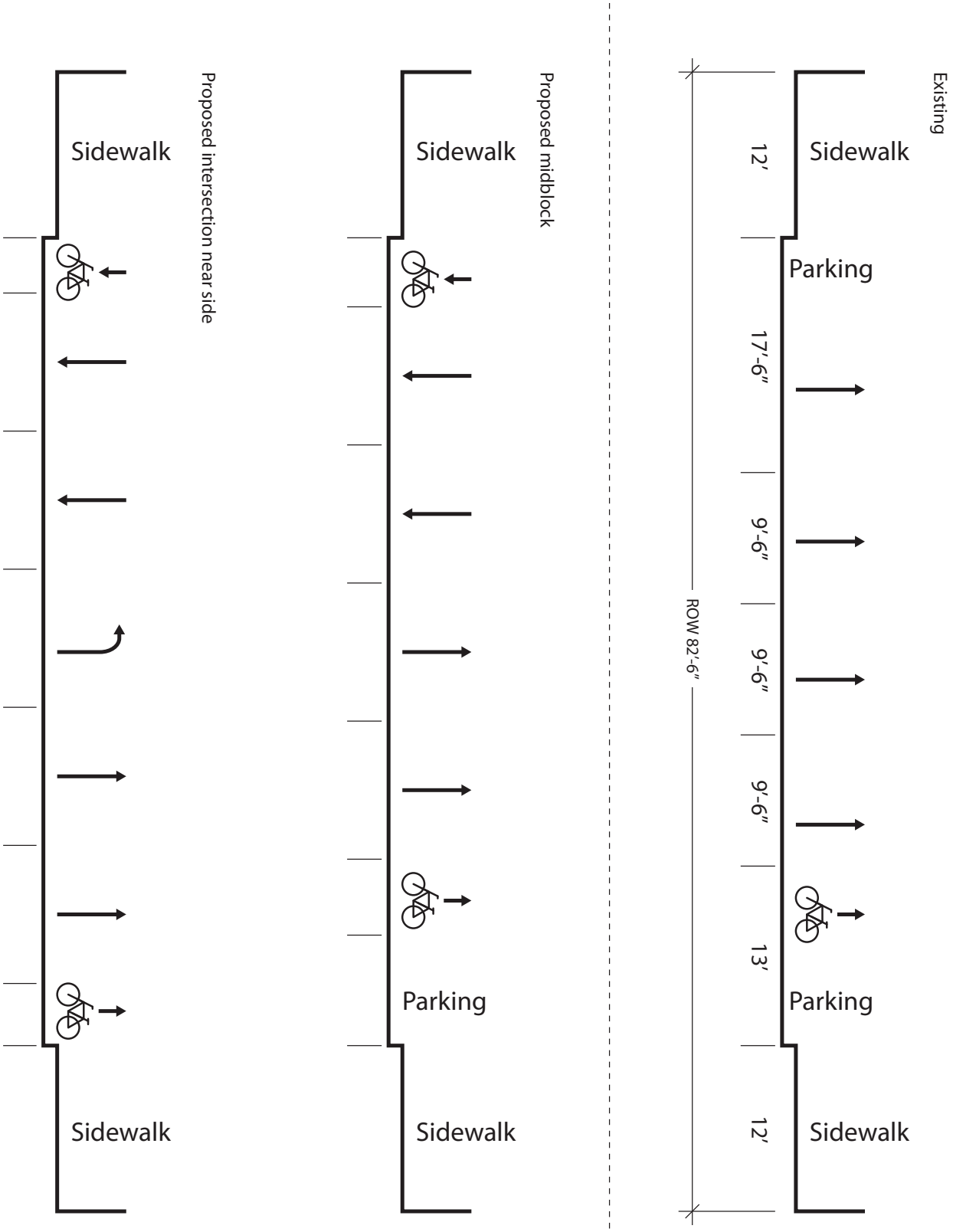
Figure 15
Howard/Folsom One-Way Option:
Folsom Street Proposed Plan View West of Second Street



SOURCE: San Francisco Planning Department

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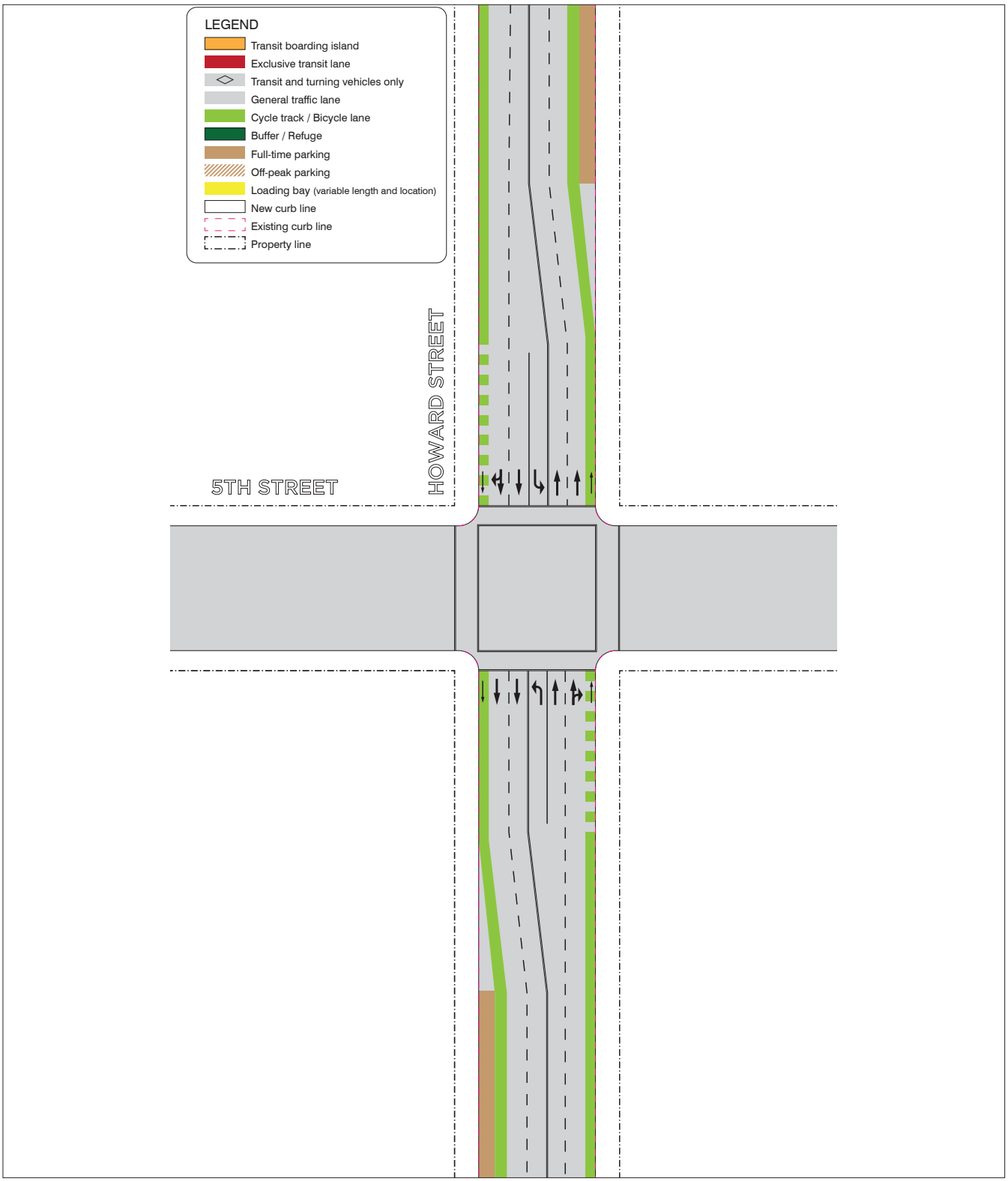
Figure 16
Howard/Folsom One-Way Option:
Folsom Street Proposed Plan View at Main Street



SOURCE: San Francisco Planning Department

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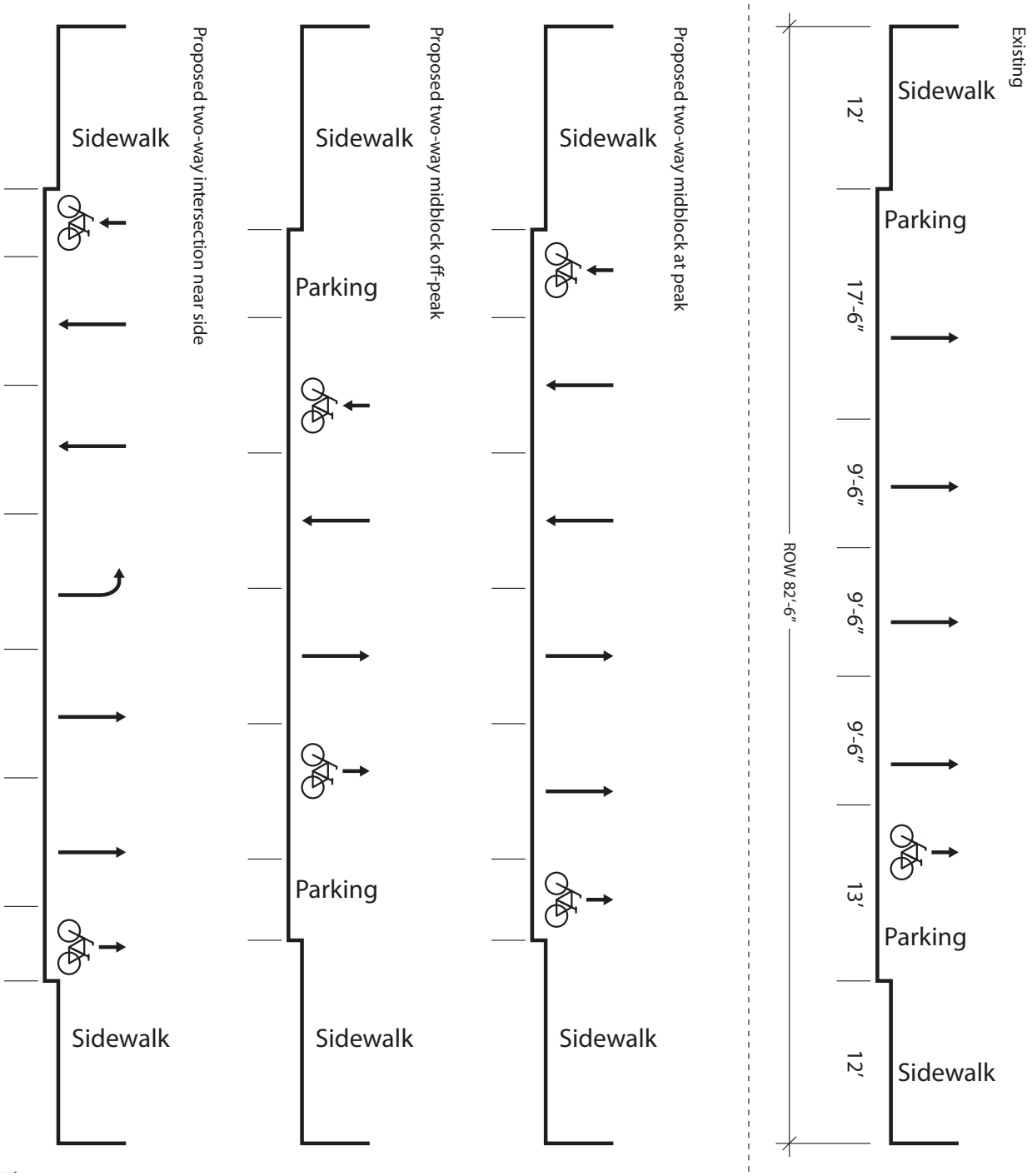
Figure 17
Howard/Folsom Two-Way Option:
Howard Street Between Fourth and Sixth Streets
Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

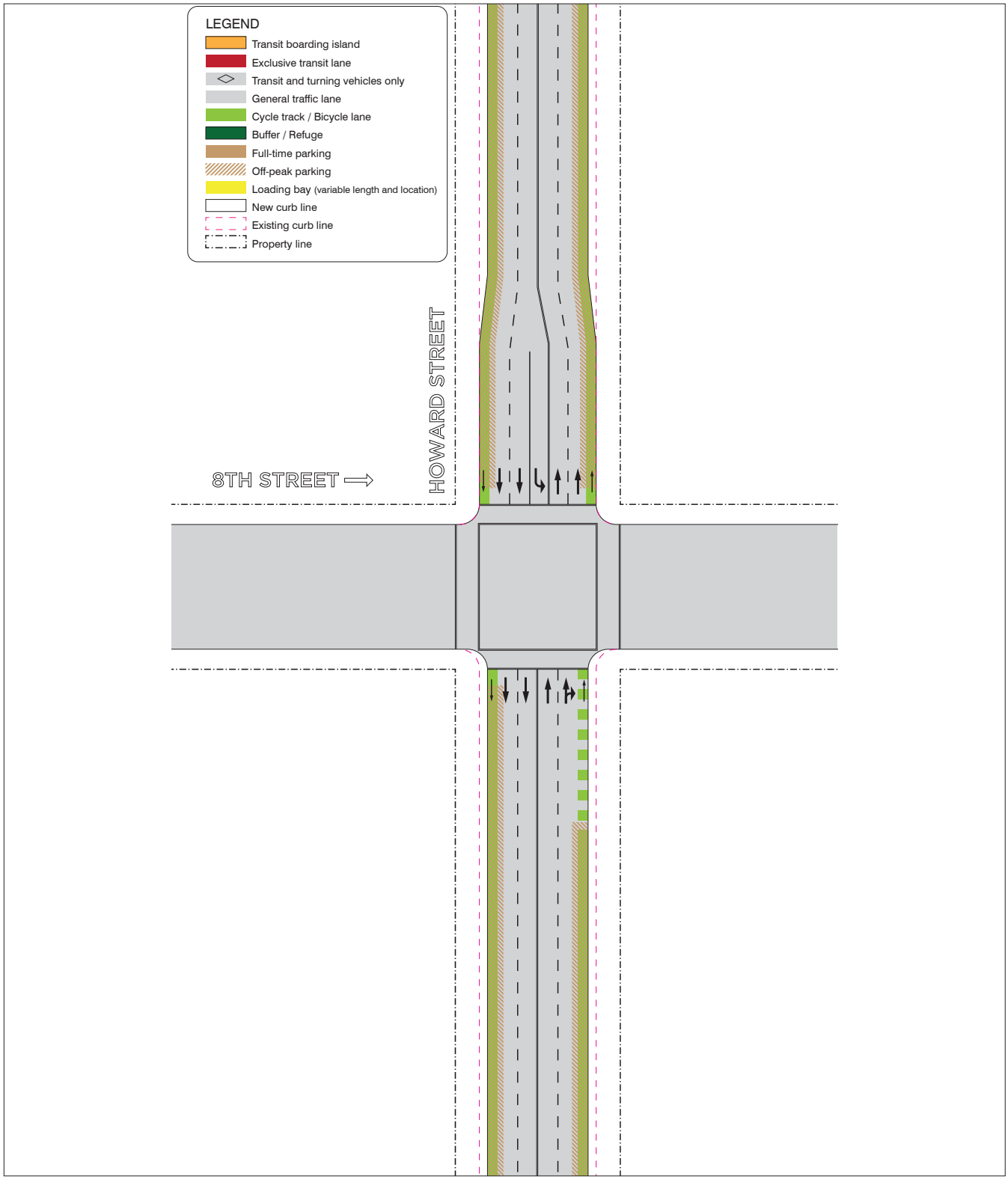
Figure 18
Howard/Folsom Two-Way Option:
Howard Street Between Fourth and Sixth Streets Plan View



SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

Figure 19
Howard/Folsom Two-Way Option:
Howard Street Between Sixth and Eleventh Streets
Existing and Proposed Typical Cross Sections

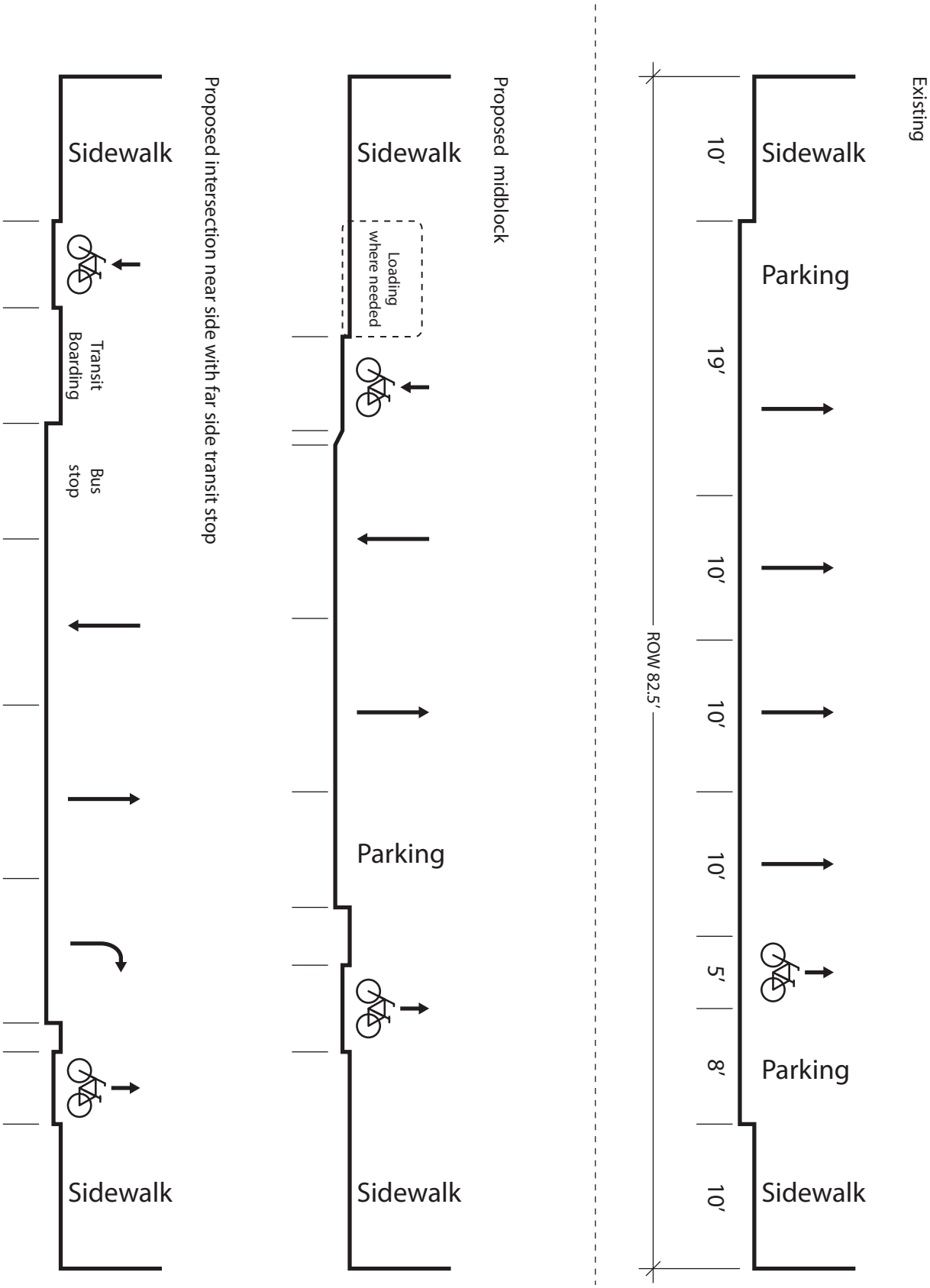


Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 20

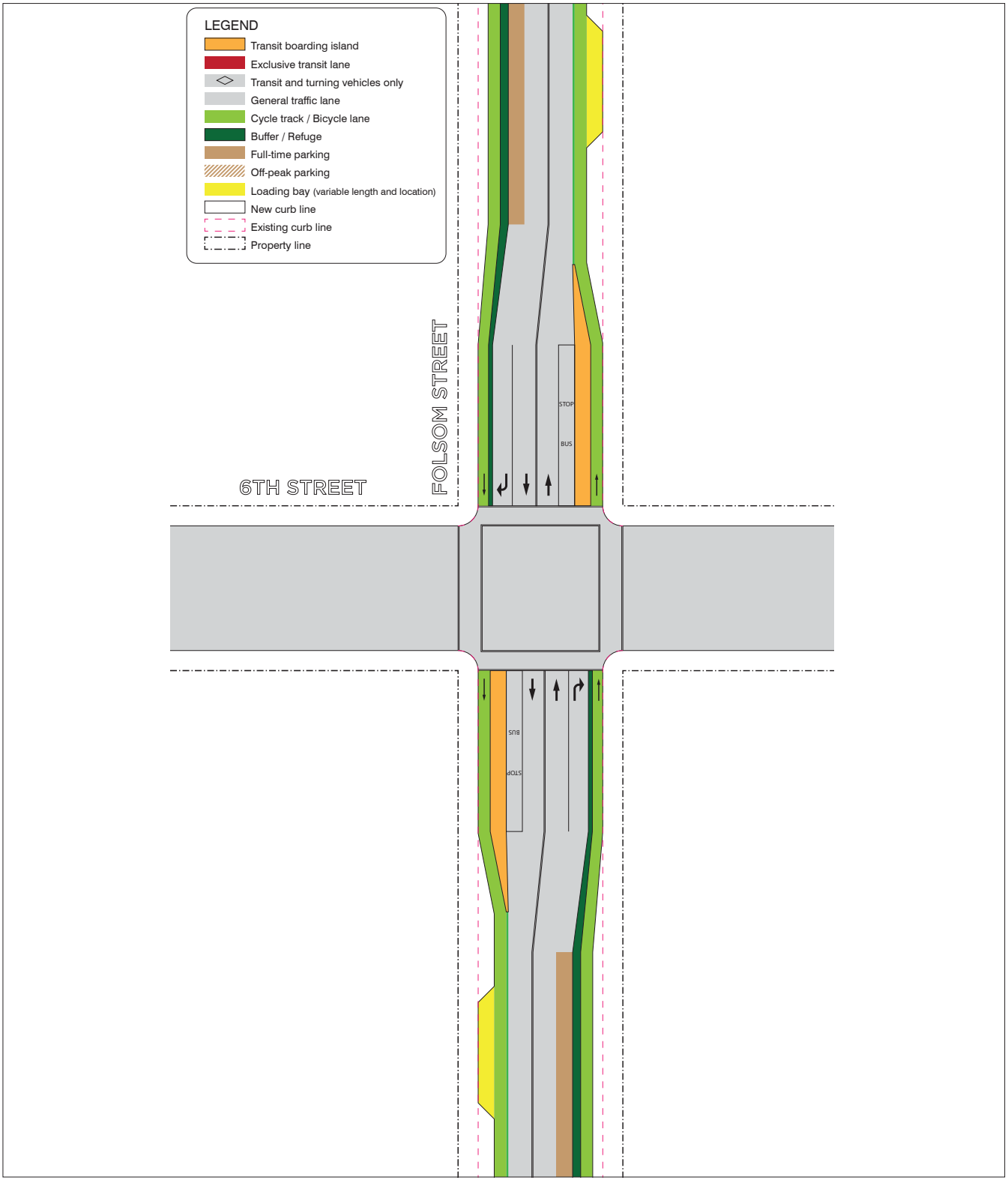
Howard/Folsom Two-Way Option:
Howard Street Between Sixth and Eleventh Streets Proposed Plan View



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 21
Howard/Folsom Two-Way Option:
Folsom Street Between Eleventh and Fourth Street
Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 22

Howard/Folsom Two-Way Option:
Folsom Street Between Eleventh and Fourth Proposed Plan View

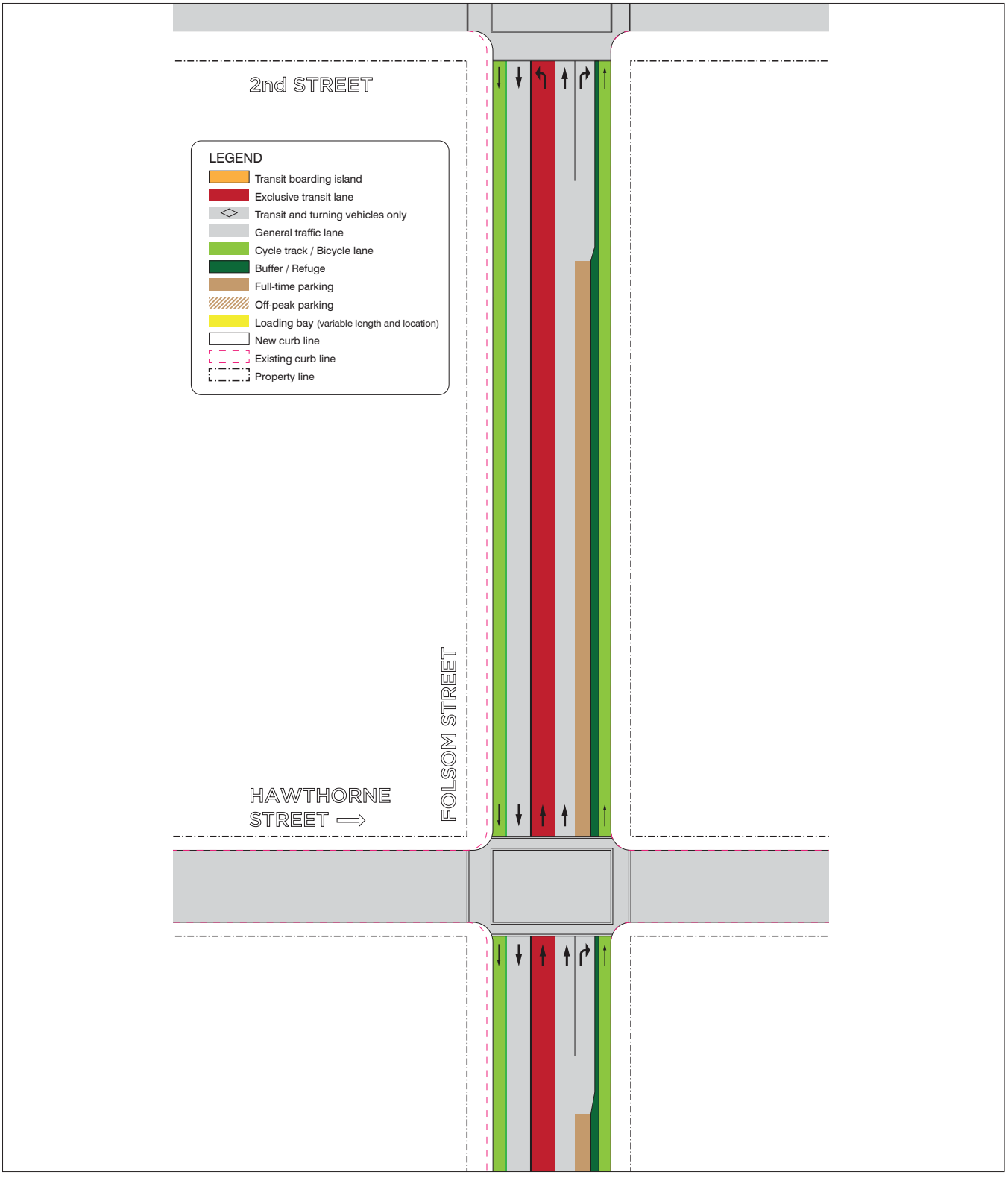
from northbound Third). Eastbound vehicle traffic on Folsom Street would be required to turn right onto southbound Fourth Street during peak periods (vehicle access to the south curb of Folsom between Fourth and Third would be accommodated by turning left onto eastbound Folsom from southbound Fourth). Parallel parking would be provided adjacent to the eastbound cycle track.

Under the two-way option, between Second Street and The Embarcadero, Folsom Street would be modified to have one eastbound and one westbound travel lane and one-way buffered cycle tracks in both directions. Parallel parking would be provided on both sides of the street alongside the cycle tracks at all times. Right-turn pockets would be provided at intersections which (along with a right-turn signal) would be necessary in order to separate right-turning vehicles from bicycles. Consistent with the TCDP, the north sidewalk would be widened to about 25 feet, and the south sidewalk would be widened to about 15 feet.

Under the two-way option, modifications to additional streets would also occur. Essex Street would be closed to vehicle access in order to remove the connection between Folsom Street and the Bay Bridge, but a southbound transit-only lane would be retained; see Figure 23. To accommodate vehicles destined to the Bay Bridge from southbound Fourth Street, Harrison Street would be converted into two-way operation between Third and Fourth streets (see description of Harrison Street below). Figures 24 through 26 on pages 41 to 43 show a plan view graphic for Folsom Street between Fourth and Second streets under the two-way option. Figure 27 on page 44 depicts a plan view graphic for Folsom Street at Main Street.



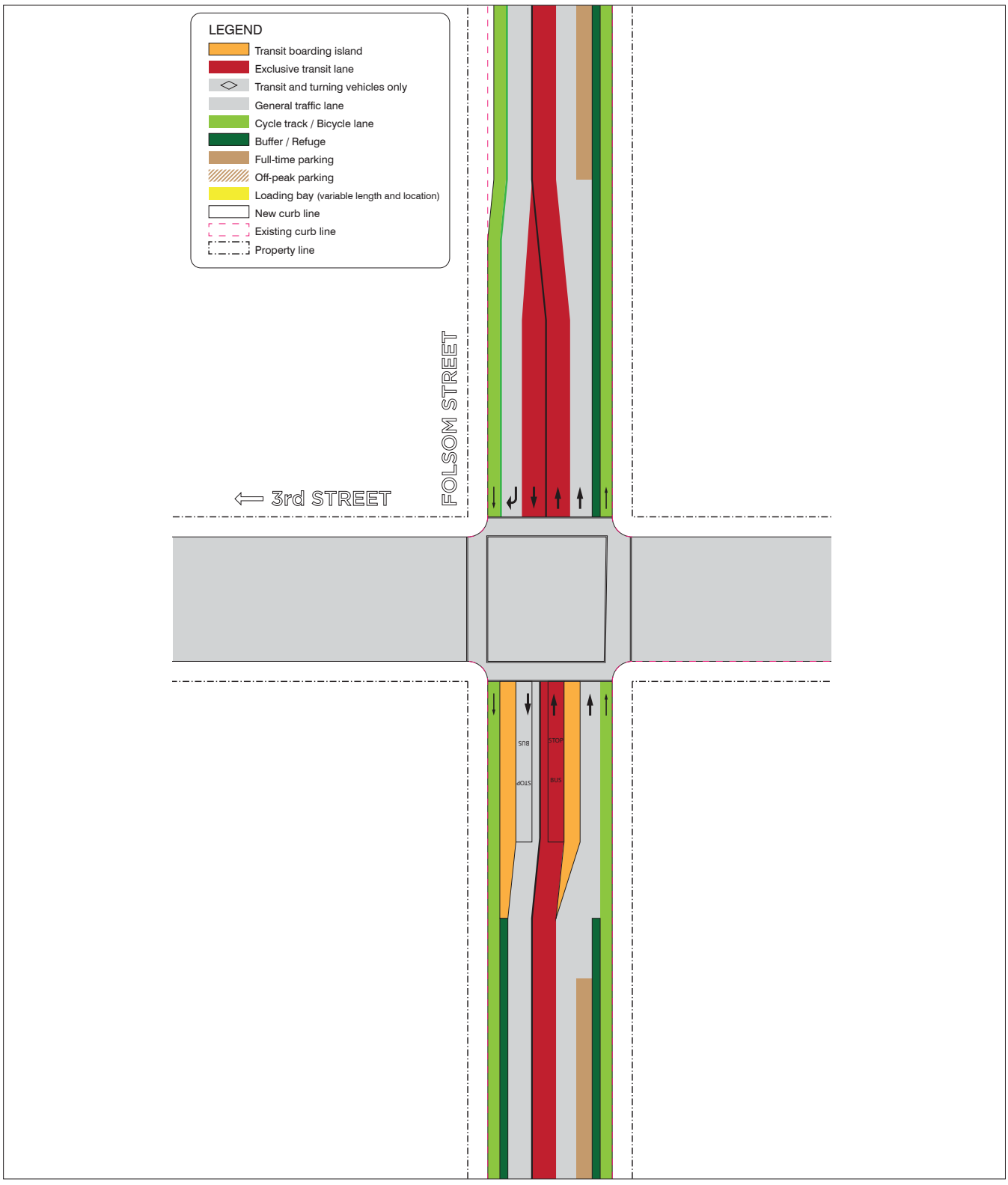
Figure 23
Essex Street Closure



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SOURCE: San Francisco Planning Department

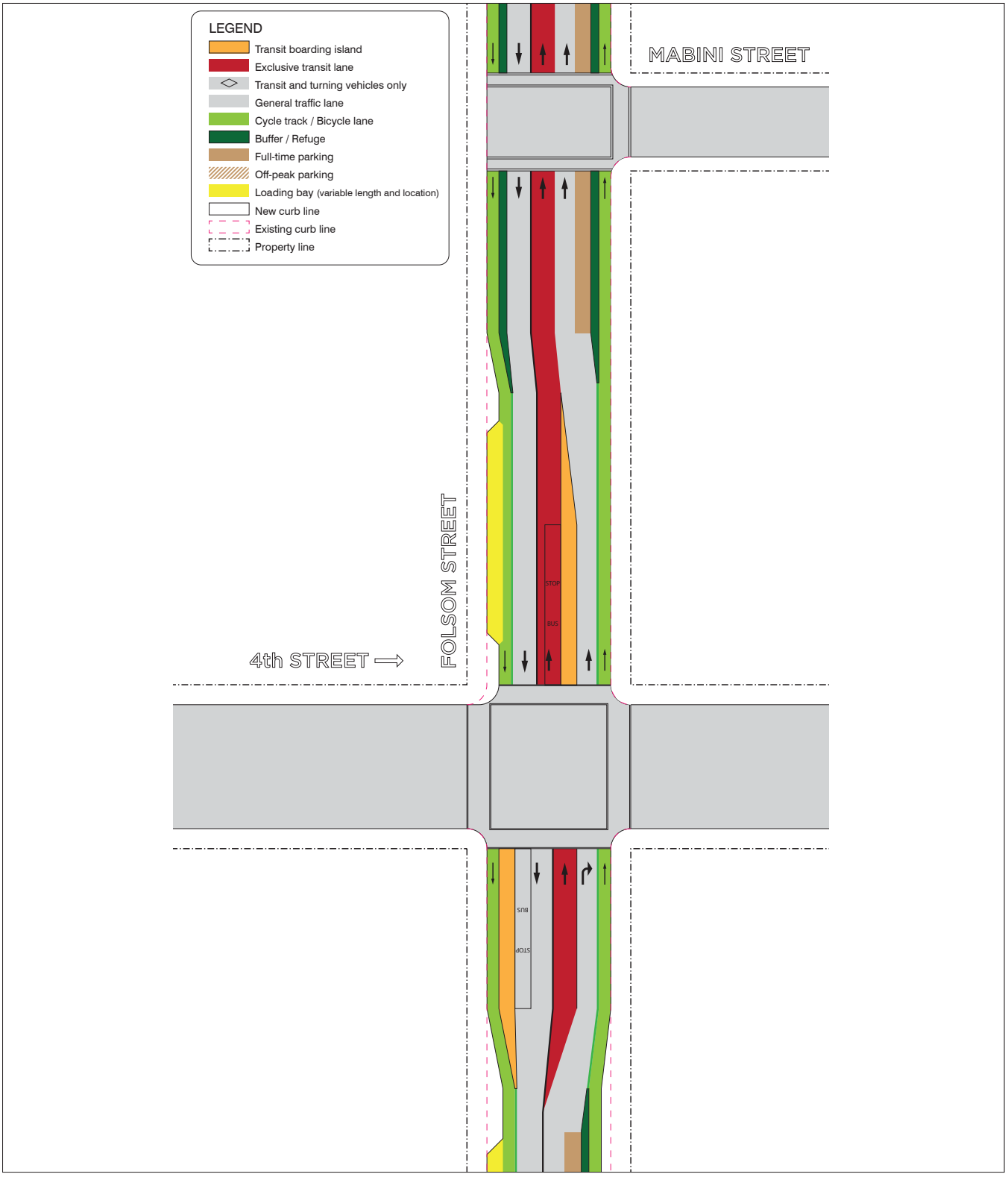
Figure 24
Howard/Folsom Two-Way Option:
Folsom Street Between Fourth and Second Streets Plan View
(Second to Hawthorne Streets)



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SOURCE: San Francisco Planning Department

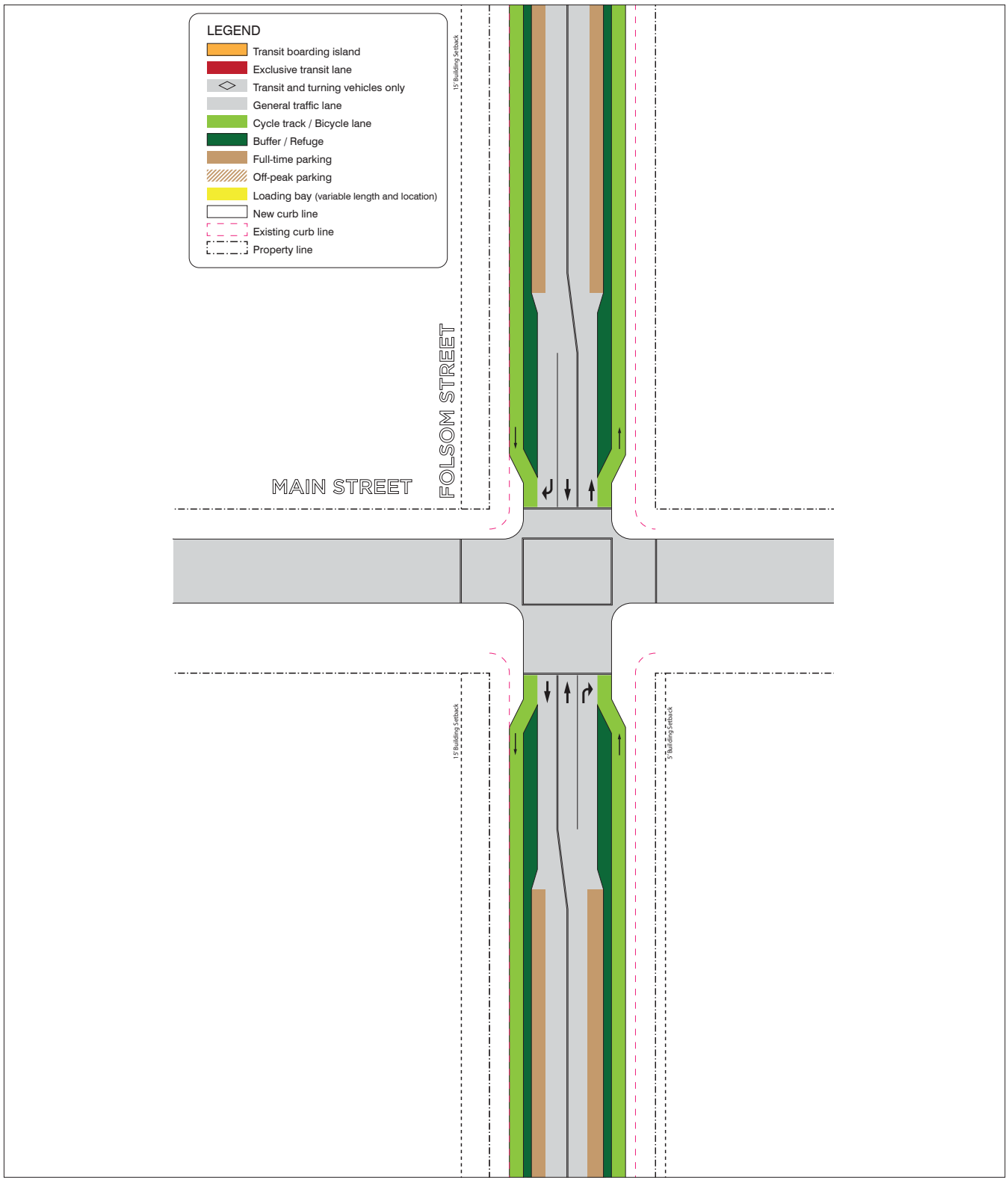
Figure 25
Howard/Folsom Two-Way Option:
Folsom Street Between Fourth and
Second Streets Plan View (at Third Street)



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SOURCE: San Francisco Planning Department

Figure 26
Howard/Folsom Two-Way Option:
Folsom Street Between Fourth and
Second Streets Plan View (at Fourth Street)



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 27
Howard/Folsom Two-Way Option:
Folsom Street between Second and
The Embarcadero Plan View (at Main Street)

Third Street

Third Street is proposed to be modified between King and Market streets. Currently this section of Third Street has three northbound travel lanes and one northbound transit-only lane, with parallel parking along the east and west curbs. During peak hours, on-street parking is prohibited along the east curb to reduce parking friction with transit vehicles; on-street parking is also prohibited along the west curb north of Bryant Street during peak hours to create a fourth travel lane.

The proposal would reconfigure Third Street to include three northbound travel lanes, a protected transit lane along the east curb, and a one-way cycle track along the west curb at all times. Sidewalks would be widened to about 15 feet, and on-street parking would be removed. At locations where on-street loading would be required, loading bays could be installed within the sidewalk. At signalized intersections, turning vehicle movements would be separated from bicycle, transit and pedestrian traffic with separate traffic signal phases. Existing and proposed typical cross sections along Third Street are shown in Figure 28 on page 46. A plan view graphic for Third Street is provided in Figure 29 on page 47.

Fourth Street

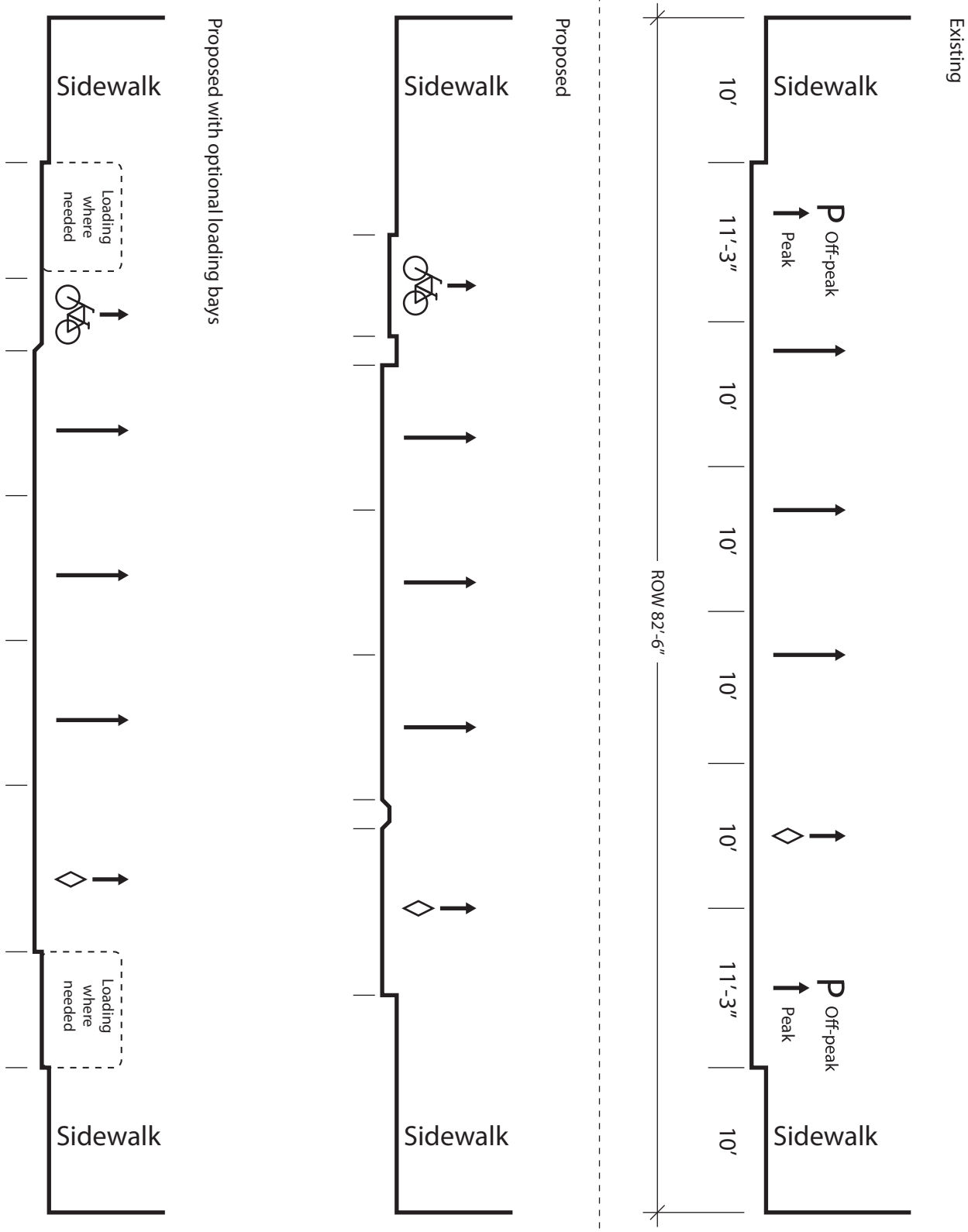
Fourth Street would be modified between Market and Harrison streets. Currently this section of Fourth Street generally has three southbound travel lanes and one southbound transit-only lane, and parallel parking along the east and west curbs.

The project would reconfigure Fourth Street to include three southbound travel lanes, a protected transit lane along the west curb, and a one-way cycle track along the east curb at all times. Sidewalks would be widened to about 15 feet, and on-street parking would be removed. At locations where on-street loading would be required, loading bays could be installed within the sidewalk. At signalized intersections, turning vehicle movements would be separated from bicycle, transit, and pedestrian traffic with separate signal phases. A typical cross section and plan graphic for the proposed street network changes along Fourth Street are shown in Figures 30 and 31 (on pages 48 and 49, respectively).

Harrison Street

Harrison Street would be modified between Second and Eleventh Streets. Currently this section of Harrison Street is configured with five travel lanes in the westbound direction (however, between Third and Second streets there are three westbound lanes and two eastbound lanes), parallel parking along both the north and south curbs, and 8 foot sidewalks. See Figure 32 on page 50 for a typical cross section of the existing conditions along Harrison Street.

The project would reconfigure Harrison Street to include a transit-only lane for the 8X Bayshore Express, and sidewalks would be widened within the Plan area between Sixth and Second streets. The length of the transit-only lane would vary between the One-way and Two-Way Howard/Folsom options. Under the Two-way Howard/Folsom Option, Harrison Street between Seventh and Tenth streets would have angled parking and fewer travel lanes. This is elaborated below.

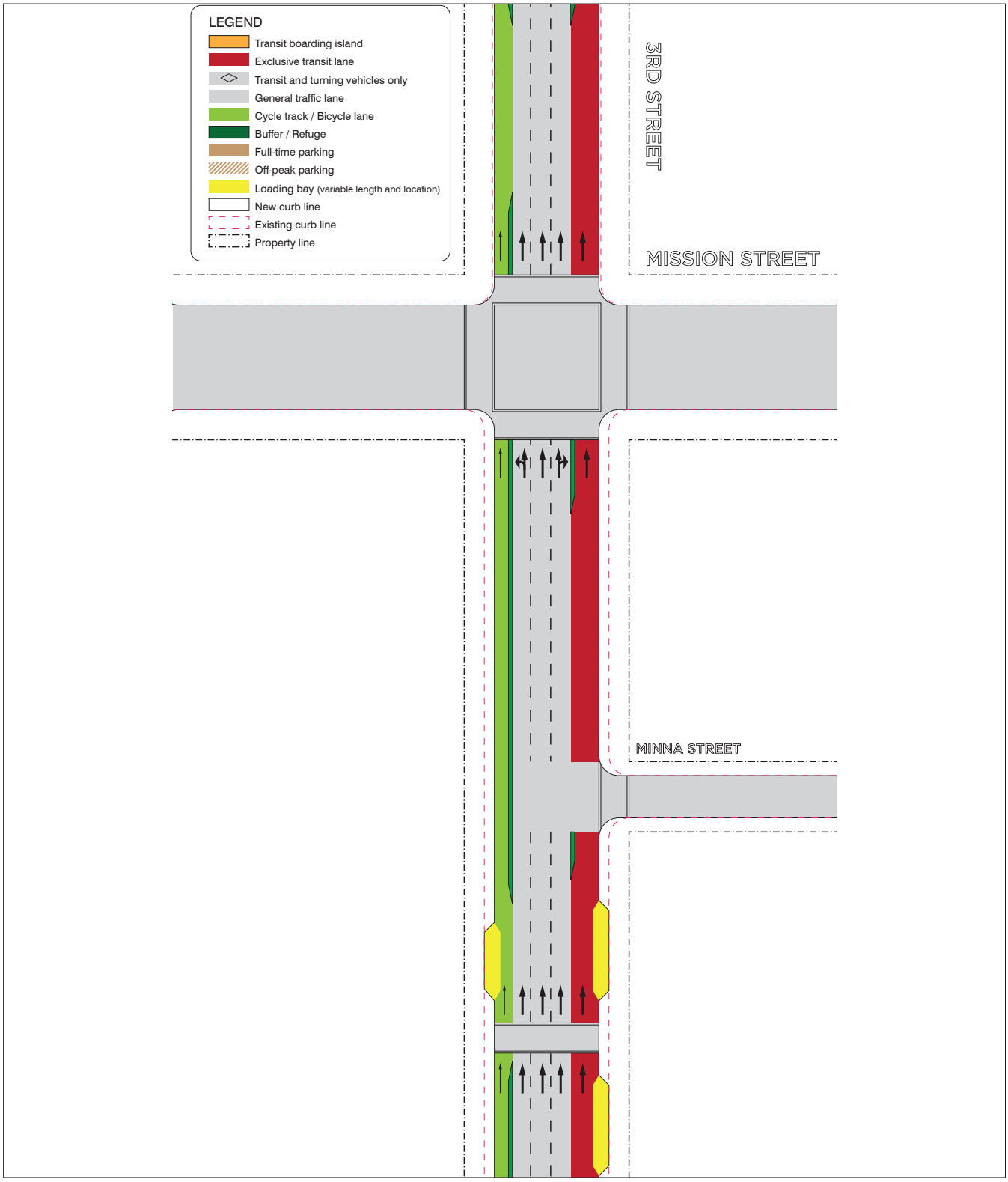


Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 28

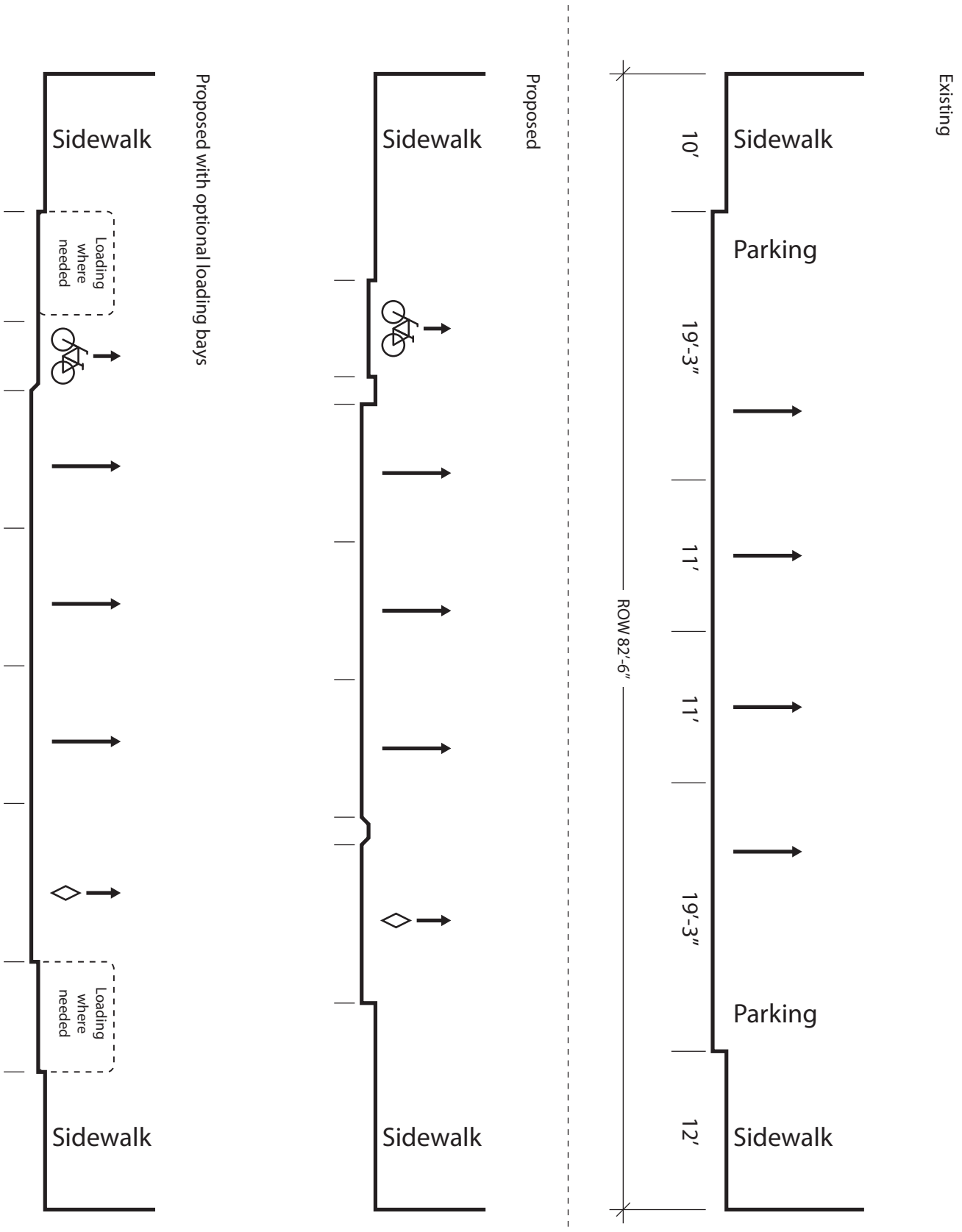
Third Street Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 29
Third Street Proposed Plan View

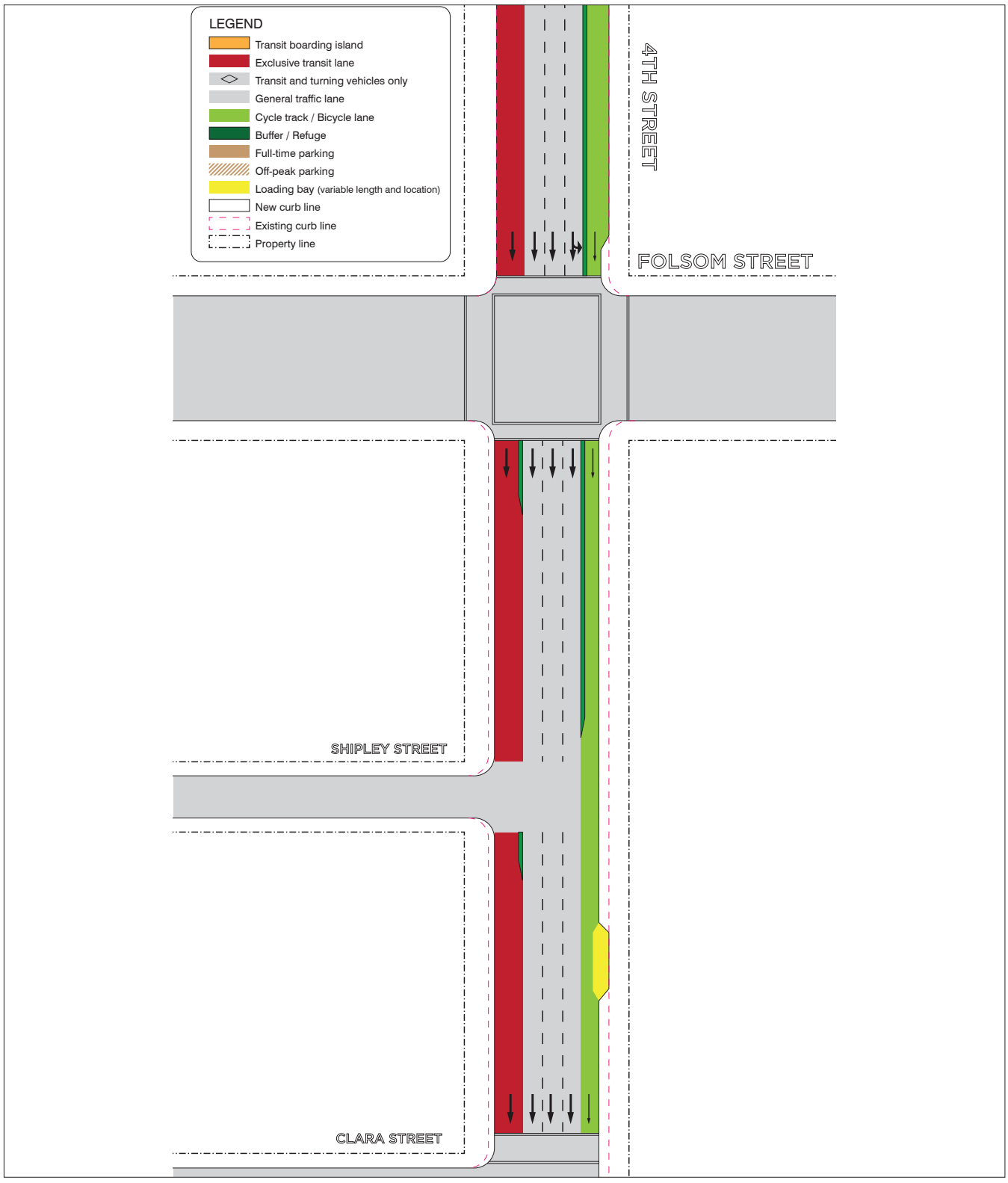


Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 30

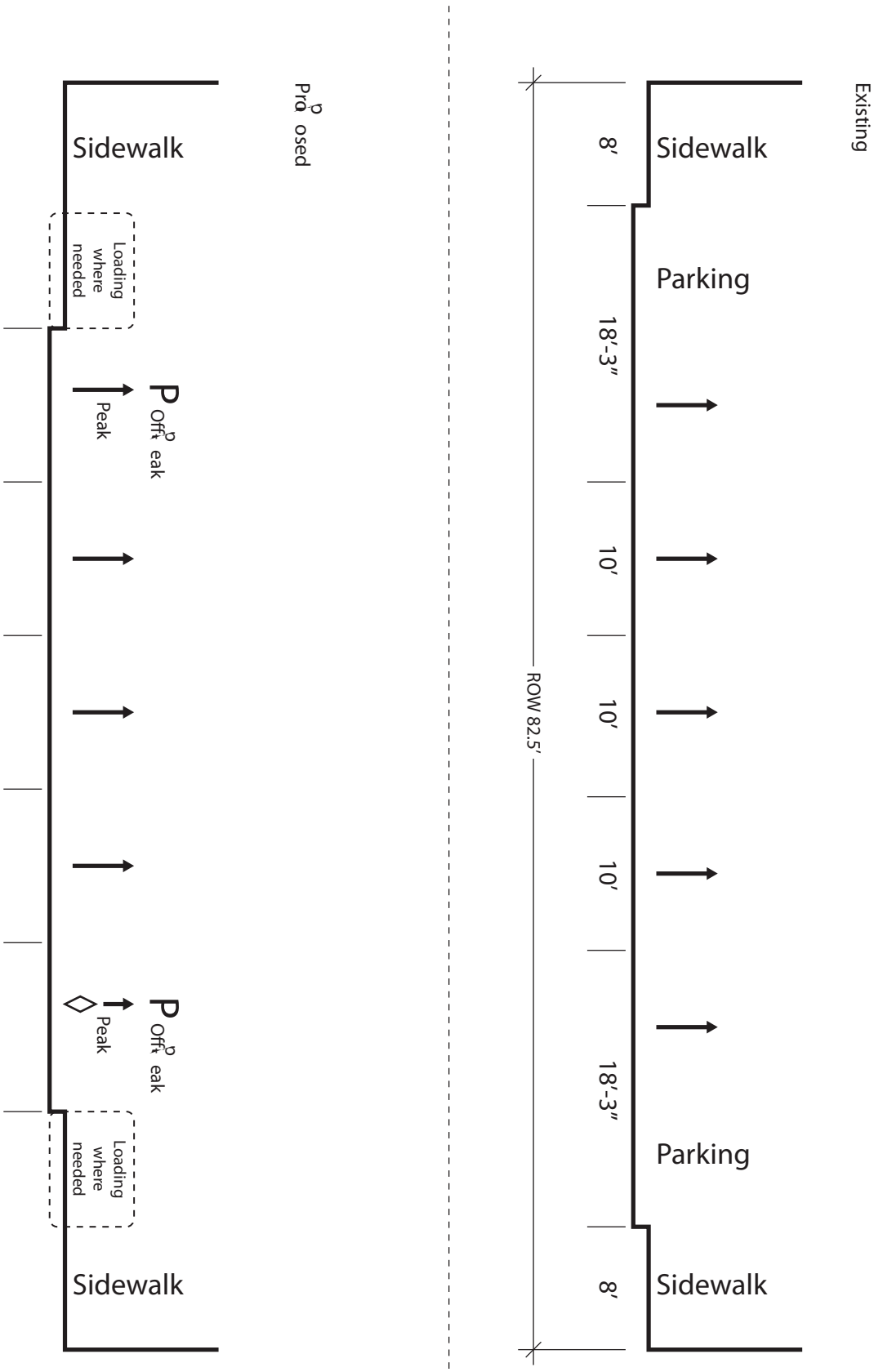
Fourth Street Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 31
Fourth Street Proposed Plan View



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 32
Howard/Folsom One-Way Option:
Harrison Street Existing and Proposed Typical Cross Sections

One-Way Howard/Folsom Option

Between Second and Third streets, there would be one westbound transit-only lane, two westbound travel lanes, two eastbound travel lanes, and no parallel parking during peak periods. During off-peak periods, parallel parking would be permitted along the north and south curbs, resulting in two westbound travel lanes and one eastbound travel lane; no transit-only lane would be provided during off-peak periods. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, about 7-foot wide loading bays could be installed within the sidewalk.

Between Third and Sixth streets, there would be four westbound travel lanes, one westbound transit-only lane, and no parallel parking during peak periods. During off-peak periods, parallel parking would be permitted along the north and south curbs, resulting in three westbound travel lanes; no transit-only lane would be provided during off-peak periods. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, about 7-foot wide loading bays could be installed within the sidewalk. A typical cross section and plan graphic of this segment of Harrison Street under the One-Way Howard/Folsom Option is shown in Figures 32 and 33 (on pages 50 and 52, respectively).

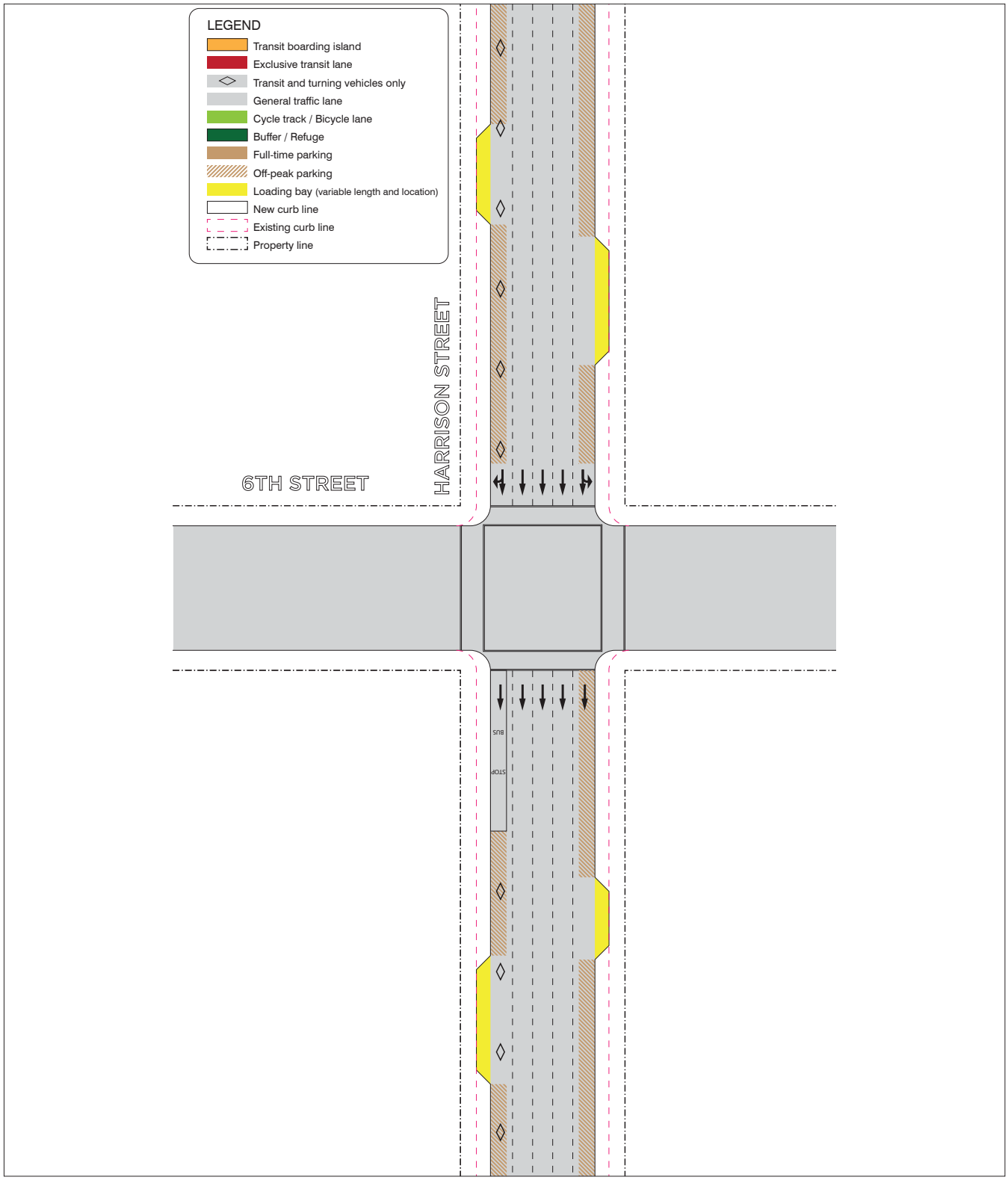
Between Sixth and Tenth streets, there would be four westbound travel lanes, one westbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide. At Seventh Street, there would be a transit-only signal phase that would enable the outbound 8X Bayshore bus to turn left onto the southbound US 101 freeway onramp from the right lane.

Between Tenth and Eleventh streets, there would be two westbound travel lanes, one westbound transit-only lane, one eastbound travel lane, and parallel parking along both the north and south curbs at all times. Sidewalks would remain 8 feet wide.

Two-Way Howard/Folsom Option

Between Second and Fourth streets, there would be three westbound travel lanes, two eastbound travel lanes, and no parallel parking during peak periods. Harrison would be converted from one-way to two-way operation between Third and Fourth streets, in order to enable Bay Bridge-bound traffic to utilize Harrison Street instead of Folsom Street (see Two-Way Howard/Folsom description, above). During off-peak periods, parallel parking would be permitted along the north and south curbs, resulting in two westbound travel lanes and one eastbound travel lane. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, 7-foot wide loading bays could be installed within the sidewalk.

Between Fourth and Sixth streets, there would be four westbound travel lanes, one westbound transit-only lane, and no parallel parking during peak periods. During off-peak periods, parallel parking would be permitted along the north and south curbs, resulting in three westbound travel lanes; no transit-only lane would be provided during off-peak periods. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, about 7-foot wide loading bays could be installed within the sidewalk.



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 33
Howard/Folsom One-Way Option:
Harrison Street Proposed Plan View

Between Sixth and Seventh streets, there would be four westbound travel lanes, one westbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide. At Seventh Street, there would be a transit-only signal phase that would enable the outbound 8X Bayshore bus to turn left onto the southbound US 101 freeway onramp from the right lane.

Between Seventh and Ninth streets, there would be three westbound travel lanes, angled parking along the north curb at all times, and parallel parking along the south curb at all times. Sidewalks would remain 8 feet wide. Between Ninth and Tenth streets, there would be two westbound travel lanes and angled parking along both the north and south curbs at all times. Sidewalks would remain 8 feet wide. Between Tenth and Eleventh streets, there would be three westbound travel lanes, one eastbound travel lane, and parallel parking along both the north and south curbs at all times. Sidewalks would remain 8 feet wide. (See Figure 34 and Figure 35 on pages 54 and 55, respectively.)

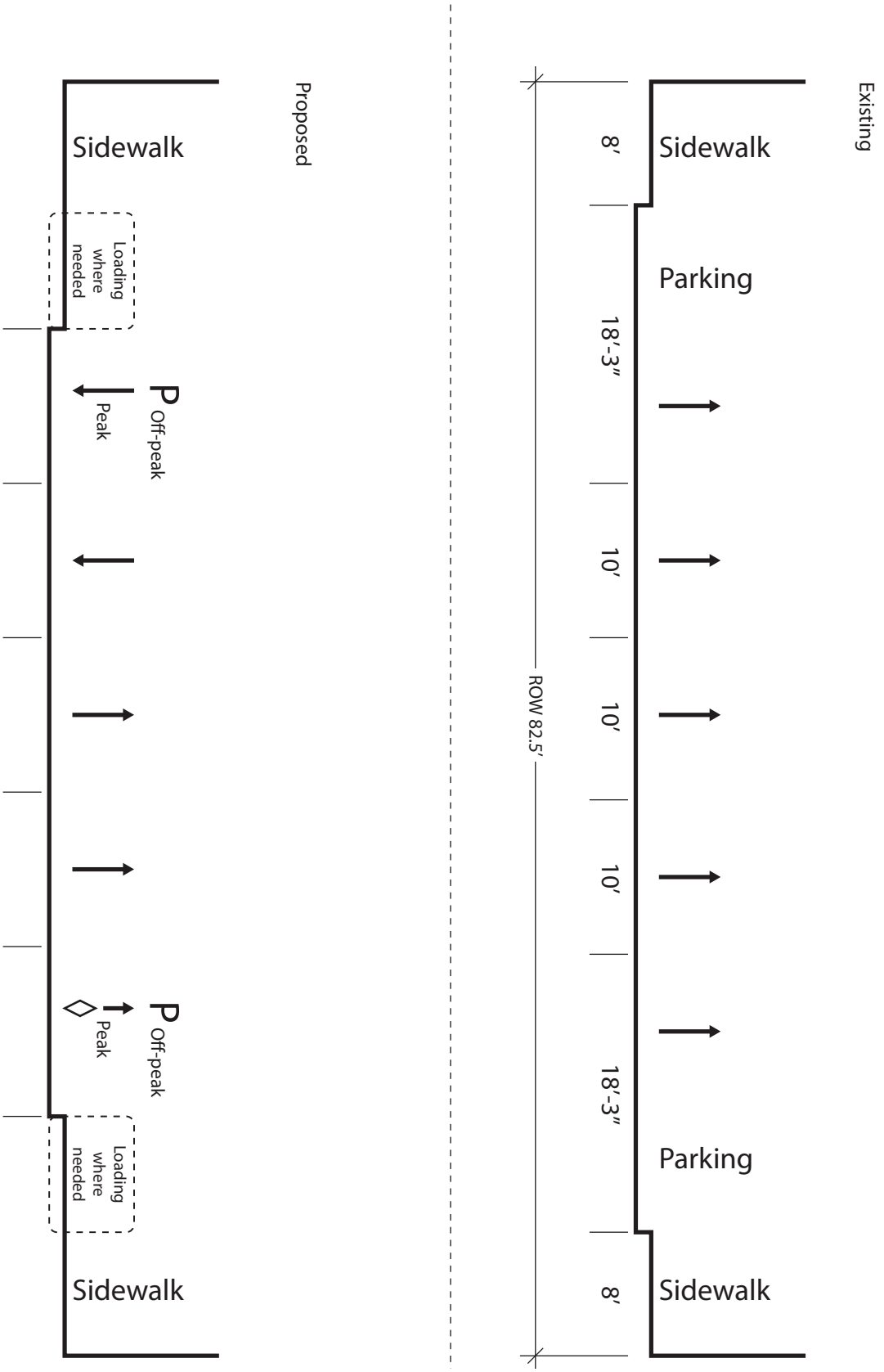
Bryant Street

Bryant Street would be modified between Second and Seventh streets. Typical cross sections for existing conditions along Bryant Street are shown in Figure 36 on page 56. Currently this section of Bryant Street is configured with five travel lanes in the eastbound direction, parallel parking along both the north and south curbs, and 8-foot sidewalks.

The proposed project would reconfigure Bryant Street to include a transit-only lane for the 8X Bayshore Express between Seventh and Third streets, and to widen sidewalks within the Plan area between Sixth and Second streets as shown in typical cross section and plan view on Figures 36 and 37 (on pages 56 and 57, respectively).

Specifically:

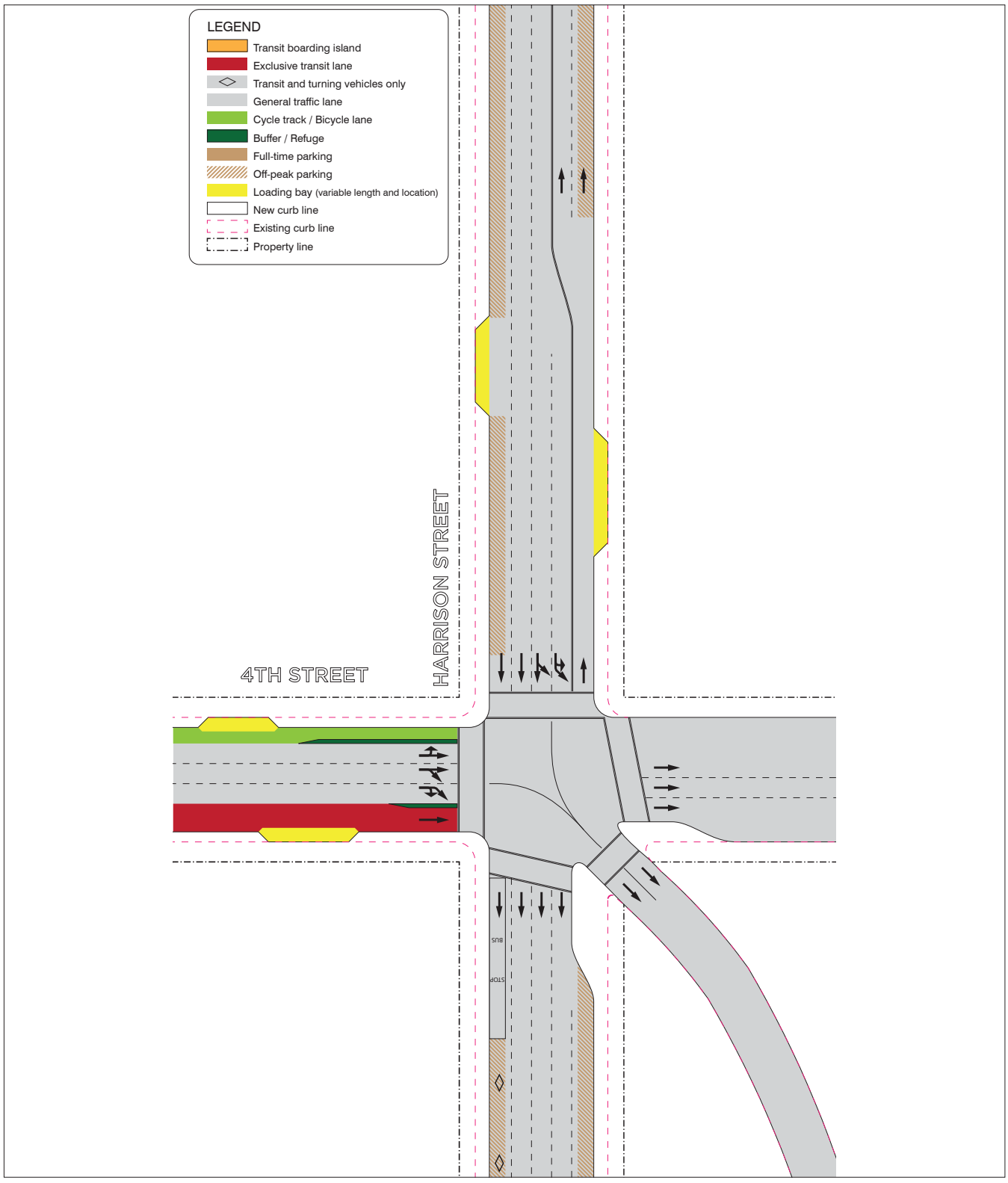
- Between Seventh and Sixth streets, there would be four eastbound travel lanes, one eastbound transit-only lane, and parallel parking along the north and south curbs at all times. Sidewalks would remain 8 feet wide.
- Between Sixth and Third streets, there would be four eastbound travel lanes, one eastbound transit-only lane, and no parallel parking during peak periods. During off-peak periods, parallel parking would be permitted along the north and south curbs, resulting in three travel lanes; no transit-only lane would be provided during off-peak periods. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, about 7-foot-wide loading bays would be installed within the sidewalk. At Third Street, there would be a transit-only signal phase that would enable the inbound 8X Bayshore bus to turn left onto northbound Third Street from the right lane. At Fifth Street, there would be a transit-only signal phase that would enable the inbound 27 Bryant bus to turn left onto northbound Fifth Street from the right lane (with implementation of the TEP, the inbound 27 would be rerouted off of Bryant Street and onto Folsom Street, in which case the transit-only signal phase would no longer be required).
- Between Third and Second streets, where transit does not operate, five eastbound travel lanes would be provided during peak periods, and no parallel parking. During off-peak travel periods, parallel parking would be permitted along the north and south curbs, resulting in three travel lanes. Sidewalks would be widened to about 15 feet. At locations where on-street loading would be required at all times, about 7-foot wide loading bays could be installed within the sidewalk.



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

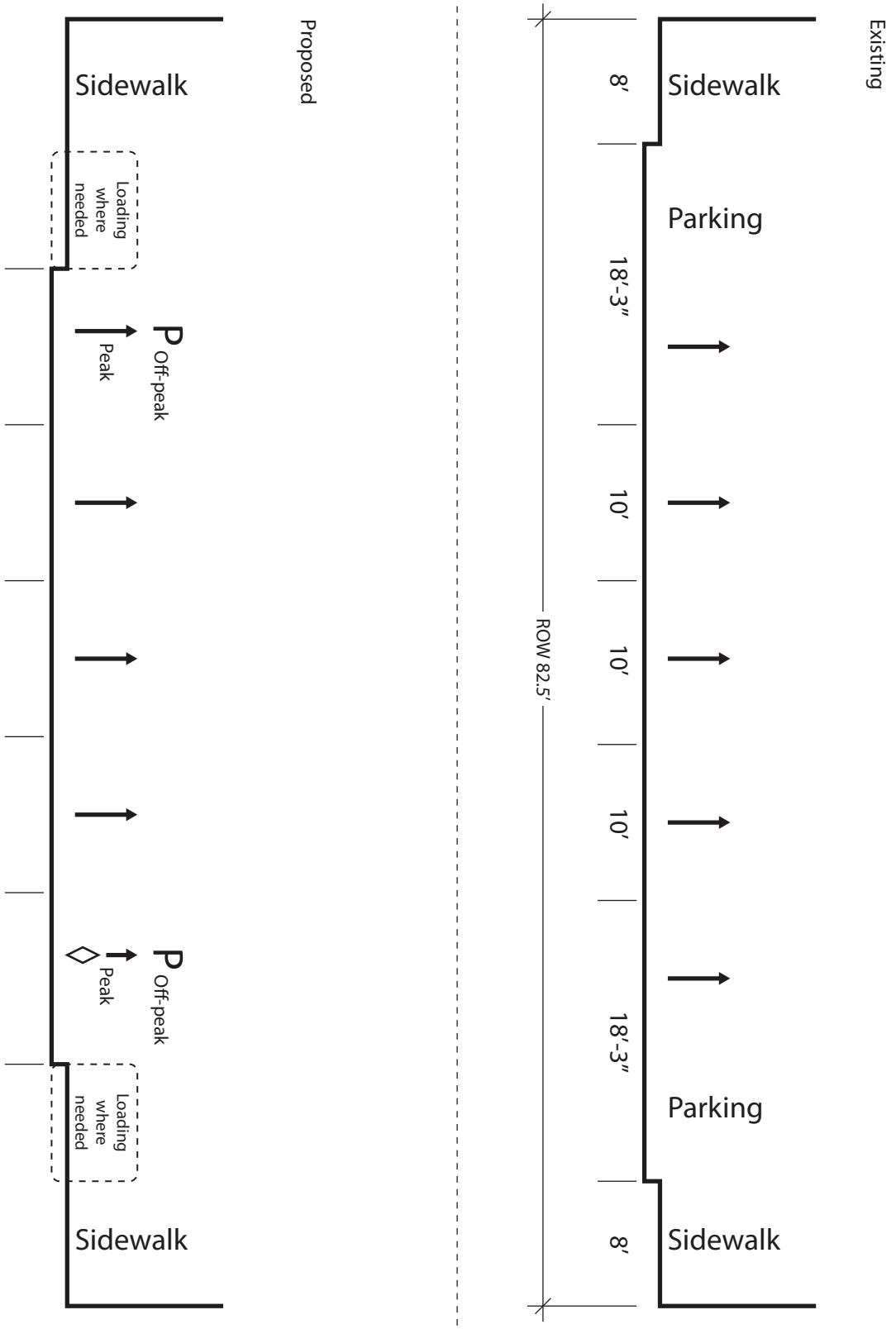
Figure 34
Howard/Folsom Two-Way Option:
Harrison Street Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 35
Howard/Folsom Two-Way Option:
Harrison Street Proposed Plan View

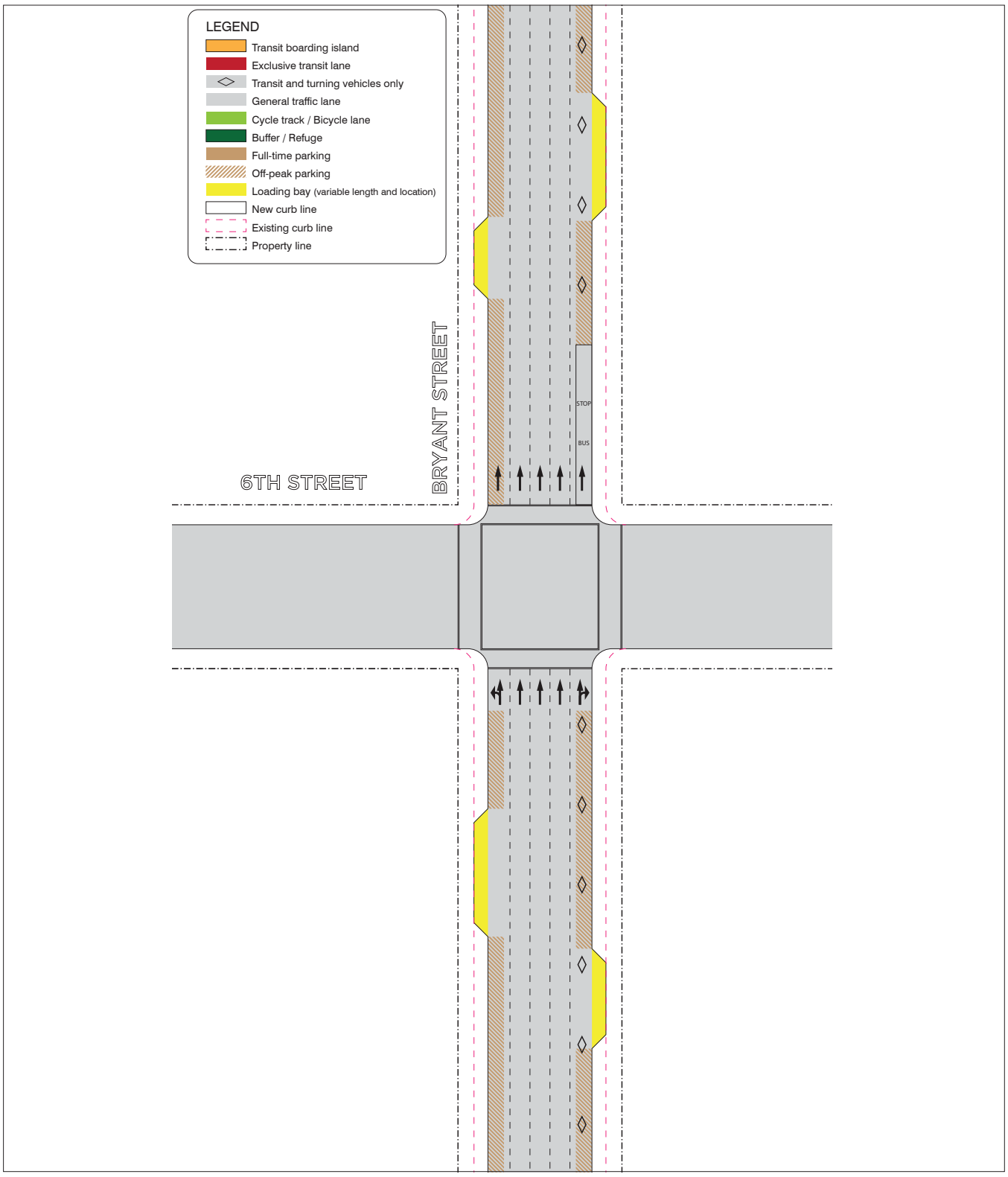


Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 36

Bryant Street Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 37
Bryant Street Proposed Plan View

Brannan Street

Brannan Street would be modified between Second and Sixth streets. Currently this section of Brannan Street is configured with two travel lanes in both the eastbound and westbound directions, parallel parking along both the north and south curbs, and 10-foot sidewalks.

The project would reconfigure Brannan Street to have one travel lane in both the eastbound and westbound directions. One-way buffered cycle tracks in each direction would be installed along the north and south curbs. Sidewalks would be widened to about 15 feet. At midblock locations, parallel parking would be permitted adjacent to either the north or south cycle track buffer. At intersection approaches, parking would be removed to create a right-turn pocket, which (along with a right-turn signal) would be necessary in order to separate right-turning vehicles from bicycles. Figures 38 and 39 (on pages 59 and 60, respectively) depict a typical cross section and plan graphic for proposed modifications to Brannan Street.

Open Space and Public Realm Improvements

Like SoMa generally, the Central SoMa Plan area has limited public open spaces and facilities. Yerba Buena Gardens, including its children's garden and carousel, in the north of the Plan area and South Park in the southeast are the only large-scale open space facilities in the Plan area. South Park is the only Recreation and Park Department property, although Victoria Manalo Draves Park and South of Market Recreation Center are just beyond the western Plan area boundary. The uneven distribution of these community assets leaves portions of the area underserved with open space. The November 2013 draft of the San Francisco General Plan's Recreation and Open Space Element (Draft ROSE) identifies portions of the Plan area as in need of new public open space.

The Western SoMa Community Plan and East SoMa Area Plan identify two areas for open space acquisition: Fourth Street between I-80 and Townsend Street and near the block bounded by Howard, Fourth, Folsom and Fifth streets. These area plans have also identified streets and alleys in the area for improvement as green connections linking neighborhoods to open space. Both the Draft ROSE and the San Francisco Better Streets Plan endorse these improvements.

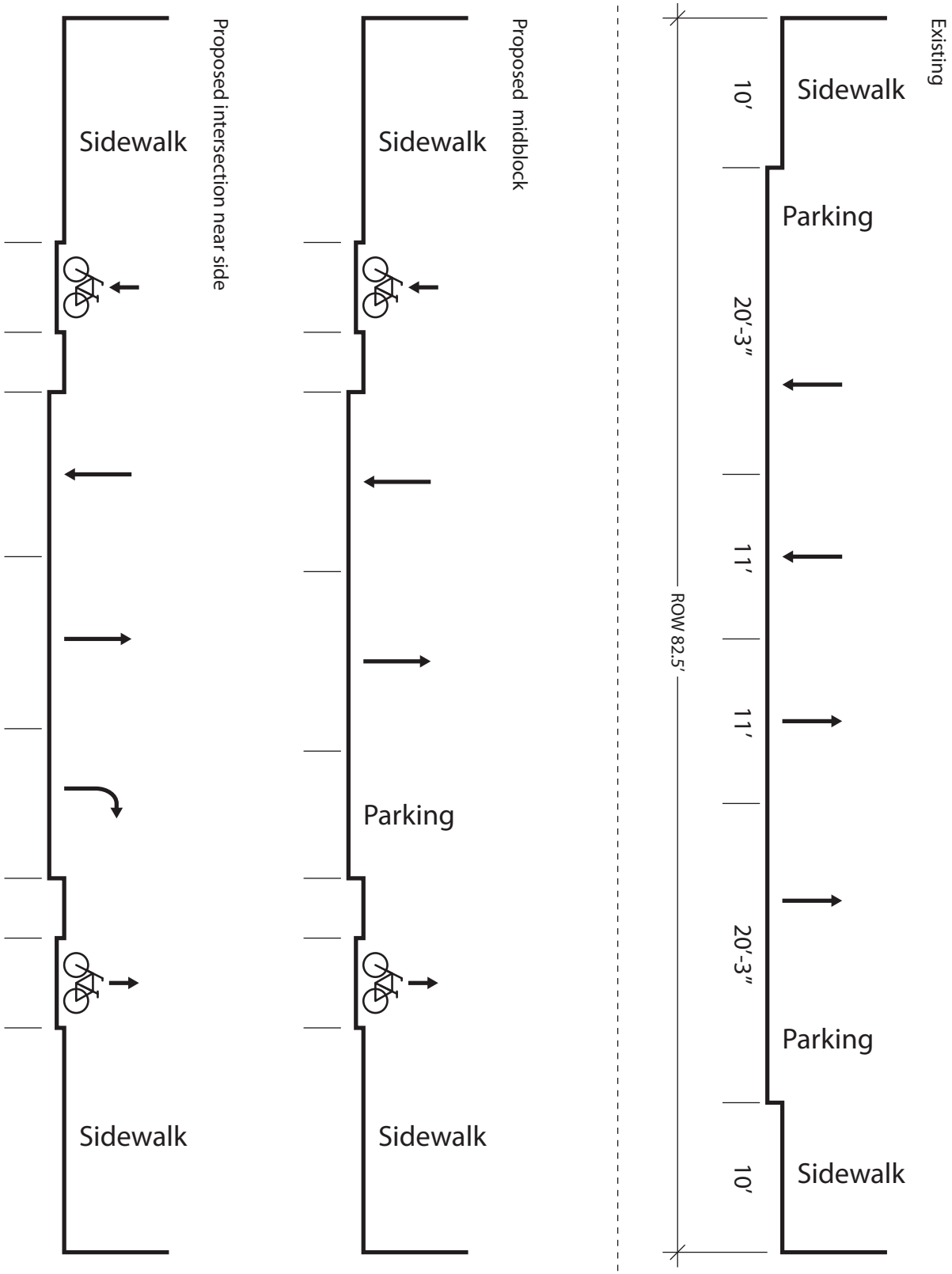
The Plan seeks to create new public open space and recreation facilities. Existing and Proposed Open Spaces are shown in Figure 40 on page 61. The Plan's open space principles are described below.

1. ***Create new publicly owned open space and recreation amenities throughout the Central SoMa Plan area.***

Proposed amenities include:

- An expanded mini-plaza at the intersection of Annie and Market streets to Stevenson Street, a new pedestrian plaza closed to vehicular traffic between Mission Street and Ambrose Bierce Alley, and a single-surface shared street[10] along the remainder of Annie Street between the two plazas.

[10] A shared street is designed for pedestrian use, but also permits low volumes and speeds of vehicles and bicycles to share the right-of-way.

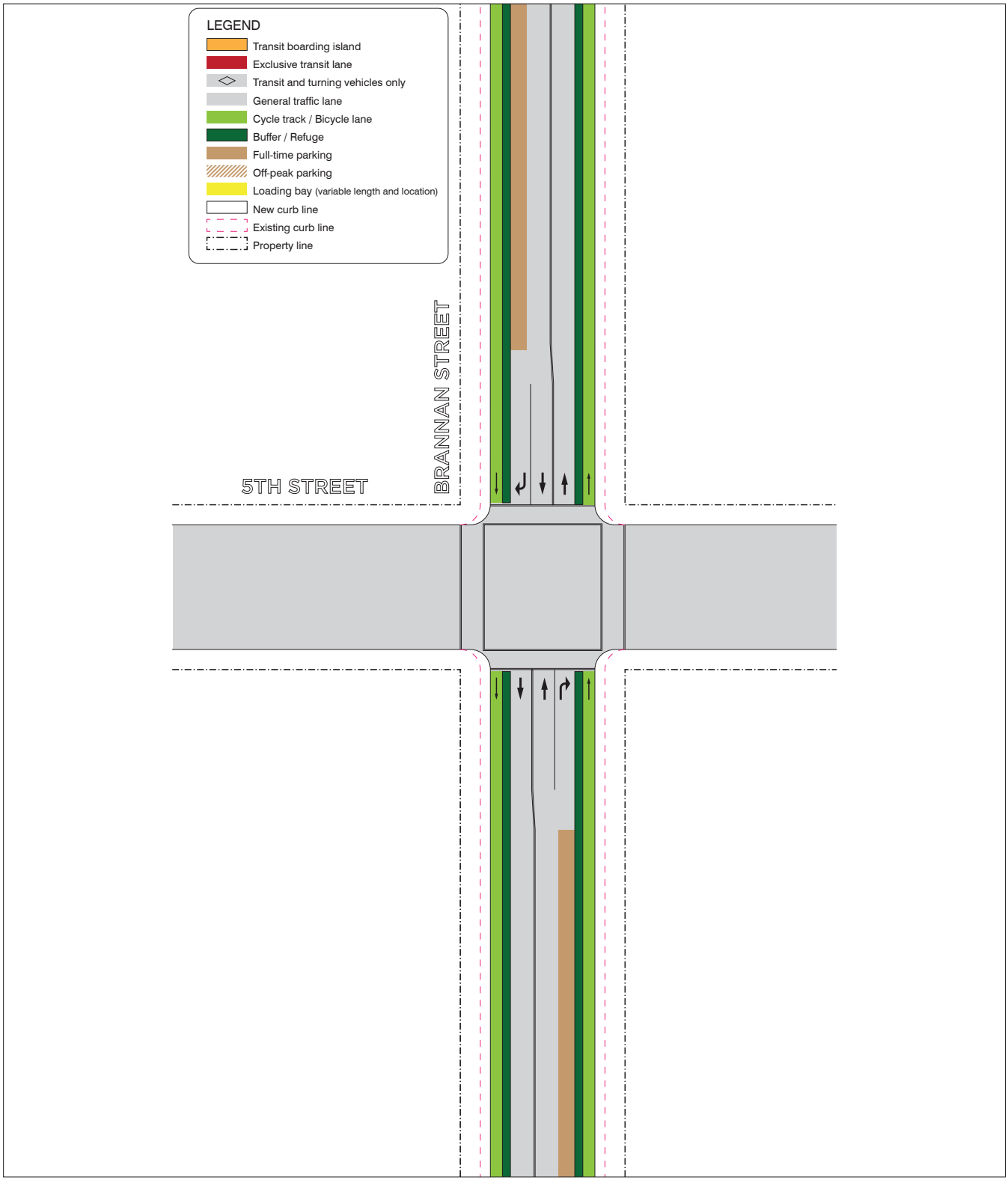


Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 38

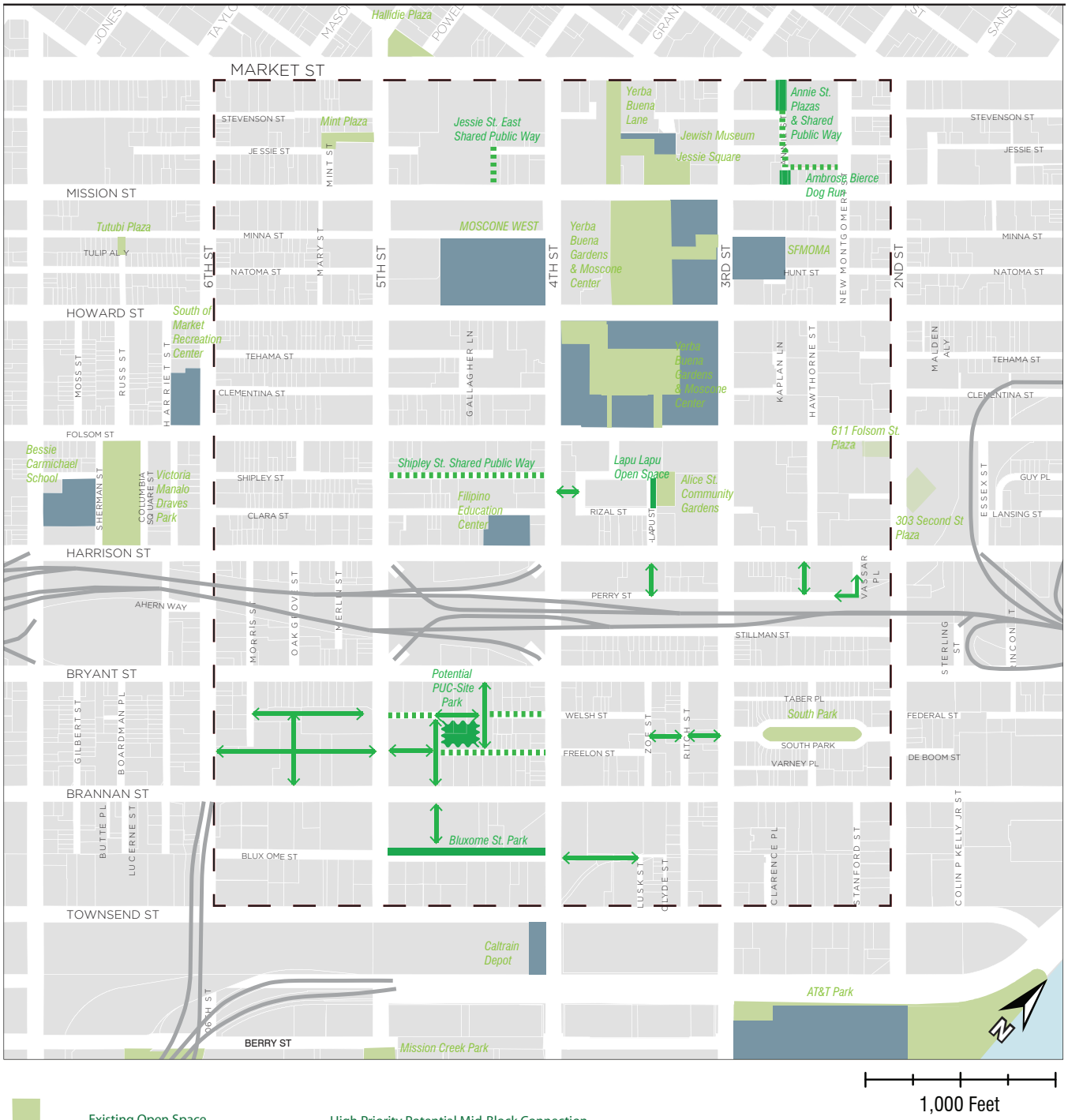
Brannan Street Existing and Proposed Typical Cross Sections



Central SoMa Plan. 120623

SOURCE: San Francisco Planning Department

Figure 39
Brannan Street Proposed Plan View



SOURCE: San Francisco Planning Department

Central SoMa Plan. 120623

Figure 40

Existing and Proposed Plan Area Open Spaces

- A new linear open space on a portion of the right-of-way on Bluxome Street between Fourth and Fifth Streets. This open space would be created by consolidating the vehicular area to two lanes of traffic and one parallel parking lane, as opposed to the current configuration containing diagonal parking.

- A recommendation to study the conversion of a portion of the San Francisco Public Utilities Commission's (SFPUC) property at 639 Bryant Street into a new mid-block public open space. The specific dimensions, design, and amenities, should this study determine it feasible to convert this property into open space, are currently unknown and would be subject to subsequent environmental review once a defined project is proposed.

2. ***Create an extensive network of pedestrian-friendly streets, alleys, and walkways that serve as flexible public spaces.***
   - Shared streets are proposed at:
     - Ambrose Bierce Alley: This small narrow alley would be transformed into a shared street/dog run.
     - Jessie East Alley: The short stretch of this alley running north-south along the Westfield San Francisco Centre's Mission Street entry would be converted into a shared street.
     - Shipley Street: From Fourth to Fifth Streets, Shipley Street would become a shared public way with traffic calming, streetscape improvements, and small public spaces.
   - Improve pedestrian access at the entries to South Park from Third and Second streets. The Plan proposes new pedestrian crosswalks as shown in Figure 8 on page 22.
   - The Plan proposes the use of the one percent Public Art development fee to fund public art, lighting, and other streetscape amenities beneath the elevated freeway between Third and Fifth streets.

3. ***Ensure that new private development augments the open space network with new publicly accessible privately owned public open spaces.***

Extend the provisions of Section 270.2 of the *Planning Code* to the entire Plan area, requiring new publicly accessible mid-block rights-of-way and access easements on large lots with more than 200 feet of street frontage.

4. ***Utilize open space areas to highlight and strengthen-logical sustainability within the Central SoMa Eco-District.***

Highlight and incorporate environmental sustainability components, including urban agriculture, within proposed open space improvements. Sustainability concepts are further described in the Sustainability section below.

5. ***Increase recreational and cultural facilities throughout the Central SoMa Plan area.***

The Plan calls for encouraging neighborhood-serving recreational and cultural amenities in new private developments using various zoning incentives, such as FAR bonuses, to encourage private developers to provide such amenities.

Historic Preservation

Buildings in the Plan area exhibit a variety of styles and ages. Although very few buildings remain from before 1906, many were built in the years immediately thereafter. Other major time periods of construction include redevelopment in the 1960s and contemporary buildings from the past 15 years. The Planning Department recently completed the South of Market Area Historic Resource Survey,[11] which covers the majority of the Plan area except for the blocks between Mission and Folsom streets. The Department has also completed the Transit Center District Survey.[12] These two surveys identify buildings and districts of historic significance, specifically those resources eligible for the National or California Register, as well as locally significant resources. As part of the environmental analysis of the Central SoMa Area Plan EIR, the remainder of the Plan area will be surveyed and evaluated to determine the historic status of each resource that has not been previously surveyed or documented. This information shall be used to augment the understanding of the Plan area's historic resources.

In addition to this survey, the Plan proposes the following three principles:

1. ***Historic resources should be retained and protected for the enjoyment of future generations and to maintain the diversity of the built environment.***

The Plan proposes to:

- Protect "Priority Historic Resources" through local designation in Article 10 or Article 11 of the *Planning Code*.
- Designate the South End Historic District Extension as per the SoMa Historic Resource Survey.
- Expand the Transfer of Development Rights (TDR) program to the Central SoMa to help preserve historic buildings. Current concepts being considered include the requirement for new development to purchase TDR for FAR in excess of 4:1 or 5:1.
- Extend the provisions of *Planning Code* Section 803.9(b) to the Plan area, which would allow the Zoning Administrator to allow commercial uses in mixed-use zoning districts for certain eligible historic resources. This section of the *Planning Code* currently is not applicable in the WS-SALI and WS-MUO zoning districts.
- Extend the provisions of *Planning Code* Section 307(h)(1) to the Plan area, which were enacted in many mixed-use districts as part of the Eastern Neighborhoods Area Plan, and allow the Zoning Administrator to waive certain development standards for designated historic resources.

2. ***Encourage sensitive re-use and design of historic buildings, and contextual design for new ones.***

Develop design guidelines for the Central SoMa Plan area. For locally designated buildings the Guidelines would encourage renovations and additions, rather than demolition.

[11] The South of Market Area Historic Resource Survey is available for review online: http://www.sf-planning.org/index.aspx?page=2530. Accessed March 2013.

[12] The Transit Center District Survey Context Statement is available for review online: http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=4039. Accessed March 2013.

3. Support and enhance Social Heritage resources within the Central SoMa Plan area.

The term "social heritage" means those elements, both tangible and intangible, that help define the beliefs, customs and practices of a particular community. The Western SoMa Area Plan identified two groupings of social heritage resources related to Filipino Social Heritage and Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) Social Heritage. Some of these resources are located in the Central SoMa Plan area. In order to reinforce social heritage areas, the Plan includes the following implementation strategies:

- The Planning Department would work to identify existing social heritage resources, including identifying resources for communities (in addition to Filipino and LGBTQ) for whom SoMa is or was important.

- Develop a Social Heritage Toolkit for the Plan area. Tools could include way-finding programs, landmark designation, public infrastructure improvements, and economic incentives.

Sustainability Proposal (Eco District Concept)

The Central SoMa Plan area has been identified for implementation as an Eco-District, which aims for neighborhood-level sustainability through district-serving water, energy conservation and/or waste reduction projects. A separate chapter on Eco-District Sustainability would contain a number of additional recommendations, which are currently under study. Actions defined at this point include:

- Establish a Central SoMa Eco-District Task Force charged with establishing goals and objectives for the Eco-District.

- Perform a district assessment to evaluate opportunities addressing energy, water, community identity, habitat and ecosystem function, and materials management. Several components of this assessment, including a United States Environmental Protection Agency study evaluating district energy opportunities, an SFPUC-led district utility analysis evaluating district water options, and a Planning Department study evaluating how to include Eco-District concepts into the preservation of buildings, are under way for the Plan area.

- Establish a Sustainability Management Association (SMA) to govern Eco-District implementation.

- Develop an implementation and funding strategy for priority projects, policies and programs.

The Plan does not include any specific principles or physical improvements at this time to implement any district-wide eco-system concepts. Thus, the EIR will analyze this aspect of the Plan at a general, programmatic level. Any district-wide system(s) proposed in the future would be subject to subsequent environmental review.

Related Planning Efforts

Much of the area close to the Central SoMa has been evaluated in planning efforts over the last decade. The work performed through these efforts has informed the development of the Plan's principles, recommendations, and specific capital improvement proposals. In addition to the following, other related citywide planning efforts include the Better Streets Plan, the San Francisco Bicycle Plan, the Transit Effectiveness Project (TEP), and the Recreation and Open Space General Plan Element Update.

Comprising citywide objectives and policies, the *General Plan* serves to guide public actions and decisions regarding the City's development. The *General Plan* also contains several area plans, which provide more specific policy direction for the development of certain neighborhoods within the City. The following area plans relate to the Central SoMa Plan, as discussed below:

- ***Eastern Neighborhoods Area Plans and the East SoMa Area Plan:*** Adopted in 2008, the Eastern Neighborhoods Area Plans focused on addressing land use conflicts between residential and office uses and light industrial uses – termed Production, Distribution and Repair (PDR) –– in the southeastern portion of the City. The Eastern Neighborhoods Area Plans articulated visions for the East SoMa, Central Waterfront, Mission, and Showplace Square/Potrero Hill neighborhoods. The East SoMa Area Plan, which overlaps with the eastern half of the Central SoMa, called for a diverse mix of uses and of income levels, including new affordable and market rate housing, offices and retail, more neighborhood-serving businesses, more jobs for local residents, safer streets, more community facilities, more open spaces, and an increased variety of transportation options. A major focus of the Eastern Neighborhoods Area Plans was to determine which areas would be set aside as industrial protection districts where other uses (primarily office and housing) that could otherwise financially out-compete PDR uses for space would not be permitted. Several sizable areas, primarily in the Central Waterfront, Showplace Square, and northeast Mission neighborhoods, were set aside for this purpose (as were areas within the Bayview District, under a separate planning process). Recognizing the opportunity and investment of the Central Subway, the East SoMa Area Plan noted that PDR businesses would not be strongly protected through proposed new zoning in this area, although the East SoMa Area Plan did not include the rezoning of the majority of the SLI use district, deferring that land use change to this more focused planning process. The Central SoMa Plan would retain many of the goals of the East SoMa Area Plan, while also proposing land use and development control changes to those areas where the Central SoMa Plan overlaps with the East SoMa Area Plan.

- ***The Western SoMa Community Plan:*** Originally part of the Eastern Neighborhoods planning process, Western SoMa was defined as a separate area in 2004, and the Western SoMa Citizens Planning Task Force was established to develop a plan. A Final Environmental Impact Report was certified in December 2012, and the Western SoMa Community Plan was adopted by the Board of Supervisors in March 2013. The Western SoMa Community Plan overlaps with the southwestern portion of the Central SoMa Plan area. While the Central SoMa Plan is synchronous with many of the core policies and proposals of the Western SoMa Community Plan, including prioritizing capital improvements such as a new park and transformative streetscape improvements along Folsom Street, the two plans differ fundamentally in their approach to land use controls in the area of overlap. The Central SoMa Plan proposes changes to land use controls to support more transit-oriented growth west of Fourth Street, in contrast to the Western SoMa Community Plan's emphasis on retaining PDR uses and providing space for nighttime entertainment uses.

- ***Rincon Hill Area Plan:*** The Rincon Hill Area Plan, adopted in 2005, encourages high-density residential development and greater building heights in the area bounded by Folsom Street, The Embarcadero, Bryant Street, Beale Street, the Bay Bridge approach, and Essex Street. The goal of the Plan is to encourage the ongoing transition of the area into a new mixed-use, high-density residential neighborhood adjacent to the downtown area, with both strong urban design controls and implementing mechanisms to fund the necessary public infrastructure, including open space, streets, community facilities and affordable housing. Together with the Transbay Redevelopment Plan, the Rincon Hill Area Plan will create housing for as many as 20,000 new residents. The Plan calls for location of retail shops and neighborhood services along Folsom Street and transformation of Main, Beale, and Spear streets into traffic-calmed, landscaped residential

streets lined with townhouses and front doors. The Rincon Hill Area Plan includes funding for the acquisition and development of open space in the district through development impact fees. The proposed project includes changes to the street network within the Rincon Hill Area Plan.

- ***Transit Center District Plan:*** Adopted in summer 2012, the Transit Center District Plan (TCDP) builds on the City's 1985 Downtown Plan to create new land use, urban form, building design, and public realm improvements in and around the new Transbay Transit Center that is currently under construction. The TCDP plan area overlaps with the northeastern corner of the Central SoMa Plan. The area of overlap is in the C-3 (downtown) zoning district and comprises the southeastern corner of the Financial District. The Central SoMa Plan would build on the policy foundation of sustainability within the Plan area that was established in the TCDP, augmenting policies on building performance, district water, and district energy. The Central SoMa Plan does not propose to change the adopted land use or development controls of the TCDP, but would modify the street network proposal for Folsom Street between The Embarcadero and Second Street as identified in the TCDP to be consistent with the Central SoMa Plan's proposed street network changes.

In addition, the following plans and adjacent redevelopment plans inform the Central SoMa Plan:

- ***ENTRIPS:*** The Eastern Neighborhoods Transportation Implementation Planning Study ("ENTRIPS") is the transportation implementation plan of the Eastern Neighborhoods Area Plans, managed by the SFMTA in coordination with the Planning Department and the San Francisco County Transportation Authority (SFCTA). Its final report, published in December 2011, provides recommendations for three key improvement projects, most critically the Folsom and Howard Street Corridor couplet. Transformation of Folsom and Howard streets is a priority of the Eastern Neighborhoods Area Plans and the Western SoMa Community Plan, described above. The EIR will analyze two options for the operation of Folsom and Howard streets as described above in the Street Network Changes section on page 26.

- ***Adjacent Redevelopment Plans – Yerba Buena, Mission Bay, and South of Market Plans:*** The Yerba Buena Center (YBC) Redevelopment Plan, which fostered much of the housing and cultural activities existing in the northern half of the Plan area, sunset in 2010, reverting applicable land use controls back to the *Planning Code*. In some instances, the underlying zoning controls now in effect were in place decades ago and are antiquated and no longer appropriate. The Central SoMa Plan proposes changes to land use controls in that area to support the YBC Plan's vision, post-redevelopment. Mission Bay, located just south of the Central SoMa, was established in 1998 as a mixed-use development to support housing, office and biotechnology lab space, and a new UCSF campus. While the Central SoMa Plan does not propose to alter Mission Bay's development controls, it would include improvements to enhance connections between these plan areas. The South of Market Redevelopment Plan Area, bordering the northwestern edge of the Central SoMa Plan area along Sixth Street, was created in 1990 to repair damage caused by the Loma Prieta Earthquake. This plan supported implementation of the remaining alleyway improvements in the area that overlaps with the Central SoMa Plan area. With the dissolution of redevelopment in California in early 2012, the South of Market Redevelopment Plan was dissolved. (The Redevelopment Plans that remain in effect by state law are Transbay, Mission Bay, and Hunters Point Shipyard/Candlestick.)

- ***4th and King Railyards Study:*** The Caltrain station at Fourth and King Street is an essential and invaluable regional transit service supporting the Central SoMa and other adjacent districts, but it also represents a valuable transit-oriented development location. With the intensification of rail service and densification of the immediately surrounding neighborhoods, questions have been raised as to whether the large railyards property ought not to be more efficiently used and

intensively developed. This would both support the transit service and help connect the neighborhoods on either side of the railyards site, which forms a one-half mile long barrier to north-south movement. In December 2012, a consultant to the Planning Department completed a study of the potential capacity for development on the site of the Caltrain Railyards. The Central SoMa Plan does not propose any changes in land use or development controls on the railyards site.

Other Reasonably Foreseeable Projects

Highlighted below are a number of projects within and adjacent to the Plan area that form the cumulative context within which environmental impacts of the Plan will be evaluated. The Planning Department does not base its analysis of cumulative impacts solely on a list of reasonably foreseeable projects; each environmental topic may require varying degrees of cumulative context. Some topics are better suited for a cumulative context based on a projection, such as a growth projection, while other topics, such as near-field aesthetic impacts, are better assessed within the immediate vicinity of the project. The cumulative context for each environmental topic will be described in the analysis of the environmental impact of that topic. However, the following identifies some of the larger development projects that may factor into the EIR's cumulative analysis where applicable, although it is not intended as a comprehensive list.

- ***Transit Effectiveness Project:*** The SFMTA's TEP is a system-wide program of projects to reduce transit travel time and improve transit customer experiences, service reliability, and transit service effectiveness and efficiency. The SFMTA has developed the Service Policy Framework, which sets forth transit service delivery objectives and actions to meet these objectives and supports the SFMTA Strategic Plan goals. Implementation of the TEP would be guided by the Service Policy Framework and would determine how investments should be made to the transit system. The TEP includes the following categories of proposals: Service Improvements, Service-related Capital Improvements, and transit Travel Time Reduction Proposals (TTRPs). This project is currently undergoing environmental review (Planning Department Case No. 2011.0558E).

- ***5M/Chronicle Site:*** A large project (Planning Department Case No. 2011.0409E, various addresses, 925-971 Mission Street, colloquially "5M" or the "Chronicle site") is proposed on an approximately 4-acre site located on several parcels at the southwest corner of Fifth and Mission streets in the southern Financial District and SoMa neighborhoods. The proposal is to demolish several surface parking lots and buildings and rehabilitate two buildings, including the San Francisco Chronicle building at Fifth and Mission streets, resulting in seven mixed-use buildings totaling up to 1.8 million gross square feet of new and renovated space. Additionally, the project calls for the relocation of the Mary Street Alley between Minna and Natoma streets. This project is currently undergoing environmental review.

- ***706 Mission Street:*** this project, located on the northwest corner of Third and Mission Streets across Mission Street from Yerba Buena Gardens, proposes construction of a new 47-story, 550-foot-tall tower that would accommodate the Mexican Museum and associated public uses on its first three floors. The new tower would be adjacent to, and physically connected to, the existing 10-story, 154-foot-tall Aronson Building (a 144-foot-tall building with a 10-foot-tall mechanical penthouse). The project would provide up to 215 dwelling units. The EIR for this project (Planning Department Case No. 2008.1084E) was certified by the Planning Commission in March 2013.

- ***Mission Rock, Seawall Lot 337/Pier 48:*** The San Francisco Giants in conjunction with Cordish Cos. propose a mixed-use project ("Mission Rock, Seawall Lot 337/Pier 48") on seawall lot 337, a

parcel bounded by Third Street, Terry A. Francois Boulevard, and Mission Rock Street, adjacent to Pier 48, that would contain up to 1.7 million square feet of office use, a parking structure, between 650 to 1,000 apartment and townhouse dwelling units, 125,000 square feet of commercial retail uses, and up to 180,000 square feet of exhibit and event space at Pier 48, as well as seven acres of open space within and adjacent to the project site.

- ***Moscone Center Expansion Project:*** The Moscone Center Expansion Project would increase the gross square footage of the Moscone Center convention facility from approximately 1.2 million square feet to 1.5 million square feet. New construction would be primarily above grade both north and south of Howard Street in buildings up to approximately 95 feet tall. Additional space would be created by excavating in two locations under Howard Street and expanding the existing below-grade exhibition halls that connect the Moscone North and South buildings, creating a total of approximately 580,000 square feet of contiguous exhibition space below ground. The project would also reconfigure the existing below-grade loading facilities and at-grade bus pick-up and drop-off facilities and create two pedestrian bridges spanning Howard Street, which would connect Moscone North and South expansions at the second level above grade. This project is currently undergoing environmental review (Planning Department Case No. 2013.0154E).

- ***Golden State Warriors:*** The Golden State Warriors are proposing to construct a new arena on Piers 30-32 in the City's South Beach neighborhood (Planning Department Case No. 2012.0718). While this project is currently in conceptual phases, the 13-acre pier site (and potentially the adjacent seawall lot) is anticipated to accommodate the arena, ancillary retail, public assembly/open space, and possibly parking. This project is currently undergoing environmental review.

- ***University of California San Francisco:*** The University of California at San Francisco (UCSF) is in the process of updating its Long Range Development Plan (LRDP) including improvements at its Mission Bay Campus. As part of the LRDP, UCSF is exploring three options to increase overall development on that campus. The increase in development would include additional research and development, institutional uses, housing, and some recreational uses. It is anticipated that by summer 2013, after completing a community outreach process, USCF will solidify its proposal for the Mission Bay Campus, including the number of residential units and square feet of research and development and institutional uses.

- ***Harrison Gardens:*** A large project (Planning Department Case No. 2005.0759E, various addresses, 725 to 765 Harrison Street, 120 and 130 Perry Street, and 425 Fourth Street, colloquially "Harrison Gardens") is proposed on an approximately 2.3-acre site on the block bounded by Harrison, Fourth, Perry and Third streets. The proposed project includes demolition of existing light industrial/commercial buildings and construction of over 730,000 square feet of office and commercial uses split among an approximately 240-foot-tall tower and 95-foot-tall mid-rise building that would be connected by a continuous podium base at the ground level.

- ***598 Brannan Street:*** A project at Fifth and Brannan streets (Planning Department Case No. 2012.0640E) proposes to construct two buildings, each up to 11 stories and 160 feet in height. The buildings would be completely separated, allowing access and a vista to a new park proposed for the center of the block. Park access would also be provided via a new passage from Brannan Street.

Intended Uses of this Initial Study and EIR

A Notice of Preparation (NOP) of an Environmental Impact Report and public scoping meeting for the Central SoMa Plan (then referred to as the Central Corridor Plan) was published on April 24, 2013. A

public scoping meeting to receive oral comments concerning the scope of the environmental review was held on May 15, 2013. Written comments were accepted from publication of the NOP for 30 days through May 24, 2013.

This Initial Study has been prepared by the San Francisco Planning Department and distributed to applicable state agencies and interested members of the public. The purpose of this Initial Study is to scope out of further review those environmental topics that are determined to result in less than significant environmental impacts. The Initial Study is made available to the public for review and comment for an approximately 30-day public review period. Comments received on the NOP and Initial Study will help to shape the scope and analysis of environmental topics covered in the EIR. Following the 30-day public review period of the Initial Study, the Planning Department will prepare and distribute the Draft EIR to state agencies through the State Clearinghouse, to applicable public agencies, and to interested members of the public. Following publication, the Draft EIR will undergo an approximately 45-day public review period, including a public hearing before the San Francisco Planning Commission, during which comments on the adequacy and accuracy of the information presented therein will be accepted. Following the public review period for the Draft EIR, responses to written and oral comments received from the public and agencies will be prepared and compiled in a Response to Comments document. The Response to Comments document will also include any staff-initiated changes to the Draft EIR. The Draft EIR, together with the Response to Comments document, will constitute the Final EIR. The Planning Commission will then consider certification of the Final EIR pursuant to CEQA, including consideration of whether the EIR is adequate, accurate and complete. No approvals may be issued before the City certifies the EIR as final. Certification of a Final EIR may be appealed to the Board of Supervisors.

Approvals Required

Approval and implementation of the final Central SoMa Plan would require the following actions. (Approving bodies are identified in *italics*.) Specific and detailed actions would be determined as the Plan is developed.

- Amendments to the *General Plan* (various elements and figures) to conform to the concepts of the Central SoMa Plan. *Planning Commission recommendation; Board of Supervisors Approval*

- Determination of consistency of the proposed *General Plan* amendments and rezoning with the *General Plan* and *Planning Code* Section 101.1 Priority Policies. *Planning Commission*

- Amendment of the *Planning Code* to conform to the concepts of the Central SoMa Plan. *Planning Commission recommendation; Board of Supervisors Approval*

- Amendment of the *Planning Code* Zoning Maps to change mapped use districts and height limits throughout the Plan area. *Planning Commission recommendation; Board of Supervisors Approval*

- Approval of alterations to street rights-of-way, including, for example, the configuration of travel lanes, sidewalk widths, bicycle lanes, addition of crosswalks, and alley way improvements that are part of the Plan's proposals to the street network and public realm. *San Francisco Municipal Transportation Agency; Department of Public Works*

B. Compatibility with Existing Zoning and Plans

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the Planning Code or Zoning Map, if applicable.	☒	☐
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☒	☐
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.	☒	☐

San Francisco Planning Code

The *San Francisco Planning Code* (*Planning Code*), which incorporates the City's Zoning Maps, implements the *San Francisco General Plan*, and governs permitted uses, densities, and the configuration of buildings within San Francisco. Permits to alter existing buildings, construct new buildings, or demolish existing buildings may not be issued unless 1) the proposed project conforms to the *Planning Code*, 2) an allowable exception is granted pursuant to provisions of the *Planning Code*, or 3) amendments to the *Planning Code* are included as part of the project.

Implementation of the Plan would require revisions to the existing *Planning Code* zoning districts and height and bulk districts in the Plan area as described in Section A, Project Components, in the Project Description (above). All proposed amendments to the *Planning Code* and Zoning Maps to conform to the concepts of the Plan will be subject to approvals by the Planning Commission and Board of Supervisors.

Plans and Policies

General Plan

The *San Francisco General Plan* provides general policies and objectives to guide land use decisions. The *General Plan* contains 10 elements (Commerce and Industry, Recreation and Open Space, Housing, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that set forth goals, policies, and objectives for the physical development of the City. The *General Plan* also contains a number of area plans, which provide more specific policy direction for certain neighborhoods, primarily on the east side of the City. The southeastern portion of the Plan area is within the East SoMa Area Plan, adopted in 2008 as part of the Eastern Neighborhoods rezoning process, while the southwest portion of the Plan area is within the Western SoMa Area Plan, adopted in 2013, and the northeast corner of the Plan area is within the Transit Center District Sub-Area Plan of the Downtown Plan, adopted in 2012. The Rincon Hill Plan, adopted in 2005, governs a neighborhood just east of the Plan area.

As described under Approvals Required in the Project Description (above), adoption of the proposed Central SoMa Plan would require amendments to the *General Plan* (under various elements and figures) to conform to the concepts of the Plan. Such amendments to the *General Plan* will be reviewed by the

Planning Commission and recommended to the Board of Supervisors for approval. Upon Board of Supervisors approval, such amendments would be incorporated into the *General Plan*.

Priority Policies

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to *Planning Code* to establish eight Priority Policies. These policies, and the subsection of Section D of this Initial Study addressing the environmental issues associated with the policies, are: (1) preservation and enhancement of neighborhood-serving retail uses (Topic 1, Land Use and Land Use Planning, Question 1c); (2) protection of neighborhood character (Topic 1, Land Use and Land Use Planning, Question 1c); (3) preservation and enhancement of affordable housing (Topic 3, Population and Housing, Question 3b); (4) discouragement of commuter automobiles (Topic 5, Transportation and Circulation, will be addressed in the EIR); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership (Topic 1, Land Use and Land Use Planning, Question 1c); (6) maximization of earthquake preparedness (Topic 14, Geology and Soils, Questions 14a through 14d); (7) landmark and historic building preservation (Topic 4, Cultural Resources, will be addressed in the EIR); and (8) protection of open space (Topic 9, Wind and Shadow, will be addressed in the EIR; and Topic 10, Recreation, Questions 10a and 10c).

Prior to issuing a permit for any project which requires an Initial Study under CEQA, and prior to issuing a permit for any demolition, conversion, or change of use, and prior to taking any action which requires a finding of consistency with the *General Plan*, the City is required to find that the Plan or legislation is consistent with the Priority Policies. As noted above, the consistency of the Plan with the environmental topics associated with the Priority Policies is discussed in Section D, Evaluation of Environmental Effects, of this Initial Study, or will be discussed in the EIR. Both the Initial Study and EIR will provide information for use in the case report for the proposed project. The case report and approval motions for the Plan will contain the Department's comprehensive project analysis and findings regarding consistency of the Plan with the Priority Policies.

Regional Plans

The principal regional policy documents that guide planning in the nine-county Bay Area are *Plan Bay Area*, a regional plan jointly adopted by the Association of Bay Area Governments and Metropolitan Transportation Commission in July 2013; the Bay Area Air Quality Management District's *2010 Clean Air Plan* and *Bay Area 2005 Ozone Strategy*; the San Francisco Regional Water Quality Control Board's *San Francisco Basin Plan*; and the *San Francisco Bay Plan*, adopted by the San Francisco Bay Conservation and Development Commission.

Approvals and Permits

Approval actions to implement the Plan and the proposed street network changes are listed in Section A, Approvals Required, in the Project Description.

Consistency with Plans and Policies

The EIR will discuss the Plan's proposed changes to the *General Plan*, and will describe the proposed project in the context of the citywide planning framework, with reference to other planning efforts in San Francisco, including the area and sub-area plans noted above, the Municipal Transportation Authority's Transit Effectiveness Program, the San Francisco Bicycle Plan, the Better Streets Plan, and others. The EIR will also discuss any inconsistencies with the regional plans noted above.

C. Summary of Environmental Effects

The Plan could potentially result in significant effects with respect to the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor.

☒ Land Use	☒ Air Quality	☒ Biological Resources
☒ Aesthetics	☐ Greenhouse Gas Emissions	☐ Geology and Soils
☐ Population and Housing	☒ Wind and Shadow	☒ Hydrology and Water Quality
☒ Cultural and Paleo. Resources	☐ Recreation	☒ Hazards/Hazardous Materials
☒ Transportation and Circulation	☒ Utilities and Service Systems	☐ Mineral/Energy Resources
☒ Noise	☐ Public Services	☐ Agricultural and Forest Resources
		☒ Mandatory Findings of Significance

Effects Found to be Potentially Significant

The Draft Central South of Market (SoMa) Plan (Plan) and proposed street network changes have been evaluated to determine whether the improvements and foreseeable development associated with the Plan could result in significant environmental impacts. The Plan could have a significant effect on (1) **land use** because development that would be facilitated by the Plan could adversely affect the character of the Plan area; (2) **aesthetics/visual quality** because subsequent development within the Plan area could result in changes in the visual character of the Plan area; (3) **cultural resources** (historical, archaeological, and paleontological) because of the potential for these resources to be disturbed by subsequent development projects; (4) **transportation and circulation** because implementation of the Plan and subsequent development within the Plan area could conflict with policies concerning the circulation system with respect to pedestrians, bicycles, transit, and vehicular traffic and loading; (5) **noise** because the development pursuant to the Plan could create construction and operation noise and vibration; (6) **air quality** because construction and operation of development under the Plan could increase emissions of criteria air pollutants and could expose sensitive receptors to pollutants; (7) **wind and shadow** because buildout of the Plan could result in the construction of new buildings that could be oriented and designed with large walls that interfere with and channel prevailing winds and the increased height limits associated with the Plan could result in a substantial amount of new shadows; (11) **utilities** because

buildout of the Plan could result in the need for new or expanded stormwater or wastewater treatment facilities, the construction of which could cause significant environmental effects; and (15) **hydrology and water quality** because buildout under the Plan could result in effects to the combined sewer system and could expose people or structures to a significant risk of loss, injury or death involving flooding as a result of sea level rise. These topics, therefore, will be further analyzed and included in the EIR to determine if such impacts would be significant.

Effects Found Not to be Significant

All items in the above Initial Study checklist that were not checked as significant have been determined by Planning Department staff not to have a significant adverse effect on the environment. The following potential impacts were determined to be insignificant: population and housing; recreation; utilities and service systems (except for potential impacts related to wastewater); public services; geology and soils; hydrology and water quality (except for potential impacts related to effects of combined sewer system operation on water quality and potential impacts of sea level rise); mineral and energy resources; and agricultural resources. In addition, biological resources and hazardous materials impacts were determined to be significant, but can be mitigated to a less-than-significant level through measures included in this document. These items are discussed below and require no further environmental analysis in the EIR.

D. Evaluation of Environmental Effects

This initial study examines the potential effects on the environment that would result from implementation of the Plan and the proposed street network changes. For all items checked "Less-than-Significant with Mitigation Incorporated," "Less-than-Significant Impact," "No Impact," or "Not Applicable," the Planning Department has determined that the Plan and proposed street network changes would not have a significant adverse environmental effect. These issues are discussed below and conclusions regarding effects are based upon field observations, staff experience and expertise on similar projects, and/or standard reference material available from the Planning Department, such as the Department's *Transportation Impact Analysis Guidelines for Environmental Review*.

For each checklist question, the analysis provides an overview of the Plan's impacts. In some cases, effects of the Plan are analyzed with respect to the most intensive land use program, which is to say that the impacts presented herein are typically those of Option B, the High-Rise Height Option, because this option would allow for incrementally greater development potential, residential and non-residential, than would either Option A, the Mid-Rise Height Option, or the Land Use Variant. Further, for some topic areas, the most conservative analysis may assume the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus" (see *Growth Assumptions*, below). While this level of development is unlikely to occur, it represents a conservative development program for analysis and forms the basis for the CEQA conclusions for some topics.

As described in the Project Description, proposed use districts would be the same under both Option A and Option B; only the permitted heights would be different, and only on a limited number of parcels.

Because the differences in development potential between Option B and Option A, and between Option B and the Land Use Variant, are relatively small, no separate analysis of the less intensive height option or variant is provided in most instances. That is, the differences in impacts generally would be small and not readily discernible at the programmatic level of this analysis, particularly with respect to topics evaluated qualitatively. However, when the difference between Options A and B is substantial enough (e.g., a difference in the significance of impacts or a substantially more severe impact), the analysis will describe the environmental effects of each option separately in order to inform the public and decision makers of the relative differences between the proposed land use options.

For each checklist question analyzed, the evaluation has considered the impacts of the Plan (including proposed open spaces) and proposed street network changes both individually and cumulatively. Cumulative development includes development surrounding the Plan area that would occur under buildout of local area plans (such as East and Western SoMa Area Plans, and the Transit Center District Plan), transportation plans and projects (such as the Municipal Transportation Agency's Transportation Sustainability Project and the *San Francisco Bicycle Plan*), and other local development projects.

Growth Assumptions

To estimate the development potential in Central SoMa, the Planning Department undertook a ten-step process to assess the development potential of every parcel within the Plan area.[13] To establish baseline numbers, the Planning Department relied on a 2010 Dun & Bradstreet database for employment numbers and the Planning Department's Land Use Database for existing housing units within the Plan area.

The Central SoMa projection numbers were developed by the Planning Department and are based on development capacity on all parcels given the existing and proposed zoning, on identification of specific sites with realistic potential as development sites under both zoning scenarios, and on factoring in known entitled and reasonably foreseeable projects. Estimated housing and employment growth by 2040 was developed for existing zoning (the No Project condition), for the proposed zoning (height Option A), and for the high-rise scenario, which includes certain specific developer proposals (height Option B). Finally, the Planning Department assigned separate land use mixes for each scenario and arrived at distinct projections for "Residential Focus" and "Office Focus" for each option. For the "Residential Focus" land use mix, the Planning Department assigned probabilities for each potential development site depending on the permitted uses within each district. For example, in districts where both office and housing would be permitted as-of-right, each potential development site was given a 50 percent chance of being developed as either residential or commercial, while residential development potential was assumed to be higher in districts where commercial development is limited and was set at zero where residential use is not permitted. The "Office Focus" land use mix was designed to capture the current trend in office development of large floor plates and open floor plans by assuming lot mergers in use districts where office uses would be permitted for the first time, which was assumed, in turn, to increase the likelihood of office development, rather than residential development, on certain parcels.

[13] San Francisco Planning Department, *Estimating Development Capacity for the Central SoMa Plan*, December 20, 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E.

The maximum development within the Plan area as developed through the process described above was then adjusted downward by 25 percent to reflect financial, regulatory, and physical constraints on maximum possible buildout through the horizon year of 2040. These include the presence of existing buildings, which may have substantial intrinsic value or be potential historical resources; existing residential units, whose elimination is constrained under the *Planning Code*; and other impediments, such as parcel configuration, subsurface soil conditions, or contamination. Because redevelopment of a substantial number of properties within the Plan area could be inhibited by these constraints, it is likely that actual buildout under the Plan would be less than the 75 percent buildout assumption used for this analysis. A Plan buildout of 75 percent by 2040 therefore represents a conservative (i.e., high) estimate of potential development.

Once the development floor area (square footage) was forecast, the total was converted to residential units and commercial space by use of the following factors: 1,200 square feet of development per residential unit (accounting for common areas, and based on actual unit sizes of 850 to 1,000 square feet); 200 square feet per office employee (a denser-than-typical ratio that accounts for current use patterns in many open-plan office spaces); 350 square feet per employee for retail, cultural/institutional/educational, and medical uses; and 787 square feet per hotel employee.

Table 2 below presents the existing jobs and housing units for the 2010 baseline (existing conditions), as well as 2040 projections for the No Project, Option A, and Option B scenarios each with the distinct land use mixes (residential and office focus). Growth projections for the Land Use Variant are discussed below in Section 3, Population and Housing, p. 77.

TABLE 2
EXISTING (2010) CONDITIONS AND MAXIMUM EXPECTED ADDITIONAL GROWTH FOR THE NO PROJECT ALTERNATIVE AND OPTIONS A AND B (RESIDENTIAL UNITS AND JOBS)

			No Project		Option A		Option B	
		Existing	Residential Focus	Office Focus	Residential Focus	Office Focus	Residential Focus	Office Focus
Residential	Units	7,800	9,000	8,800	12,800	11,100	13,200	11,500
Non-Residential	Jobs	45,600	29,300	30,100	45,000	52,300	49,400	56,400
Plan Area Totals in 2040								
Residential	Units		16,800	16,600	20,600	18,900	21,000	19,300
Non-Residential	Jobs		74,800	75,700	90,600	97,800	95,000	101,900

NOTES: Plan area totals in 2040 represent existing jobs and housing plus reasonably foreseeable development and expected growth pursuant to the Plan; numbers are rounded to nearest 100.

SOURCE: San Francisco Planning Department

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
1. LAND USE AND LAND USE PLANNING— Would the project:					
a) Physically divide an established community?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐
c) Have a substantial impact upon the existing character of the vicinity?	☒	☐	☐	☐	☐

The Plan would result in the rezoning of some areas now designated for light industrial (PDR) and arts uses to use districts that would allow and encourage office-type employment and residential uses and retail uses, including a mix of such uses. These changes could result in potential physical environmental conflicts between uses, such as, for example, noise generated by PDR or arts/entertainment uses causing disturbance for proximate residential uses. These changes, therefore, could adversely affect existing neighborhoods, and could result in changes in neighborhood character in certain parts of the study area. The EIR will compare existing land uses to proposed land use changes under the Plan and will describe the nature of the anticipated change and the resulting changes in neighborhood character, as well as the potential for the Plan to conflict with land use plans and policies that address environmental concerns and the potential for the Plan to result in a physical division of an established community.

Proposed Street Network Changes

The proposed street network changes would involve no changes in land use, as the alteration of lane configurations, widening of sidewalks, addition of bicycle lanes and cycle tracks, transit-only lanes, and mid-block pedestrian crossings would not alter either the permitted uses or the allowable building heights. However, the proposed street network changes could indirectly affect neighborhood character, particularly if, as stated in the Draft Plan, "Pedestrian improvements combined with traffic calming could have a distinct impact not only on livability, but on public health in the area," "Ensuring that traffic does not adversely affect transit reliability and speed is essential to the success of the thriving mixed-use district envisioned in this Plan," and "The area's flat topography and relatively good weather, if combined with a comprehensive network of high-quality bicycle routes, could result in significant mode shift toward cycling, relieving demand for additional car trips."[14] These potential changes will be discussed in the EIR.

[14] April 2013 Draft Plan, pp. 47-48.

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

The Plan and the proposed street network changes have the potential to result in changes in the built environment, either indirectly through demolition of existing structures or development of new buildings, directly through changes to the configuration of the public right-of-way and development of new open spaces, or through a combination of these factors. The EIR will discuss how these changes might affect scenic vistas, visual resources, visual character, and urban form.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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)?	☐	☐	☒	☐	☐
b) Displace substantial numbers of existing housing units or create demand for additional housing, necessitating the construction of replacement housing?	☐	☐	☒	☐	☐
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐	☐

Setting

Existing Conditions

The San Francisco Housing Inventory, published in May 2012, reports there were 372,831 housing units in the City in 2011, an increase of 269 units since 2010.[15] Between 2000 and 2011, nearly 24,520 units were added to the City's housing stock, reflecting an annual growth rate of approximately 0.6 percent. For the

[15] San Francisco Planning Department, *San Francisco Housing Inventory 2011*, May*2011*, May 2012. Available on the internet at: http://www.sf-planning.org/ftp/files/publications_reports/2011_Housing_Inventory_Report.pdf; reviewed July 5, 20132013.

same time period, from 2000 to 2011, the City experienced population growth at a slower rate. According to the US Census, there were approximately 776,735 residents living in San Francisco in 2000. These trends suggest that housing growth has exceeded increases in the City's population, resulting in an average household size of 2.3 persons per household, down from 2.4 persons per household in 2010. Citywide development and growth has sharply accelerated since 2011: according to recent Planning Department figures, there were nearly 4,600 housing units under construction in the City in the second calendar quarter of 2013.[16]

The Plan area contains approximately 7,800 residential units, approximately 6,800 households, and a population of approximately 12,000 people, according to Planning Department data. This accounts for just below two percent of the City's total number of households. According to the Plan, South of Market and the Plan area in particular, are home to a large amount of deed restricted affordable housing; about 15 percent of the housing is deed-restricted for low income residents, compared to 4.5 percent citywide.

Growth Anticipated in Local and Regional Plans

San Francisco's central location, historic function as a job nucleus and employment hub for the region, and access to jobs and transit are reasons the City's share of regional population is expected to increase.

Projected Growth – Plan Bay Area

Plan Bay Area is a joint effort led by ABAG and the Metropolitan Transportation Commission (MTC) in partnership with the Bay Area's other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD) and the Bay Conservation and Development Commission (BCDC). As part of the *Plan Bay Area* planning process, these agencies developed the Jobs-Housing Connection Strategy 2012, which is the land-use element of the *Preferred Land Use Scenario* for the Bay Area's first Sustainable Communities Strategy (SCS) mandated by SB 375 (see Topic 8, Greenhouse Gas Emissions). The *Preferred Land Use Scenario* includes draft employment and housing growth forecasts for 2010 to 2040.

According to *Plan Bay Area,* the Bay Area is expected to gain nearly 2.1 million residents between 2010 and 2040, reaching a total population of 9.3 million, a 30 percent increase over the 2010 population.[17] The number of households is expected to increase by 27 percent (700,000) to 3.3 million, and the number of housing units is expected to increase by 24 percent (660,000) to 3.45 million. The Plan area, like much of the eastern part of San Francisco, is designated as a Priority Development Area (PDA), which is an infill location served by transit and recognized by ABAG, MTC, and BAAQMD.[18] In designated PDAs, compact land development is promoted, specifically near the Central Subway transit line now under construction.

[16] San Francisco Planning Department, *Pipeline Report: Second Quarter 2013.* Available at: http://www.sf-planning.org/modules/showdocument.aspx?documentid=9212. Reviewed November 10, 2013.

[17] Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area,* adopted July 18, 2013; p. 7. Available on the internet at: http://onebayarea.org/plan-bay-area/final-plan-bay-area.html. Reviewed January 22, 2014.

[18] According to *Plan Bay Area*, PDAs, which are identified by local jurisdictions as appropriate places to concentrate future growth, are existing neighborhoods served by transit and supported by local plans to provide both new housing options and services to meet residents' daily needs of residents in a pedestrian-friendly environment. *Plan Bay Area* calls for PDAs to accommodate more than three-fourths of new housing in the Bay Area.

The Plan area is one of the 12 PDAs in the City where 80 percent of the new housing production and population growth in the City are expected to take place.[19]

Projected Growth – San Francisco Housing Element

The *San Francisco General Plan* Housing Element 2009 (adopted June 2011) identifies additional capacity in the Plan area as an appropriate location for high-density housing near transit and jobs as part of the planned housing supply capacity to meet the City's short-term (to 2014) and longer-term (to 2035) housing production goals. The Housing Element identifies the Plan area as a housing opportunity area with the potential to accommodate up to 2,700 new units toward the City's 2007-2014 Regional Housing Needs Allocation (RHNA) allocation, promulgated by ABAG based on data from the State Department of Housing and Community Development. The Housing Element requires that zoning and development standards encourage and promote the development of affordable housing and a diverse range of housing opportunities. In addition, the Housing Element describes housing needs and identifies the capacity for new housing in the City based on land supply and development capacity. This element focuses on the City's critical need for affordable housing. The Housing Element establishes goals for housing production as well as policies related to reducing the impacts of growth on the housing market.[20]

According to the Planning Department and ABAG, San Francisco is expected to gain approximately 101,000 households and 270,000 residents between 2010 and 2040, reaching a population of over 1 million, a 35 percent increase in residential population. Employment is forecast to increase by 34 percent (191,000 jobs) during this period, to a total of approximately 760,000.[21, 22]

Accommodating Jobs and Housing Growth and Plan Rationale

As noted above, San Francisco's official quantified targets for addressing housing needs are provided by ABAG, in coordination with the California Department of Housing and Community Development, as part of the RHNA. The RHNA is required by state law to promote the state interest in increasing housing supply, increasing the mix of housing types and affordability in all jurisdictions, facilitating infill development and efficient development patterns, protecting environmental resources, and reducing inter-regional commuting. The needs are defined in terms of housing market factors: accommodating projected demand (due to household growth, employment growth, and the need to transition commuters into residents); increasing the vacancy rate to provide more choice and less upward pressure on prices and rents; and increasing the supply of affordable housing options. ABAG allocates regional total housing needs among jurisdictions based on factors that consider existing employment, employment growth, household growth, and the availability of transit. Region-wide income distributions complete the allocation by household income category.

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19 Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), Plan Bay Area Jobs-Housing Connection Strategy, revised May 16, 2012. Available on the internet at: http://www.onebayarea.org/pdf/JHCS/May_2012_Jobs_Housing_Connection_Strategy_Main_Report.pdf. Reviewed January 22, 2014.

20 San Francisco Planning Department, *Housing Element: An Element of the General Plan of the City and County of San Francisco*, 2009. Available online at: http://www.sf-planning.org/ftp/general_plan/I1_Housing.html, accessed on January 11, 2014.

21 ABAG and MTC, Plan Bay Area Jobs-Housing Connection Strategy, revised May 16, 2012 (see footnote 19).

22 San Francisco Planning Department, *San Francisco Land Use Allocation, Central SoMa*, January 6, 2014. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E.

The adoption of Senate Bill 375, which required California regions as a whole to reduce greenhouse gas emissions (GHGs) by linking growth to transit, resulted in increased pressure on San Francisco (and other major cities such as San José and Oakland) to accommodate a major portion of the region's growth. While the City has performed significant planning intended to direct housing towards areas supported by transit, it has been less proactive in planning space for jobs. The City's 2007 Economic Strategy, currently undergoing an update, set a path for more economic development and opportunity, more and better jobs for middle-and lower-income residents, and growing tax revenue to fund City services. Its key recommendations relating to land use are to 1) provide sufficient real estate for strategic priorities, 2) maximize San Francisco's accessibility to a local and regional workforce, and 3) work to reduce the cost of residential and commercial development.[23]

According to the Draft Central Corridor Plan,[24] among San Francisco's neighborhoods, the Plan area provides a unique opportunity to create more job space at locations readily accessible to both regional and local transit. Its location, framed by BART to the north and Caltrain to the south and connected to Market Street by the new, under-construction Central Subway as well as local bus routes, represents an intersection of local and regional transit. The Plan area's adjacency to the major job centers of Downtown and Mission Bay makes it a natural next step to focus job growth, and it is already home to some of technology's biggest companies, which is a strong attraction for new and growing companies in that sector. Finally, its capacity for new development combined with its existing building stock provides the opportunity to expand not only the amount, but the types of workspace San Francisco has to offer.[25]

Planning for more intensive new development in the Plan area to accommodate more population (and employment) than would otherwise be the case is one of the means by which San Francisco and the region as a whole could potentially meet state mandates under SB 375 for a Sustainable Communities Strategy to reduce per-capita greenhouse-gas emissions, and thus one of the primary goals of the Central SoMa Plan.[26] The long-term projections of city and regional population and employment growth are the basis for the housing, transportation, other infrastructure, and public services and utilities planning conducted at a city and regional level. They are also the basis for efforts to secure the funding and financial support essential to realizing this level of infill development.

Approach to Analysis

The Plan is a regulatory program and would result in new planning policies and controls for land use to accommodate additional jobs and housing. The Plan itself would not result in direct physical changes to population or housing. Indirect effects to population and housing could result as specific development projects allowed under the Plan could replace existing residences and businesses, or increase space for

[23] For a complete description of all goals, principles, and strategies of the Plan, please refer to the Draft Central Corridor Plan for Public Review available: http://www.sf-planning.org/ftp/files/Citywide/Central_Corridor/Central-Corridor-Plan-DRAFT-FINAL-web.pdf; accessed May 23, 2013.

[24] The Plan was known as the Central Corridor Plan at the time of the Draft Central Corridor Plan was published. Although the two names—Central Corridor Plan and Central SoMa Plan—may be used interchangeably, specific references to the "Draft Central Corridor Plan" refer to the document, as published in April 2013.

[25] Draft Central Corridor Plan (see footnote 23).

[26] Ibid.

residences or businesses in the Plan area. The population growth accommodated in the Plan area could result in physical changes related to transportation, air quality, noise, and public services and utilities, as well as other environmental resource areas. These physical impacts are analyzed under the other environmental topics in this document and in the EIR. The proposed open space improvements would not result in any changes to the existing or projected population increase and thus would have no effect on this topic.

The following analysis for population and housing evaluates the changes anticipated in population and housing in the Plan area, as compared to baseline (2010) conditions. The baseline numbers are based on a 2010 Dun & Bradstreet database for employment and the Planning Department's Land Use Database for existing housing units. The 2040 projection numbers were developed by the Planning Department and are based on development capacity, potential development sites, and development policy under the existing and proposed zoning represented by the Plan. The Planning Department arrived at projections for Option A and Option B with distinct projections for either the "Residential Focus" or "Office Focus" within each option (see Section D, *Evaluation of Environmental Effects*, above).

This analysis takes a conservative approach by assuming the most aggressive land development scenario. For Population and Housing, the most aggressive land development scenario is high-rise Option B, which would result in the greatest population and employment increase within the Plan area. Further, while Options A and B each include two distinct growth projections that vary depending on assumed development trends, for the purposes of a conservative analysis, this analysis assumes the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus." While this level of development is unlikely to occur, it represents a conservative development program for analysis and forms the basis for the CEQA conclusions for this topic. These estimates are reflected in Table 3, below. Option B, as presented in Table 3, presents the development program assumptions for the Plan used in this Population and Housing analysis.

As stated in the Project Description, the Plan includes a Land Use Variant under which new housing would not be permitted in the existing WS-SALI and WS-MUO use districts applied as part of the Western SoMa Plan, in the area roughly bounded by Bryant, Townsend, Fourth and Sixth Streets. (The WS-SALI and WS-MUO districts do not currently permit new residential uses.) The growth forecasts for this variant eliminated new housing from this portion of the Plan area and substituted that growth with commercial uses in proportion to the prevalence of non-residential uses elsewhere in the Plan area, and are also included in Table 3.

TABLE 3
PROJECTED PLAN AREA GROWTH, OPTION A, OPTION B, AND LAND USE VARIANT

		Option A	Option B	Option A Land Use Variant	Option B Land Use Variant
Residential	Units	12,800	13,200	11,400	11,700
Non-Residential	Jobs	52,300	56,400	54,800	58,900

NOTE: Numbers rounded to nearest 100.

SOURCE: San Francisco Planning Department, Estimating Development Capacity for the Central SoMa Plan, December 20, 2013.

Impacts and Mitigation Measures

Impact PH-1: Development under the Plan and proposed street network changes would not induce substantial population growth, either directly or indirectly. (Less than Significant)

Development under the Plan would result in greater development density within the Plan area, compared to what is allowed under existing zoning. The Plan seeks to help shape and accommodate population growth within San Francisco primarily by removing land use restrictions to support a greater mix of uses while also emphasizing office uses in the central portion of the Plan area and increasing height limits on certain sites, primarily south of Harrison Street. The development projects that could be proposed and approved pursuant to the proposed zoning controls would accommodate population and job growth already identified for San Francisco, and projected to occur within city boundaries, and thus would not induce substantial population growth, either directly or indirectly.

Development Under the Plan

As described above, the Plan includes options that vary by permitted heights and a variant that alters permitted uses in one sub-area. Each scenario, described in more detail above in the Project Description, is presented briefly below. Tables 4, 5, and 6, below, present the estimates of population and housing for the Plan area as a whole, comparing the existing conditions (2010 baseline) and baseline conditions in 2040 (growth allowed under the current zoning), to the growth allowed under the Plan for Options A, B, and the Land Use Variant.

Option A (Mid-Rise Option)

Option A would increase heights along Fourth, Harrison, and Bryant streets to allow for towers between 130 and 320 feet tall on certain sites, mostly located south of Harrison Street, increasing height limits on those sites by 45 to 235 feet. As shown below in Table 4, Option A would result in approximately 52,300 new jobs and 22,700 new residents in the Plan area compared with the existing conditions (2010 Baseline).[27]

TABLE 4
EXISTING AND FORECAST HOUSING AND POPULATION IN THE PLAN AREA UNDER OPTION A

	Existing (2010 Baseline)	2040 No Project	No Project Increment	2040 w/Plan Option A	Option A Increment	Option A Less the 2040 No Project
Households[a]	6,800	16,000	9,200	19,600	12,800	3,600
Population[b]	12,000	28,300	16,200	34,700	22,700	6,400
Jobs	45,600	75,700	30,100	97,800	52,300	22,200

NOTE: Numbers rounded to nearest 100; some columns and rows do not add due to rounding.

[a] Assumes an 87 percent occupancy rate for existing households (2010 Baseline) which is based on the 2010 Census Data and appears to reflect a large number of newly constructed but not yet occupied units. Assumes a 95 percent occupancy rate for all Plan area households and existing households under future conditions in the remaining years.

[b] Assumes 1.77 persons per household, based on Planning Department data.

SOURCE: San Francisco Planning Department, *Estimating Development Capacity for the Central SoMa Plan*, December 20, 2013.

[27] For this discussion and subsequent topical discussions, all numbers for households, population, and jobs are rounded to the nearest increment of 100.

Option B (High-Rise Option)

Option B would be similar to Option A, except that Option B would increase tower height limits for certain sites south of Harrison Street to between 115 and 400 feet, increasing height limits on those sites by about 60 to 315 feet. As shown below in Table 5, Option B would result in about 56,400 new jobs and some 23,400 new residents in the Plan area compared with the existing conditions (2010 Baseline).

TABLE 5
EXISTING AND FORECAST HOUSING AND POPULATION IN THE PLAN AREA UNDER OPTION B

	Existing (2010 Baseline)	2040 No Project	No Project Increment	2040 w/Plan Option B	Option B Increment	Option B Less the 2040 No Project
Households[a]	6,800	16,000	9,200	20,000	13,200	4,000
Population[b]	12,000	28,300	16,200	35,400	23,400	7,100
Jobs	45,600	75,700	30,100	101,900	56,400	26,300

NOTE: Numbers rounded to nearest 100; some columns and rows do not add due to rounding.

[a] Assumes an 87 percent occupancy rate for existing households (2010 Baseline) which is based on the 2010 Census Data and appears to reflect a large number of newly constructed but not yet occupied units. Assumes a 95 percent occupancy rate for all Plan area households and existing households under future conditions in the remaining years.

[b] Assumes 1.77 persons per household.

SOURCE: San Francisco Planning Department, *Estimating Development Capacity for the Central SoMa Plan*, December 20, 2013.

Land Use Variant

The Land Use Variant, described above in the Project Description, would prohibit residential uses in a four-block area bounded by Bryant, Townsend, Fourth and Sixth streets. Development under the Plan with the Land Use Variant would result in a decrease in the additional residential units and a net increase in the additional commercial use space (and therefore jobs) under both Option A and Option B. As shown below in Table 6, Option B with the Land Use Variant would result in approximately 58,900 new jobs and about 20,800 new residents in the Plan area compared with the existing conditions (2010 Baseline).

TABLE 6
EXISTING AND FORECAST HOUSING AND POPULATION IN THE PLAN AREA UNDER THE LAND USE VARIANT WITH OPTION B

	Existing (2010 Baseline)	2040 No Project	No Project Increment	2040 w/Plan Option B Land Use Variant	Option B Land Use Variant Increment	Option B Land Use Variant Less the 2040 No Project
Households[a]	6,800	16,000	9,200	18,500	11,800	2,600
Population[b]	12,000	28,300	16,200	32,800	20,800	4,500
Jobs	45,600	75,700	30,100	104,500	58,900	28,800

NOTE: Numbers rounded to nearest 100; some columns and rows do not add due to rounding.

[a] Assumes an 87 percent occupancy rate for existing households (2010 Baseline) which is based on the 2010 Census Data and appears to reflect a large number of newly constructed but not yet occupied units. Assumes a 95 percent occupancy rate for all Plan area households and existing households under future conditions in the remaining years.

[b] Assumes 1.77 persons per household.

SOURCE: San Francisco Planning Department, *Estimating Development Capacity for the Central SoMa Plan*, December 20, 2013.

CEQA Analysis Scenario

Overall, the environmental effects of Option A, including the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus," would be the same as or less severe than those of Option B. The Land Use Variant is estimated to result in fewer residents and more jobs within the Plan area compared with Option B. Because the variant effectively converts potential residential development to non-residential development, the net change in combined population and jobs is similar. Therefore, Plan Option B (with or without the land use variant) would result in the greatest population and employment increase within the Plan area, and thus represents the most aggressive land development scenario and the conservative approach to analysis.

Regardless of the scenario and associated population projections, none of the Plan options or variants would stimulate new population or job growth within San Francisco that is not already projected to occur by regional growth forecasts and regional air quality planning efforts. For San Francisco, this includes a projected increase of approximately 101,000 households and 191,000 jobs during the period from 2010 to 2040 (see *Growth Anticipated in Local and Regional Plans*, above). The Plan policies would not trigger the need for roadway expansions or result in the extension of infrastructure into previously unserved areas. Rather, by allowing for more density within the Plan area, and accommodating growth that is projected to occur within San Francisco, development under the plan would have the effect of alleviating development pressure elsewhere in the City and promoting density in the already urbanized and transit-rich Plan area. Therefore, the Plan would not induce substantial population growth beyond that projected by regional forecasts, either directly or indirectly, and this impact would be less than significant.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the Plan would not have any impacts on population and housing, as they would not induce population growth in the Plan area, either directly or indirectly.

Mitigation: None required.

Impact PH-2: Development under the Plan and proposed street network changes would not generate housing demand beyond projected housing forecasts. (Less than Significant)

Development Under the Plan

As a regulatory program, the Plan would not result in direct physical effects but rather would result in new planning policies and controls to accommodate additional jobs and housing. The goal of the Plan is to accommodate regional growth projections for San Francisco and to shape and direct that growth toward appropriate locations. Because San Francisco is a regional job center, and because the Plan area is near regional transit lines, the Plan area represents one of the locations appropriate for new office development. As described below, the potential housing demand generated by expected office development would be offset by new housing development forecast both within the Plan area and for the

City as a whole, as well as through the City's affordable housing programs (Inclusionary Affordable Housing Program and Jobs-Housing Linkage Program).

Employment Related Housing Demand

As noted, the Land Use Variant is estimated to result in fewer residential units and more jobs within the Plan area compared with Option B and thus represents the most aggressive land development scenario and the conservative approach to analysis for employment related housing demand. Under the Land Use Variant, Option B, employment in the Plan area is anticipated to increase by up to about 58,900 jobs by 2040 (under Option B). Based on a nexus study prepared for the Jobs-Housing Linkage Program (*Planning Code* Sections 413 *et. seq.*), this employment would create a demand for about 19,900 new dwelling units in San Francisco, assuming that all employees of those development projects were new to San Francisco, and assuming the majority of new employees would reside outside of the city limits.[28] (Some Plan area workers would be likely to have relocated from other jobs in San Francisco, given that firms routinely relocate within the City when a lease expires and/or they require more or different kinds of space.) As derived from Planning Department data, the total potential housing demand from Plan-generated jobs represents roughly 19 percent of the approximate 106,000-unit increase in housing units projected for the City through 2040.[29] This projected demand for housing (about 19,900 units) would surpass the potential addition of about 11,700 units (see Land Use Variant Option B in Table 3, above) projected to be created in the Plan area through 2040, but is consistent with the expected growth of housing throughout the City, the proportion of jobs created, and the existing and intended future character of the Plan area as an employment center. (The Plan's job growth would represent a substantially greater percentage of the anticipated citywide increase—25 percent of new jobs between 2010 and 2040 would be in the Plan area.)

New Housing Development

The Plan recognizes that the regional imbalance of housing supply and demand means that it is important to capitalize on opportunities to provide more housing in appropriate locales. Sites within the Plan area that are too small or otherwise inappropriate for workplace development have been identified as more appropriate for new housing development. Importantly, the historical and future base of the Plan area is as an employment base and the Plan provides for additional housing above the existing conditions and the under proposed zoning. From a location, transit, and market demand perspective, it is a logical employment growth center. Allowing a wide and flexible range of uses, increasing allowed densities, and strategically raising height limits are the Plan's key strategies to enable increased development potential. With these changes to height and bulk limits and development densities allowed under the Plan, the Planning Department estimates a total additional development potential of up to 13,200 housing units in Plan area by 2040.

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[28] This method uses the estimated project-related increase in employment (up to 58,900 employees) by the fraction of San Francisco employees who live in the City (55%). This result, the approximate number of Plan-related employees who would live in the City (32,400), is divided by the average number of workers in households where workers reside (1.63). The estimated housing demand would be about 19,900 units (58,900 x 0.55 ÷1.63 ≈ 19,900).

[29] San Francisco Planning Department, *San Francisco Land Use Allocation, Central SoMa*, January 6, 2014. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E. This document projects citywide growth of approximately 101,000 households which translates to approximately 106,000 housing units at a 95 percent occupancy rate.

This increase in housing development potential would improve San Francisco's ability to accommodate housing demand, thereby reducing the number of people who would otherwise be commuters living outside the City and therefore more likely to drive to work. Furthermore, the increased housing supply in the Plan area would reduce demand pressure from employment growth on the existing, older housing stock in the City.

Also, the developers of new housing (in development projects of five or more units) in the Plan area would be required to participate in San Francisco's Inclusionary Affordable Housing Program. The affordable housing fees required of these developers would generate revenue for the Citywide Affordable Housing Fund to be used to increase the supply of affordable housing in San Francisco. Payment of these fees would satisfy the City's current land use regulatory requirement to offset the documented impact of market-rate housing development on the demand for affordable housing in San Francisco.

Furthermore, non-residential development in the Plan area would be required to participate in the Jobs-Housing Linkage Program, which would contribute to offsetting any residual impact of increased demand on housing prices and rents and the need for affordable housing in San Francisco. Any Jobs-Housing Linkage Fee Program revenue generated by development projects in the Plan area would be deposited in the Citywide Affordable Housing Fund to be used to increase the supply of affordable housing in San Francisco.

Overall, the conservatively estimated housing demand resulting from Plan-generated employment would be accommodated by increases in housing supply, primarily within the Plan area and elsewhere in San Francisco, and the impact would be less-than-significant.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the Plan would not have any impacts on population and housing, as they would not generate demand for housing units.

Mitigation: None required.

Impact PH-3: Development under the Plan and proposed street network changes would not displace a large number of housing units or people or necessitate the construction of replacement housing outside of the Plan area. (Less than Significant)

Development Under the Plan

While the Plan is a regulatory program with no direct physical effects, subsequent development under the Plan could require the demolition of existing housing units within the Plan area. From the perspective of the City's housing stock, the loss of housing units as a result of development under the Plan would be offset by the production of up to approximately 13,200 net new housing units within the Plan area in addition to residential development elsewhere in San Francisco as has been occurring and is expected to

occur in the future, in addition to the fees paid for the jobs/housing linkage program and Inclusionary Affordable Housing.

While it would be speculative to estimate precisely how many of the 7,800 existing Plan area dwelling units could be demolished as a result of development under the Plan, the Plan is designed to promote density within the Plan area and therefore any displaced housing units would not be expected to necessitate the construction of replacement housing elsewhere outside the Plan area. Further, adherence to *Planning Code* Section 317, which requires replacement of residential structures lost through demolition, would ensure that the housing stock in the City would be conserved and maintained. Therefore, this impact would be less than significant.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the Plan would not have any impacts on population and housing, as they would not displace a large number of housing units or people or necessitate the construction of replacement housing.

Mitigation: None required.

Impact C-PH-1: Development under the Plan and proposed street network changes would not make a considerable contribution to any cumulative impact on population or housing. (Less than Significant)

Housing and employment growth in San Francisco is consistent with the projections contained in *Plan Bay Area*, which is the current regional transportation plan and Sustainable Communities Strategy that was adopted by MTC and ABAG in July 2013, in compliance with California's governing greenhouse gas reduction legislation, Senate Bill 375. *Plan Bay Area* calls for an increasing percentage of Bay Area growth to occur as infill development in areas with good transit access and where services necessary to daily living are provided in proximity to housing and jobs. With its abundant transit service and mixed-use neighborhoods, San Francisco is expected to accommodate an increasing share of future regional growth. Therefore, the *Plan Bay Area* projections represent the context for the cumulative analyses.

Development under the Plan

The purpose of the Plan, and subsequent development under the Plan, is to accommodate projected employment and housing growth identified for San Francisco. Therefore, the Plan would not (1) induce population growth beyond that projected, and (2) would not directly displace housing or necessitate the construction of replacement housing outside of the Plan area. Subsequent development could result in the displacement of housing, but replacement of displaced units would be required on a project-specific basis, based on regulations in the *Planning Code* (Section 317) related to the removal of dwelling units. Office and other non-residential development would be required to pay in-lieu fees pursuant to the jobs-housing linkage program. Therefore, subsequent development pursuant to the Plan would not make a considerable

contribution to any housing displacement anticipated as a result of implementation of *Plan Bay Area*. Accordingly, cumulative effects related to population and housing would be less than significant.

Proposed Street Network Changes

The proposed street network changes that would be implemented as part of the Plan would not have any impacts on population and housing, and thus would not make a considerable contribution to any cumulative impact on population or housing.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
4. CULTURAL AND PALEONTOLOGICAL 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*?	☒	☐	☐	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☒	☐	☐	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐	☐	☐	☐

The Plan and the proposed street network changes have the potential to result in significant cultural and paleontological impacts. Accordingly, this topic will be further analyzed and included in the EIR.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	☐	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☒	☐	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐

The Plan area is approximately 10 miles from San Francisco International Airport. Plan area development would have no effect on air travel patterns or obstruct aircraft. Therefore, topic 5c is not applicable and will not be addressed further in the EIR. With respect to the other questions, the Plan and the proposed street network changes have the potential to result in significant transportation and circulation impacts. Accordingly, Transportation, with the exception of air traffic patterns, will be further analyzed and included in the EIR.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6. NOISE—Would the project:					
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐	☐
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐	☐
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐	☐
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☒	☐	☐	☐	☐
e) For a project located within an airport land use plan area, or, where such a plan has not been adopted, in an area within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☐	☒
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☐	☒
g) Be substantially affected by existing noise levels?	☒	☐	☐	☐	☐

The Plan area is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore, topics 6e and 6f are not applicable, and will not be addressed further. With respect to other questions, the Plan and the proposed street network changes have the potential to result in significant noise impacts. Accordingly, Noise, with the exception of aircraft noise, will be further analyzed and included in the EIR.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
7. AIR QUALITY—Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☒	☐	☐	☐	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐	☐
e) Create objectionable odors affecting a substantial number of people?	☒	☐	☐	☐	☐

The Plan and the proposed street network changes have the potential to result in significant air quality impacts. Accordingly, this topic will be further analyzed and included in the EIR.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

Setting

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The

accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), ozone, and water vapor.

Individual projects emit GHGs during demolition, construction, and operational phases. While the presence of the primary GHGs in the atmosphere is naturally occurring, CO2, CH4, and N2O are largely emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of CO2 are largely byproducts of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural activities and landfills. Black carbon has recently emerged as a major contributor to global climate change, possibly second only to CO2. Black carbon results from incomplete combustion of fossil fuels, biofuels, and biomass.[30] N2O is emitted from agricultural activities, fossil fuel combustion, wastewater management, and industrial processes, such as the production of nitric acid, which is used to make synthetic commercial fertilizer.[31] Other GHGs generated in industrial processes include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gases are typically reported in "carbon dioxide-equivalent" measures (CO2E).[32]

There is international scientific consensus that human-caused increases in GHGs have contributed and will continue to contribute to global warming. Many impacts resulting from climate change, including increased fires, floods, severe storms and heat waves, occur already and will only become more frequent and more costly.[33] Secondary effects of climate change are likely to include a global rise in sea levels; impacts to agriculture, the state's electricity system, and native freshwater fish ecosystems; an increase in the vulnerability of levees in the Sacramento-San Joaquin Delta; changes in disease vectors; and changes in habitat and biodiversity.[34,35]

The ARB estimated that in 2010, California produced approximately 451 million gross metric tons of CO2E (MMTCO2E) emissions.[36] ARB determined that transportation is the source of 38 percent of the State's GHG emissions, followed by electricity generation (both in-state and out-of-state) at 21 percent and industrial sources at 19 percent. Commercial and residential fuel use (primarily for heating) accounted for approximately 10 percent of CO2E emissions.[37] In the Bay Area, the transportation (on-road motor vehicles, off-highway mobile sources, and aircraft) and the industrial and commercial sector were the two largest sources of GHG emissions, each accounting for approximately 36 percent of

30 Center for Climate and Energy Solutions. *What is Black Carbon?*, April 2010. Available online at: http://www.c2es.org/docUploads/what-is-black-carbon.pdf. Accessed November 12, 2013.

31 U.S. Environmental Protection Agency. *Overview of Greenhouse Gases, Climate Change*, September 9, 2013. Available online at: http://epa.gov/climatechange/ghgemissions/gases/n2o.html. Accessed November 12, 2013.

32 Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," a weighted average based on each gas's heat absorption (or "global warming") potential.

33 California Climate Change Portal. Available online at: http://www.climatechange.ca.gov. Accessed November 12, 2013.

34 Ibid.

35 California Energy Commission. California Climate Change Center. *Our Changing Climate 2012*. Available online at: http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf. Accessed November 12, 2013.

36 California Air Resources Board. California Greenhouse Gas Inventory for 2000-2010— by Category as Defined in the Scoping Plan. Available online at: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-11_2013-08-01.pdf. Accessed December 30, 2013.

37 Ibid.

the Bay Area's 95.8 MMTCO2E emitted in 2007.[38] Electricity generation accounts for approximately 16 percent of the Bay Area's GHG emissions, followed by residential fuel usage (e.g., home water heaters, furnaces, etc.) at 7 percent, off-road equipment at 3 percent, and agriculture at 1 percent.[39]

Regulatory Setting

In 2005, in recognition of California's vulnerability to the effects of climate change, former Governor Arnold Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced:

- By 2010: reduce GHG emissions to 2000 levels (approximately 457 MMTCO2E);
- By 2020: reduce emissions to 1990 levels (estimated at 427 MMTCO2E); and
- By 2050: reduce state-wide GHG emissions to 80 percent below 1990 levels (about 85 MMTCO2E).

In response, in 2006, the California legislature passed Assembly Bill No. 32 (AB 32; California HSC Division 25.5, Section 38500, et seq.) also known as the Global Warming Solutions Act. AB 32 requires ARB to design and implement emission limits, regulations, and other measures to reduce GHG emissions to 1990 levels by the year 2020.[40]

Pursuant to AB 32, ARB adopted the Climate Change Scoping Plan (Scoping Plan) in December 2008, as the state's overarching plan for addressing climate change. The Scoping Plan outlines measures to meet the required GHG reductions by 2020 and sets out an implementation timeline for GHG reduction strategies. In order to meet the goals of AB 32, California must reduce its GHG emissions by 30 percent below projected 2020 business as usual emissions levels, or about 15 percent from 2008 levels.[41] The Scoping Plan estimates a reduction of 174 million MMTCO2E (about 191 million U.S. tons) from the transportation, energy, agriculture, forestry, and high global warming potential sectors, as summarized in Table 7.[42]

The AB 32 Scoping Plan recommendations are intended to curb projected business-as-usual growth in GHG emissions and reduce those emissions to 1990 levels. Meeting the reduction goals of the Scoping Plan would result in an overall annual net decrease in GHGs relative to current levels, accounting for projected increases in emissions resulting from anticipated growth.[43]

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[38] Bay Area Air Quality Management District, Source Inventory of Bay Area Greenhouse Gas Emissions: Base Year 2007, updated February 2010. Available online at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Emission%20Inventory/regionalinventory2007_2_10.ashx. Accessed November 12, 2013.

[39] Ibid.

[40] Governor's Office of Planning and Research. *Technical Advisory- CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*, June 19, 2008. Available online at: http://opr.ca.gov/docs/june08-ceqa.pdf. Accessed November 13, 2013.

[41] California Air Resources Board. *California's Climate Plan: Fact Sheet,* September 25, 2010. Available online at: http://www.arb.ca.gov/cc/cleanenergy/clean_fs2.pdf. Accessed November 13, 2013.

[42] California Air Resources Board. *Assembly Bill 32: Global Warming Solutions Act*. Available online at: http://www.arb.ca.gov/cc/ab32/ab32.htm/. Accessed November 13, 2013.

[43] The AB 32 Scoping Plan is currently undergoing a 5-year update, as required by the legislation. A discussion draft was released on October 1, 2013. ARB plans to release the draft plan in January 2014 and will hold a hearing in spring 2014 to consider adoption of the final plan.

TABLE 7
GREENHOUSE GAS REDUCTIONS BY SECTOR FROM THE AB32 SCOPING PLAN

Sector	GHG Reductions ($MMTCO_2E$)
Transportation Sector	62.3
Electricity and Natural Gas	49.7
Industry	1.4
Landfill Methane Control Measure (Discrete Early Action)	1
Forestry	5
High Global Warming Potential GHGs	20.2
Additional Reductions Needed to Achieve the GHG Cap	34.4
Total	**174**
Other Sectors/Recommended Measures	
Government Operations	1-2
Agriculture - Methane Capture at Large Dairies	1
Water	4.8
Green Buildings	26
High Recycling/ Zero Waste ▪ Commercial Recycling ▪ Composting ▪ Anaerobic Digestion ▪ Extended Producer Responsibility ▪ Environmentally Preferable Purchasing	9
Total	**41.8 - 42.8**

In addition, Senate Bill 375 (SB 375) was implemented to reduce carbon emission by aligning local land use and transportation planning to further achieve the state's GHG reduction goals. SB 375 requires Metropolitan Planning Organizations to incorporate a "sustainable communities strategy" in regional transportation plans (RTPs) to achieve GHG emission reduction targets set by ARB. SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations, to incorporate a "sustainable communities strategy" in their regional transportation plans (RTPs) that would achieve GHG emission reduction targets set by ARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit-oriented development. SB 375 would be implemented over the next several years and *Plan Bay Area*, the Bay Area Metropolitan Transportation Commission's 2013 RTP, is the first plan subject to SB 375, adopted on July 18, 2013.

In conformance with AB 32, ARB has identified a GHG reduction target of 15 percent from current levels for local governments, noting that successful implementation of the Scoping Plan relies on local governments' land use planning and urban growth decisions because local governments have the primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions.[44] The BAAQMD conducted an analysis of the actions outlined in the Scoping

[44] CARB. *Climate Change Scoping Plan*, December 2008.

Plan and determined that in order for the Bay Area to meet the GHG reduction goals, the region would need to achieve an additional 2.3 percent reduction in GHG emissions from the land use sector.[45]

The BAAQMD is the primary agency responsible for air quality in the nine-county San Francisco Bay Area air basin. The BAAQMD recommends that local agencies adopt a Greenhouse Gas Reduction Strategy consistent with the goals of AB 32 and that significance of GHG emissions from a project be based on the degree to which that project complies with a Greenhouse Gas Reduction Strategy. As described below, this recommendation is consistent with the approach to analyzing GHG emissions outlined in the CEQA Guidelines.

At a local level, the City of San Francisco has developed a number of plans and programs to reduce the City's contribution to global climate change. San Francisco's 2008 Greenhouse Gas Reduction ordinance requires that by 2008, the City determine its GHG emissions for the year 1990, the baseline level with reference to which target reductions are set; by 2017, reduce GHG emissions by 25 percent below 1990 levels; by 2025, reduce GHG emissions by 40 percent below 1990 levels; and finally by 2050, reduce GHG emissions by 80 percent below 1990 levels. San Francisco's Strategies to Address Greenhouse Gas Emissions (Greenhouse Gas Reduction Strategy) documents the City's actions to pursue cleaner energy, energy conservation, alternative transportation, and solid waste reduction. As identified in the Greenhouse Gas Reduction Strategy, the City has implemented a number of mandatory requirements and incentives that have measurably reduced GHG emissions including, but not limited to, increasing the energy efficiency of new and existing buildings, installation of solar panels on building roofs, implementation of a green building strategy, adoption of a zero waste strategy, a construction and demolition debris recovery ordinance, a solar energy generation subsidy, incorporation of alternative fuel vehicles in the City's transportation fleet (including buses), and a mandatory recycling and composting ordinance. The strategy also identifies 42 specific regulations for new development that would reduce a project's GHG emissions.

San Francisco's policies and programs have resulted in a reduction in GHG emissions below 1990 levels of approximately 6.15 MMTCO2E. A recent third-party verification of the City's 2010 community-wide and municipal emissions inventory confirmed that San Francisco reduced its GHG emissions to 5.26 MMTCO2E, representing a 14.5 percent reduction in GHG emissions below 1990 levels, which exceeds the statewide AB 32 GHG reduction goals.[46]

Approach to Analysis

The Plan is a regulatory program and would result in new planning policies and controls for land use to accommodate additional jobs and housing. The Plan itself would not result in direct physical changes to the environment, though specific development projects allowed under the Plan could result in changes to GHG emissions in the Plan area. Section 15064.4 of CEQA Guidelines calls for a "good-faith effort" to

[45] BAAQMD. California Environmental Quality Act, *Proposed Thresholds of Significance*, December 7, 2009. Available online at: http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Draft%20BAAQMD%20CEQA%20Guidelines_Dec%207%202009.ashx?la=en. Accessed November 13, 2013.

[46] San Francisco Department of the Environment, Community Greenhouse Gas Inventory 3rd Party Verification Memo, http://www.sfenvironment.org/download/community-greenhouse-gas-inventory-3rd-party-verification-memo, accessed December 27, 2013.

"describe, calculate or estimate" GHG emissions; Section 15064.4 further states that the significance of GHG impacts should include consideration of the extent to which the Plan would increase or reduce greenhouse gas emissions; exceed a locally applicable threshold of significance; and comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." The CEQA Guidelines also state that a project may be found to have a less-than-significant impact if it complies with an adopted plan that includes specific measures to sufficiently reduce GHG emissions (Section 15064(h)(3)).

The Plan's impacts with respect to GHG emissions are based on compliance with local, regional, and state plans, policies and regulations adopted for the purpose of reducing the cumulative impacts of climate change. GHG emissions are analyzed in the context of their contribution to the cumulative effects of climate change because a single land use project could never generate enough GHG emissions to noticeably change the global average temperature. As discussed above, the AB 32 Scoping Plan is the State's overarching plan for addressing climate change. The AB 32 Scoping Plan recommendations are intended to curb projected business-as-usual growth in GHG emissions and reduce those emissions to 1990 levels. Therefore, meeting AB 32 GHG reduction goals would result in an overall annual net decrease in GHGs as compared to current levels and accounts for projected increases in emissions resulting from anticipated growth.

A third, and regional, transportation, land use, and GHG reduction plan applicable to the Plan is *Plan Bay Area*. *Plan Bay Area* sets forth a forecasted development pattern for the region that concentrates growth into walkable communities along the region's extensive transit network, provides incentives for clean vehicles and smart driving, and directs investment into operating and maintaining, rather than expanding, the region's current transportation network. With implementation of these strategies, by 2035, per capita greenhouse gas emissions from transportation are projected to decline by 16.4 percent from today, exceeding the region's target of 15 percent.

In summary, the three applicable GHG reduction plans, the AB 32 Scoping Plan, *Plan Bay Area*, and the City's GHG Reduction Strategy, are intended to reduce GHG emissions below current levels. Given that the City's local greenhouse gas reduction targets are more aggressive than the State's 2020 GHG reduction targets, and consistent with the long-term 2050 reduction targets, the City's GHG Reduction Strategy is consistent with the goals of AB 32. Therefore, projects that are consistent with the City's GHG Reduction Strategy would be consistent with the goals of AB 32 and would not conflict with either plan or generate GHG emissions that would make a considerable contribution to global climate change. This analysis also considers the Plan's consistency with the primary goals of *Plan Bay Area*, which is expected to reduce GHG emission from the land use section by 16.4 percent by 2035. As such, a project's impact with respect to GHG emissions is analyzed based on compliance with the City's GHG Reduction Strategy and, for this analysis, with *Plan Bay Area* as well.

It is noted that the proposed open space improvements that would be implemented as part of the Plan would not have any impacts on greenhouse gases, other than to further many of the goals of the applicable

GHG reduction plans. The open space improvements would, however, result in a temporary increase in GHG emissions during construction of individual improvements.

It is also noted that the following discussion applies to the components of the Plan and the Plan as a whole, and the environmental effects associated with the Plan's proposed height options and land use variant do not apply to this topical area, unless otherwise noted.

Impacts and Mitigation Measures

Impact C-GG-1: The Plan and development pursuant to the Plan would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with the City's GHG reduction strategy, *Plan Bay Area*, or AB 32, and would not result in cumulatively considerable GHG emissions. (Less than Significant)

Development Under the Plan

Adoption and implementation of the Plan would not directly result in GHG emissions. However, implementation of subsequent development projects in the Plan area would indirectly result in GHG emissions. It is important to make clear that the proposed Central SoMa Plan is, in substantial part, being put forward by the Planning Department as a response to the Bay Area's regional GHG reduction strategy. As explained in the Project Description, Senate Bill 375 required each metropolitan region in the state to prepare a Sustainable Communities Strategy (SCS) to reduce greenhouse gas emissions (GHGs) by linking growth and transportation planning. ABAG and MTC adopted *Plan Bay Area*, the region's SCS and regional transportation plan, in July 2013. The growth projections contained within *Plan Bay Area* anticipate that San Francisco will add, between 2010 and 2040, approximately 92,500 housing units (a 25 percent increase) and nearly 191,000 additional jobs (a 34 percent increase). As further explained in the Project Description, the City has adopted plans in recent years to accommodate much of the anticipated new housing units, but has been less proactive in planning space for jobs. Accordingly, the Plan seeks to accommodate growth, in particular employment growth, in proximity to local and regional transit. Thus, the Plan is a key step in San Francisco's approach to implementation of the GHG reduction policies set forth in both AB 32 and SB 375. The Plan is also a key step in San Francisco's ability to accommodate both the amount of jobs and housing growth projected by *Plan Bay Area*, as well as the manner in which that growth occurs as infill development in transit-rich neighborhoods. This manner of development, encouraged through Plan policies, is consistent with the *Plan Bay Area's* goals of reducing greenhouse emissions by 16.4 percent by 2035.

The Plan includes goals and objectives that would apply to development within the Plan area. These policies are generally consistent with the City's *Strategies to Address Greenhouse Gas Emissions*. The Plan would support reductions in GHG emissions by providing for additional medium- to high-density mixed-use development in an area with an extensive array of transit service and would expand non-auto modal (e.g., bicycle and pedestrian) facilities. With regard to the GHG reduction sectors listed in the City's *Strategies to Address Greenhouse Gas Emissions* (i.e., Transportation, Energy Efficiency, Renewable Energy, Waste, and Environment/Conservation), many of the Plan objectives would reduce GHGs resulting from

transportation, by increasing more flexible zoning and designated growth-oriented zoning locations, to allow for the creation of a more "transit-rich area" and enhance worker-access to jobs (through workplace growth), and by maintaining a diversity of land uses, increasing levels of affordable housing, and where appropriate, increasing building densities. Other objectives encourage adaptive building reuse and infill development. Additionally, a series of transportation improvements are also planned that would directly discourage auto-oriented uses of the Plan area, and encourage the use of transit and other non-auto modes. Table 8, below, sets forth goals, principles, and implementation strategies from the Plan that are important among those that would serve to reduce potential GHG emissions by concentrating growth near transit, discouraging use of single-occupancy vehicles for commuter travel, encouraging alternative forms of travel, and maintaining the area's vibrant economic and physical diversity.[47]

In addition to the above-mentioned goals, principles, and strategies, a feasibility analysis in the Plan area is under way to assess energy, water, and waste, to determine the overall viability and cumulative effect of the area as an established Eco-District. Notable tasks will include: 1) an assessment, led by the SFPUC and Department of the Environment (SF Environment), of projects that may apply shared energy efficiency analytic resources and improve building performance; 2) a SFPUC-led study of a district water strategy aimed at identifying opportunities for shared stormwater management and decentralized wastewater treatment and reuse; and 3) through coordination with SF Environment and the waste/recycling company Recology, exploration of new recycling facilities and achievement of zero waste and maximum sort separation.

The foregoing goals, principles, and implementation strategies in the Plan would, if implemented, ensure that subsequent development projects in the Plan area would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment, nor would these projects conflict with the City's GHG Reduction Strategy. Further, the Plan is designed to accommodate the regional growth and development pattern set forth in *Plan Bay Area* and therefore support the regional goal to reduce GHGs by 16.4 percent by 2035, exceeding the region's target of 15 percent. Therefore, the Plan would be consistent with the GHG Reduction Strategy, and effects of Plan implementation related to GHG emissions would be less than significant.

Consistent with Planning Department practice, subsequent development projects proposed in the Plan area would be evaluated based on the Department's Compliance Checklist Table for Greenhouse Gas Analysis: Private Development Projects, to ensure that such projects are consistent with the City's GHG Reduction Strategy.[48] Depending on a proposed project's size, use, and location, a variety of controls are in place to ensure that a proposed project would not impair the State's ability to meet statewide GHG reduction targets outlined in AB 32, or impact the City's ability to meet San Francisco's local GHG reduction targets. Given

[47] For a complete description of all goals, principles, and strategies of the Plan, please refer to the Draft Central Corridor Plan for Public Review available: http://www.sf-planning.org/ftp/files/Citywide/Central_Corridor/Central-Corridor-Plan-DRAFT-FINAL-web.pdf; accessed May 23, 2013.

[48] The GHG checklist is available for review on the Planning Department website at: http://sfmea.sfplanning.org/GHG_Checklist_T1.doc.

TABLE 8
GOALS, POLICIES, AND STRATEGIES FROM THE
CENTRAL SOMA PLAN THAT COULD AFFECT EMISSIONS OF GREENHOUSE GAS

Goal, Policy, or Strategy	Potential Effect on Greenhouse Gas Emissions
Overall Plan Goals	
Goal 1: Support transit-oriented growth, particularly workplace growth in the Plan area.	By accommodating a share of regional growth in an area with good transit access, the Plan would result in lesser GHG emissions than would a comparable degree of development elsewhere in the region with less transit access. As noted above, these goals will contribute to *Plan Bay Area's* target of reducing greenhouse emissions from transportation by 16.4 percent by 2035.
Goal 4: Support growth with improved streets, additional open space, and other elements of "complete communities."	By providing for communities in which employees and residents have convenient access to goods, services, and amenities, the Plan could minimize vehicle travel that might otherwise be required to obtain these goods, services, and amenities, thereby reducing both vehicle miles traveled and vehicle emissions, including of GHGs.
Goal 5: Create a model of sustainable growth.	By supporting sustainability at the building and district level, the Plan encourages green practices, including energy and water savings and reduced wastewater, thus reducing GHGs from production, transport, and treatment.
Land Use	
Principle 1: Support substantial development in this diverse, transit-rich area.	See discussion under **Goal 1**, above.
Implementation Strategy 1.1: Maintain growth-oriented zoning where it exists.	
*Implementation Strategy 1.*2: Replace restrictive zoning with more flexible zoning in areas that can support sustainable growth.	
Principle 2: Favor commercial development over other kinds of growth.	By accommodating substantial job growth in the Plan area, the Plan would help the Bay Area accommodate economic growth in a transit-rich district, thereby resulting in less vehicle travel and GHG emissions than for a comparable amount of job growth in a part of the Bay Area less well served by transit. As noted above, these goals will contribute to *Plan Bay Area's* target of reducing greenhouse emissions from transportation by 16.4 percent by 2035.
Implementation Strategy 2.2: Rezone office-restrictive areas to enable workplace development.	
Streetscape and Circulation	
Principle 1: Provide a safe, convenient and attractive walking environment on all streets in the Plan area.	The Plan seeks to reduce reliance on personal vehicle travel and to increase the attractiveness and convenience of alternative means of travel such as transit, bicycling, and walking. To the extent that the Plan achieves a decrease in personal vehicle travel and an increase in travel by alternative, non-auto means, the Plan would decrease vehicle miles traveled and vehicle emissions, including those of GHGs.
Principle 2: Configure transit routes to adequately serve the area and redesign streets that serve transit to lessen the impact of traffic on transit performance.	
Implementation Strategy 2.1: Provide a robust network of dedicated transit lanes.	
Principle 3: Make cycling an attractive transportation option throughout the Plan area for all ages and abilities.	
Implementation Strategy 3.1: Enhance existing and planned bicycle lanes.	
Implementation Strategy 3.2: Provide bicycle facilities on additional streets.	
Implementation Strategy 3.3: Provide additional bicycle infrastructure, such as bicycle parking, to support ridership.	

TABLE 8 (Continued)
GOALS, POLICIES, AND STRATEGIES FROM THE
CENTRAL SOMA PLAN THAT COULD AFFECT EMISSIONS OF GREENHOUSE GAS

Goal, Policy, or Strategy	Potential Effect on Greenhouse Gas Emissions
Streetscape and Circulation (cont.)	
Principle 4: Employ transportation demand management measures to encourage mode-shift away from private automobile usage.	Transportation demand management (TDM) seeks to further reduce vehicle miles traveled by increasing the use of non-personal vehicles. In addition to enhancing alternative modes of travel, TDM may include strategies to provide employees with a ride home in the event of emergency, provision of on-site services to preclude the need for travel, parking management, site-specific shuttle service, and the like.
Open Space	
Principle 1: Create new publicly-owned open space and recreation amenities throughout the Central SoMa Area.	As with other amenities, the provision of new open space in the Plan area would enhance the livability of the neighborhood and allow both employees and residents to obtain access to green spaces without traveling outside the area, thereby potentially reducing GHG emissions from vehicle travel.
Principle 2: Create an extensive network of pedestrian-friendly streets, alleys, and paseos that serve as flexible public spaces.	
Principle 4: Utilize open space areas to highlight and strengthen ecological sustainability within the Central SoMa Eco-District.	See discussion under **Goal 5**, above.

that: (1) San Francisco has implemented regulations to reduce GHG emissions specific to new construction and renovations of private developments and municipal projects; (2) San Francisco's sustainable policies have resulted in the measured reduction of annual GHG emissions; (3) San Francisco has met and exceeds AB 32 GHG reduction goals for the year 2020 and is on track towards meeting long-term GHG reduction goals; (4) current and probable future state and local GHG reduction measures will continue to reduce a project's contribution to climate change; and (5) San Francisco's *Strategies to Address Greenhouse Gas Emissions* meet the CEQA and BAAQMD requirements for a Greenhouse Gas Reduction Strategy, projects that are consistent with San Francisco's regulations would not contribute significantly to global climate change. Subsequent development projects in the Plan area would be required to comply with the requirements listed above, consistent with San Francisco's *Strategies to Address Greenhouse Gas Emissions.* As such, these subsequent development projects would result in a ***less-than-significant impact*** with respect to GHG emissions.

Mitigation: None required.

Impact C-GG-2: The proposed street network changes and open space improvements would generate greenhouse gas emissions during construction, but not at levels that would result in a significant impact on the environment, and the proposed changes would be consistent with the City's GHG Reduction Strategy, *Plan Bay Area*, and the AB 32 Scoping Plan. The proposed street network changes and open spaces therefore would not result in cumulatively considerable GHG emissions. (Less than Significant)

The proposed street network changes would not have any direct impacts on operational (e.g., traffic- or building-related) greenhouse gases. Implementation of the proposed street network changes would result in

reduced roadway capacity, which may increase GHG emissions, as more congestion and idling may occur. However, the proposed street network changes also would further the goals of the applicable GHG reduction plans by promoting alternative modes of transportation through improved walking and cycling environments and a reduced impact of traffic on transit performance, and by employing Transportation Demand Management measures to encourage mode-shift away from private automobile usage.

However, proposed street network changes and open space improvements could result in a temporary increase in GHG emissions during construction of individual street improvements. Construction equipment used in construction of the physical improvements required for the proposed street network changes (e.g., construction of bus bulbs and widened sidewalks, installation of signal lights at new crosswalks) and open spaces would result in a temporary increase in GHG emissions. Greenhouse gases would also be emitted from vehicles delivering supplies to construction sites and from construction worker vehicle trips. Additionally, some construction activities would require demolition of portions of the street or sidewalk, resulting in an increase in GHGs related to landfill transport. However, construction activities in connection with the proposed street network changes and open spaces would be relatively small, typically involving a limited area and a limited number of pieces of heavy equipment and workers. Moreover, City construction projects are subject to the "Clean Construction Ordinance" (Section 6.25 of the *San Francisco Administrative Code*), which requires use of relatively cleaner diesel engines or emission controls; typically, cleaner engines are newer and more efficient than older ones, which would have the added benefit of reducing GHG emissions during construction.

Given the City's existing GHG Reduction Strategy and other regulations to reduce GHG emissions from municipal projects, its success in reducing GHG emissions, the likelihood that state and local GHG reduction measures will continue to reduce projects' contribution to climate change, and the relatively minor scale of the proposed street network changes and open spaces, these improvements would result in a ***less-than-significant impact*** with respect to GHG emissions.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
9. WIND AND SHADOW—Would the project:					
a) Alter wind in a manner that substantially affects public areas?	☒	☐	☐	☐	☐
b) Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas?	☒	☐	☐	☐	☐

The Plan and development pursuant to the Plan has the potential to result in wind and shadow impacts. Accordingly, wind and shadow, including effects on existing and potential new open spaces, will be further analyzed and included in the EIR.

Proposed Street Network Changes

The proposed street network changes would occur entirely within the public right-of-way and would not involve construction of any buildings or other structures of sufficient height or bulk such that they would result in adverse effects related to wind or shadow. Therefore, effects of the proposed street network changes with respect to wind and shadow would be less than significant. The effects of the proposed street network changes on wind and shadow will not be analyzed further in the EIR.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐
c) Physically degrade existing recreational resources?	☐	☐	☒	☐	☐

Setting

With almost 18 percent of San Francisco's total land area devoted to publicly owned open space (city, state, and federal), and other publicly accessible spaces owned by public and private entities, San Francisco is among the top five cities in the country in terms of parkland per resident.[49] New residents and employees in the Plan area would be served by the San Francisco Recreation and Parks Department (SFRPD), which administers more than 220 parks, playgrounds, and open spaces throughout the City, as well as recreational facilities including recreation centers, swimming pools, golf courses, athletic fields, tennis courts, and basketball courts.[50] Several larger open space areas, including Golden Gate Park (1,017 acres), the Lake Merced complex (700 acres, including the 368-acre lake) and John McLaren Park (317 acres) comprise about one half of the total City-owned acreage in recreational use. Unlike neighborhood facilities, these larger facilities provide programs, activities, and recreational opportunities that serve the City as a whole. In addition, smaller open spaces, including campuses, linear open spaces such as boulevards and parkways, and privately owned, publicly accessible open spaces (POPOS) distributed throughout the City, also serve San Francisco residents; some of these, such as the Embarcadero Promenade, Rincon Park, South Beach Park, open space along China Basin Channel, and the large POPOS at 303 Folsom Street, are readily accessible to the Plan area's population.[51]

[49] San Francisco Planning Department, *Revised Draft Recreation and Open Space Element: An Element of the General Plan of the City and County of San Francisco*, November 2013. Available online at: http://openspace.sfplanning.org/docs/Recreation_and_Open_Space_Element_NOVEMBER_2013.pdf, accessed on December 4, 2013.

[50] San Francisco Recreation and Parks Department. Available online at: sfrecpark.org. Accessed May 16, 2013.

[51] San Francisco Planning Department, *Revised Draft Recreation and Open Space Element: An Element of the General Plan of the City and County of San Francisco*, November 2013. Available online at: http://openspace.sfplanning.org/docs/Recreation_and_Open_Space_Element_NOVEMBER_2013.pdf, accessed on December 4, 2013.

The Plan area encompasses an intensely developed urban area, and does not contain large regional park facilities, but does include a number of open spaces, one neighborhood park, and other recreational facilities (see Figure 40, p. 61). There is one existing facility managed by the SFRPD within the Plan area—South Park, located at South Park and Jack London Alley, between Second and Third streets and Bryant and Brannan streets. This is a 1.2-acre, oval-shaped neighborhood park that contains a hummingbird garden, native plantings, benches, and a small playground area. The park is located in the southeast quadrant of the Plan area. Although not a SFRPD facility, Yerba Buena Gardens, including its children's garden and carousel, provides publicly accessible recreational facilities in the north of the Plan area. Yerba Buena Gardens is the name commonly given to the publicly accessible areas atop Moscone Center; that is, the portion of the block bounded by Mission, Howard, Third, and Fourth streets excluding the Moscone North lobby and the Metreon building, and the portion of the block between Howard, Folsom, Third, and Fourth streets excluding the Moscone South lobby and the Esplanade Ballroom. Using this definition, Yerba Buena Gardens occupies approximately 11.8 acres (about 300,000 square feet on the north block and about 215,000 square feet on the south block). The largest area of open space is the five-acre Esplanade atop Moscone North, an oval-shaped grassy area that extends from Mission Street south to the Martin Luther King Jr. Memorial and its waterfall. The north block also contains the elevated Sister Cities Garden, which abuts two restaurant spaces, along with the Yerba Buena Center for the Arts gallery and theater buildings, separated along Third Street by the smaller East Garden. The south block contains the central Children's Garden, which is surrounded by the Children's Creativity Museum, Child Development Center, Bowling Center, and Ice Rink. The historic carousel occupies an elevated site at the corner of Fourth and Howard Streets.

Two other open space and recreational areas are located immediately west of the Plan area. Victoria Manalo Draves Park, an approximately 2.0-acre neighborhood park, extends between Folsom and Harrison streets, between Sixth and Seventh streets, and includes a softball field, playground area, picnic area, basketball court, and a grassy field. The park is located one block west of the Plan area. Gene Friend (formerly South of Market) Recreation Center, a 1-acre recreational facility, located at the intersection of Sixth and Folsom streets, provides a full indoor gymnasium, multiple recreational/physical fitness rooms, outdoor basketball and volleyball courts, and a playground. It is located across Sixth Street from the Plan area.

San Francisco Planning Code Open Space Requirements

The *Planning Code* requires usable open space in conjunction with development projects. As a part of the permitting process, project sponsors are required to incorporate certain amounts of open space, depending on a project's use and size as well as the use district in which the site is located, to serve future project residents and/or employees. *Planning Code* Section 135 requires that open space be provided for the use of residents in new dwelling units, with the amount required ranging from 36 to 300 square feet per unit. The requirement is generally higher in single-use residential districts than in mixed-use residential districts. Commonly accessible open space (designed for use jointly by two or more units) is permitted at a ratio typically 1.33 times the required amount of private open space. Open space is also required for the use of tenants in non-residential land uses in Eastern Neighborhoods and South of

Market mixed-use districts, including, in the Plan area, the MUO, MUR, WS MUO, and WS MUG districts, in accordance with *Planning Code* Section 135.3; the requirement ranges between one square foot per 50 to 90 square feet of office space and one square foot per 250 square feet of retail, restaurant, and arts space. In the northern part of the Plan area, Section 138 requires the provision of publicly accessible open space in C-3 districts, at a ratio of one square foot to 50 square feet of most non residential uses, except in the C-3-R district, where the ratio is one square foot to 100 square feet of non-residential use.

Open Space Fund and Recreation and Park Acquisition Policy

In 2000, San Francisco voters approved Proposition C, extending the Open Space Fund that is used to finance acquisitions and capital improvements for SFRPD through Fiscal Year 2030-2031. At least 5 percent of the revenue raised is allocated to new land acquisition. In 2006, the SFRPD, at the request of the Recreation and Park Commission, published the Recreation and Park Acquisition Policy to provide clear guidelines for the expenditure of acquisition funds under the Recreation and Park Commission's jurisdiction; the Acquisition Policy was updated in 2011.[52] The Acquisition Policy contains maps of areas of high need and maps showing deficiencies in active use/sports field open spaces, playgrounds, and passive use/tranquil open spaces, taken from the 2011 Draft Recreation and Open Space Element Update of the *San Francisco General Plan* (since revised and updated in 2013). These maps show that the Plan area is in relatively high need of additional open space and that the northeastern portion of the Plan area, in particular, has no nearby active use/sports field open space or playground.[53]

Potential Future Increase in Open Space

Separate from the new open spaces proposed in the Plan, surrounding neighborhoods would experience an increase in open spaces as a result of other planning efforts. For example, a number of new open spaces have been developed in the Mission Bay redevelopment area to the south; a new neighborhood park has been approved for the Northeast Mission; a publicly accessible park has recently been completed on Rincon Hill, at 333 Harrison Street; several other open spaces are approved for the Transit Center District; and a variety of "green streets" are proposed in the Mission District, Central Waterfront, Showplace Square, and Western SoMa neighborhoods, as a result of the Eastern Neighborhoods and Western SoMa planning process. Moreover, the Planning Department, in conjunction with the SFRPD, the Mayor's Office, and the Neighborhood Parks Council, is currently evaluating the future open space needs of the entire City, through the Open Space 2100 initiative. As part of this planning effort, a Draft Open Space Framework is being developed that includes several components: the Draft Citywide Vision for Open Space,[54] which provides a broad outline of the City's ideal open space network over the next 100 years; the Open Space Framework, which "expands the traditional definition of open space and introduces the concept of a high-performing open space network";[55] and the Revised Draft Recreation and Open Space

[52] San Francisco Recreation and Park Department, *Acquisition Policy*, August 2011. Available on the internet at: http://sfrecpark.org/about/publications/acquisition-policy. Reviewed August 2, 2013.

[53] The maps consider only Recreation and Park Department facilities, and therefore exclude the Children's Garden at Yerba Buena Gardens from consideration as a playground.

[54] San Francisco Planning Department, *Draft Citywide Vision for Open Space*, May 2009. Available at: http://openspacesf.org/files/AN_OPEN_SPACE_VISION_FOR_SAN_FRANCISCO_text.pdf. Reviewed August 2, 2013.

[55] Open Space San Francisco: 2100 website. http://www.openspacesf.org/openspaceframework?phpMyAdmin=B3a%2C-cbmDK07AdsMpUGthHU0xfa. Reviewed December 4, 2013.

Element (ROSE)[56] of the San Francisco General Plan. As stated in the Draft Citywide Vision for Open Space,[57] Components of the Vision include:

- New Open Spaces in High Need Areas;
- An Active, Accessible and Connected Waterfront Open Space System;
- A Cross-Town Trail that Celebrates Diverse Urban Nature and Allows for Both Human and Wildlife Movement Across the City;
- A System of Linear Parks and Daylighted Creeks;
- A Network of Livable Streets and New Open Spaces in High-Density Neighborhoods;
- Revitalized and Activated Destination Open Spaces; and
- Connectivity – A System of Public Transit and Green Streets Connecting People to Open Space

Within the Plan area, the SFRPD has convened a task force to specifically examine and plan for open space within Supervisorial District 6, which includes the Plan area, as well as the remainder of the South of Market neighborhood, the Tenderloin, Rincon Hill, the Transit Center District, and Mission Bay.[58]

Approach to Analysis

The Plan is a regulatory program and would result in new planning policies and controls for land use to accommodate additional jobs and housing. This analysis considers both growth forecasts, discussed in Section D, *Evaluation of Environmental Effects*, above, and the Central SoMa Plan's proposed improvements to the Plan area's open space system. It also incorporates information on open space and recreational facilities elsewhere in San Francisco. In terms of growth forecasts, this analysis takes a conservative approach by assuming the most aggressive land development scenario. This is the same scenario as is assumed for the Population and Housing analysis which is high-rise Option B, assuming the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus" (see *Approach to Analysis* in Topic 3, above).

Based on the CEQA significance criteria, development under the Plan would have an adverse environmental impact if it were to cause the deterioration of existing recreational resources through increased use or require the construction or expansion of recreational facilities that may have an adverse effect on the environment. However, it should be noted that any unmet demand for parks and recreational resources that currently exists within the Plan area is not, in and of itself, considered to be a significant impact on the environment.

The creation of new open spaces in the Plan area, including the potential new park on the SFPUC property, linear open spaces, and alley improvements, would result in minor physical effects. The largest

[56] San Francisco Planning Department, *Revised Draft Recreation and Open Space Element: An Element of the General Plan of the City and County of San Francisco*, November 2013. Available online at: http://openspace.sfplanning.org/docs/Recreation_and_Open_Space_Element_NOVEMBER_2013.pdf, accessed February 6, 2014.

[57] San Francisco Planning Department, *Draft Citywide Vision for Open Space*, May 2009. Available at: http://openspacesf.org/files/AN_OPEN_SPACE_VISION_FOR_SAN_FRANCISCO_text.pdf. Reviewed August 2, 2013.

[58] D6 Open Space Planning webpage. http://sfrecpark.org/park-improvements/capital-publications/ Reviewed December 4, 2013.

proposed new open space—the potential park on SFPUC property—would likely require construction over a period of approximately eight months.[59] In general, other proposed open space improvements would be substantially smaller and require less construction time than the potential park on SFPUC property. For the most part, any potentially adverse effects would be those associated with construction, such as noise, archeological impacts, air quality impacts such as emissions of dust and other pollutants, including diesel exhaust, and temporary street closures or other traffic obstructions. Construction would be required to comply with the City's Clean Construction Ordinance and the Noise Ordinance. Moreover, traffic impacts would be limited because most work would be conducted on the potential park site. Overall, construction activities and impacts of the open space improvements would be similar to those associated with development under the Plan. These potential impacts are either addressed in the other sections of this Initial Study or will be further analyzed and included in the EIR.

Impacts and Mitigation Measures

Impact RE-1: Development under the Plan, and the proposed street network changes would result in an increase in the use of existing parks and recreational facilities, but would not result in substantial deterioration or physical degradation of such facilities, and would result in the expansion of recreational facilities and enhance existing recreational resources. (Less than Significant)

The Plan, including both City-proposed open spaces and new open space that would be required to be provided by individual development projects in the Plan area, would enhance and expand recreational and open space uses throughout the Plan area. The Plan would result in an increase in use of publicly available open spaces of various types. Each individual development project proposed in the Plan area would be subject to compliance with the City's open space requirements, as defined in the *Planning Code*.

Development Under the Plan

The development projects that would occur in the Plan area, including the proposed street network changes, would not directly physically degrade any recreational resources. The potential for secondary effects related to physical deterioration resulting from population increases and/or use attributable to Plan rezoning is addressed in the following discussion.

One of the primary objectives of the Plan is to propose an expanded network of open space and recreational uses to serve the existing and future population. As described in Topic 3, Population and Housing, the Plan under high rise Option B would allow for an increase in residential population in the Plan area of up to approximately 23,400 (of which approximately 16,200 would occur absent the Plan), along with up to about 56,400 additional jobs (of which about 30,100 would be attributable to growth without the Plan). Under Option A, the plan would allow for slightly lower increases—an increase in residential population in the Plan area of up to approximately 22,700 (16,200 would occur absent the Plan), along with approximately 52,300 additional jobs (about 30,100 would occur absent the Plan).[60]

[59] Estimated construction schedule based on the construction period for the 17th and Folsom Street Park, as described in the Mitigated Negative Declaration for that project, in Planning Department Case No. 2009.1163E.

[60] Numbers rounded to nearest 100

Although parts of the northern portion of the Plan area include major public spaces and attraction sites such as Yerba Buena Gardens, other portions of the Plan area are in need of additional public open space and recreational facilities. To achieve this goal and as described above, the Plan proposes to develop an inter-connected network of open spaces and recreational facilities to enhance public health and livability within the Plan area and to improve pedestrian and bicycle access to existing recreational opportunities. Based on community input, open spaces could include recreational amenities such as community gardens, athletic facilities, playgrounds, or other uses.

Because development under the Plan would increase the number of new residents and employees in the area, there would be increased demand for, and use of, both neighborhood parks and recreational facilities. It can reasonably be presumed that new residents would make the greatest "active" use of parks and open spaces, using playgrounds, ball fields, and like facilities both within and outside the Plan area, as do existing San Francisco residents. In general, it is anticipated that new employees would normally frequent open spaces during the midday period, when many office workers spend the lunch hour in publicly accessible open spaces, during other midday breaks, and after work, particularly in the case of workers who are also City residents. Hotel guests visiting for business purposes would not be expected to be frequent park users. Leisure visitors, while they would use public parks, would be likely to visit parks citywide, notably Golden Gate Park and other iconic SFRPD properties. Because the growth forecasts for the Plan area anticipate considerably more employment growth than residential growth, it is likely that much of the new recreational use resulting from Plan area development would likely be passive use.

To accommodate existing and future demand from residents as well as employees (e.g., on-site daytime population), the Plan would construct new publicly available spaces as well as a comprehensive pedestrian-friendly network to increase access to existing, new and improved spaces. The Plan would install several new open space features and modifications to existing recreation areas/open space within its boundaries. As shown in Figure 40 on p. 61, the major new open space identified in the Plan is a potential new neighborhood park on the block bounded by Fourth, Fifth, Bryant, and Brannan streets, where the SFPUC owns a 1.4 acre parcel in the middle of the block, with frontage on Bryant Street and on the Welsh Street and Freelon Street alleys. This site is currently used for materials storage and parking, and the Plan calls for evaluation of the conversion of a portion of this site to a new park, assuming the SFPUC can resolve financial and logistical issues.[61]

As described in the Project Description, other proposed improvements include creation of a new linear open space on a portion of the Bluxome Street right-of-way, between Fourth and Fifth streets; conversion of several mid-block alleys into "shared public ways,"[62] including portions of Annie Street, Jessie Street (west of Fourth Street, where Jessie meets Mission Street), Shipley Street (between Fourth and Fifth

[61] The specific dimensions, design, and amenities, should this study determine it feasible to convert this property into open space, are currently unknown and would be subject to subsequent environmental review once a defined project is proposed.

[62] A shared public way is a small street with low traffic volumes where the pavement and sidewalk are at the same level, traffic calming improvements are made (e.g. chicanes, raised crosswalks, special paving are added) to slow traffic, and landscaping and other enhancements such as street furniture are added. Several mid-block alleys South of Market and in Hayes Valley have been recently been treated in this manner; an older example is Hotaling Place in Jackson Square.

streets); and potentially Welsh and Freelon streets surrounding the potential new SFPUC park described above; and creation of one expanded and one new pedestrian plaza at either end of Annie Street, with an intersecting dog run on Ambrose Bierce (Aldrich) Alley. In addition, the Plan identifies potential conversion of Lapu Lapu Street, adjacent to the Alice Street Community Gardens, to a small park or otherwise enhancing this street as partial open space.

To improve pedestrian access to existing and proposed public spaces, the Plan calls for the provision of new publicly accessible mid-block pedestrian/bicycle rights-of-way and access easements on large lots with more than 300 feet of street frontage on any street. Key locations for new mid-block access would include the block bounded by Fourth, Bryant, Third, and Brannan streets; the block bounded by Fourth, Folsom, Third, and Harrison streets; Perry Street to Harrison Street; the block bounded by Fifth, Bryant, Fourth, and Brannan streets; the block bounded by Fifth, Townsend, Fourth, and Brannan streets; the block bounded by Sixth, Bryant, Fifth, and Brannan streets; and the block bounded by Fourth, Townsend, Third, and Brannan streets (see Figure 40 on page 61).

Finally, the Plan proposes that the *Planning Code* requirement for provision of publicly accessible open space in connection with development of non-residential uses—currently applicable only in the C-3 districts in the northern portion of the Plan area—be extended to the entirety of the Plan area.

Given the Plan's proposed network of new open spaces, including a potential new neighborhood park, several new and expanded linear open spaces and plazas, new mid-block pedestrian/bicycle connections, and publicly accessible private open spaces, and continued *Planning Code* requirements for new residential open space, implementation of the Plan would result in a substantial increase in the overall availability of a variety of open spaces in the Plan area. Moreover, new residents and workers in the Plan area would have access to existing open spaces such as Yerba Buena Gardens and South Park in the Plan area and nearby facilities such as the Herb Caen Promenade/Bay Trail along the Embarcadero, Victoria Manolo Draves Park and South of Market Recreation Center to the east, and Rincon Park, South Beach Park, and Mission Creek Park to the east and south. Therefore, it is expected that mostly passive recreational use of publicly accessible open spaces by Plan area workers, visitors, and residents would not be so great that any significant effects related to physical deterioration of park facilities or construction of new facilities would be anticipated. Accordingly, the Plan would have a less-than-significant impact on recreational facilities.

Proposed Street Network Changes

The proposed street network changes would not separately result in any demand for recreational facilities, and effects would be less than significant for the proposed street network changes.

Mitigation: None required.

Impact C-RE-1: Development under the Plan and the proposed street network changes, in combination with other past, present, or reasonably foreseeable projects would not result in a considerable contribution to cumulative impacts on recreational resources. (Less than Significant)

The cumulative geographic context for recreational facilities with respect to development under the Plan and proposed street network changes consists of growth projections for the Plan area and citywide growth, in addition to all existing and potential new open spaces available to, and accessible by, the daytime and permanent population within the Plan area.

As discussed above in the Setting, the City is planning for a "comprehensive open space network, one that is made up of local, citywide, regional and even national destinations, and that provides space for people to relax, recreate and enjoy the natural beauty of the area on a daily basis."[63] The Central SoMa Plan would further this effort by providing its own network of open spaces. As stated above under Impact RE-1, the Plan would not directly physically degrade any recreational resources, would not result in significant effects related to the construction of new open spaces, and would not increase demand for and use of either neighborhood parks or recreational facilities resulting in secondary effects related to physical deterioration. As noted previously, other planning efforts, both specific to nearby neighborhoods and citywide, are under way in San Francisco to address existing and future open space needs. Therefore, given these efforts, and given that the Plan would substantially increase open space within the Plan area, Plan-related growth would not result in significant cumulative impacts to recreational facilities. The proposed street network changes would have no impacts related to recreation and thus no potential to contribute to any cumulative impacts.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
11. UTILITIES AND SERVICE SYSTEMS— Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☒	☐	☐	☐	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐	☐
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?	☒	☐	☐	☐	☐
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?	☐	☐	☒	☐	☐

[63] Open Space San Francisco 2100 website: http://www.openspacesf.org/. Accessed August 2, 2013.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☒	☐	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐	☐

Setting

The Plan area is within an urban area that is served by utility service systems, including water, wastewater and stormwater collection and treatment, and solid waste collection and disposal. The Plan area and proposed developments therein would add new daytime and nighttime population to the area that would increase the demand for utilities and service systems on the site, but not in excess of amounts expected and provided for in the area. Descriptions of the City's water supply system, combined sewer system, and solid waste collection and disposal operations are provided below under the relevant impact discussions.

Water

The San Francisco Water Enterprise Division of the SFPUC provides water and the Wastewater Enterprise Collection System Division of the SFPUC provides wastewater services to approximately 2.6 million people in San Francisco, Santa Clara, Alameda, San Mateo, and Tuolumne Counties. Eighty-five percent of the water delivered to SFPUC customers comes from Sierra Nevada snowmelt stored in the Hetch Hetchy Reservoir on the Tuolumne River in Yosemite National Park. The remaining 15 percent comes from runoff in the Alameda and Peninsula watersheds captured in reservoirs located in San Mateo and Alameda Counties. The entire regional system delivers approximately 265 million gallons of water per day (mgd) to its customers, of which approximately 70 percent is "wholesale" water supplied to 27 other water agencies in San Mateo, Santa Clara, and Alameda Counties and 30 percent is "retail" water provided to individual residential and commercial customers.[64]

The local water system provides distribution and storage for water and fire protection within the City. This system includes 10 reservoirs, 8 water tanks, 17 pump stations, and approximately 1,250 miles of transmission lines and water mains within the City. The SFPUC manages distribution of potable water through two systems: a low-pressure water main system that provides water for domestic and commercial uses at about 1,000 gallons per minute (gpm), and a high-pressure system that provides a dedicated water source for fire suppression at about 10,000 gpm.[65]

[64] SFPUC, *2010 Urban Water Management Plan for City and County of San Francisco*, June 2011 Available online at: http://www.sfwater.org/modules/showdocument.aspx?documentid=1055. Reviewed May 23, 2013.
[65] Ibid.

Wastewater

San Francisco's wastewater collection, treatment, and disposal system consists of a combined sewer system (which collects both sewer and stormwater), three wastewater treatment plants, and effluent outfalls to San Francisco Bay and the Pacific Ocean. The collection and conveyance system consists of approximately 900 miles of underground pipes throughout the City. The City discharges approximately 84 mgd of treated wastewater during dry weather. Two of the City's treatment plants, the Southeast Water Pollution Control Plant (Southeast Plant) and Oceanside Water Pollution Control Plant, operate year-round, while the third plant, the North Point Wet Weather Facility, operates only during rainy periods. The Southeast Plant, which serves the Plan area, treats all eastside sewage flows during dry weather. Treated wastewater is discharged to San Francisco Bay through a deep water outfall at Pier 80, north of Islais Creek.

Solid Waste

San Francisco uses a three-cart collection program: residents and businesses sort solid waste into recyclables, compostable items such as food scraps and yard trimmings, and garbage. The City's Mandatory Recycling and Composting Ordinance (Ordinance 100-09) requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash. Recology (formerly Norcal Waste Systems, Inc.) provides solid waste collection, recycling, and disposal services for residential and commercial garbage, recycling, and compositing in San Francisco through its subsidiaries San Francisco Recycling and Disposal, Golden Gate Disposal and Recycling, and Sunset Scavenger. Materials collected are hauled to the Recology transfer station/recycling center on Tunnel Avenue, near the southeastern city limit, for sorting and subsequent transportation to other facilities. Recyclable materials are taken to Recology's Pier 96 facility, where they are separated into commodities (e.g., aluminum, glass, and paper) and transported to other users for reprocessing. Compostables (e.g., food waste, plant trimmings, and soiled paper) are transferred to a Recology composting facility in Solano County, where they are converted to soil amendment and compost. The remaining material that cannot otherwise be reprocessed ("trash") is transported to, and disposed of at, the Altamont Landfill in Alameda County.

Approach to Analysis

The Plan is a regulatory program and would result in new planning policies and controls for land use to accommodate additional jobs and housing. Specific development projects allowed under the Plan, and associated population growth, would result in an increased demand for utilities and service systems.

The analysis of water supply capacity is based on review of SFPUC data on water supply (principally the commission's current 2010 Urban Water Management Plan and an update thereto prepared in 2013); demand is calculated largely based on SFPUC-generated rates. Solid waste is evaluated based on publicly available data from the California Department of Resources Recycling and Recovery (CalRecycle), as well as the City's solid waste planning activities. Wastewater and stormwater collection and treatment capacity will be analyzed in the EIR, in addition to the potential for development under the Plan to require new stormwater facilities, the construction of which could have environmental effects.

This analysis takes a conservative approach by assuming the most aggressive land development scenario for the Plan, as was assumed for the Population and Housing analysis. This is high-rise Option B, assuming the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus" (see *Approach to Analysis in* Topic 3, above). Option A, as well as the Land Use Variant, would result in incrementally reduced effects compared to those described below. This analysis also evaluates the effects of proposed open spaces at a programmatic level, as design-level details have not yet been developed. The analysis addresses impacts related to proposed street network changes at a project level, as a sufficient level of detail has been developed to allow analysis of the potential environmental effects of these changes.

Impacts and Mitigation Measures

Impact UT-1: Development under the Plan and proposed street network changes would not require or result in the construction of substantial new water treatment facilities and the City would have sufficient water supply available from existing entitlements. (Less than Significant)

The SFPUC forecasted future water demand using regional growth projections that incorporate existing land use designations and reasonably foreseeable future projects within San Francisco and other areas served by the SFPUC. According to the 2010 Urban Water Management Plan (UWMP) and the updated retail demand forecasts contained in the 2013 Water Availability Study, the SFPUC would be able to meet the future demand in years of average precipitation as well as in a single dry year and a multiple dry year event, for each five-year projection beginning in 2020.[66] However, in the near term (2015), the 2013 Water Availability Study projects a very small retail deficit (0.25 percent of demand) for a normal year and single dry year, and a retail deficit of 2 percent of demand during a multiple-dry-year event, as a result of development and occupancy of new projects in advance of improvements planned in the SFPUC's water supply. SFPUC notes in the 2013 report that a 2 percent shortfall in water supplies "can be easily managed through voluntary conservation measures or rationing," and further states that "retail" demand (water provided to individual customers, as opposed to "wholesale" demand from other water agencies) has declined by more than 10 percent in the last 10 years.[67] For the regional system as a whole, in a single dry year and multiple dry years, it is possible that the SFPUC would not be able to meet 100 percent of demand and would therefore have to impose reductions on its deliveries. Under the Water Shortage Allocation Plan (WSAP), retail customers would experience no reduction in regional water system deliveries within a 10-percent shortage. During a 20-percent system-wide shortage, customers would experience a 1.9-percent reduction in deliveries. Retail allocations would be reduced to 79.5 mgd

[66] SFPUC, 2013 Water Availability Study (WAS) for the City and County of San Francisco, May 2013; accessed August 15, 2013. Available online at: http://www.sfsewers.org/modules/showdocument.aspx?documentid=4168. The 2013 Water Availability Study was prepared as an update to the 2010 UWMP to evaluate water demand based on updated growth projections completed by the Planning Department in 2012 in response to the ABAG Sustainable Community Strategy Jobs-Housing Connections Scenario. As described in Topic 3, Population and Housing, p. 79, the Central SoMa Plan would rezone allowable land uses and physical controls on buildings, in part, to accommodate these growth forecasts, and it is these growth forecasts on which the Plan's growth assumptions are based. Hence, the 2013 WAS assumes Plan area growth as analyzed herein.

[67] Ibid.

(98.1 percent of normal year supply), and wholesale allocations would be reduced to 132.5 mgd (72 percent of normal year supply).[68]

The ability to meet the demand of the customers is in large part due to the development of 10 mgd of local supplies in the City through implementation of the Water Supply Improvement Program (WSIP). These additional supplies of groundwater, recycled water, and conservation are essential to providing the City with adequate supply in dry year periods, as well as improving supply reliability during years with normal precipitation. With the WSAP in place, and the addition of local WSIP supplies, the SFPUC concluded that it has sufficient water available to serve existing customers and planned future uses.[69]

Development Under the Plan

Based on the most intensive land use development scenario (Option B), development pursuant to the Plan would consume up to about 2.8 million gallons of potable water daily.[70] (The demand calculation is conservative in that it is based on existing water consumption patterns and does not include potential future savings due to increased efficiency of fixtures and use of recycled water, including such use in conjunction with the proposed Central SoMa Eco-District, nor future reductions in accordance with the City's water conservation ordinances.) Of this amount, as much as 37 percent could be for non-potable uses, including landscape irrigation, toilet flushing, and boilers and chillers, and could be supplied by non-potable water (recycled water, rain water, etc.) once a distribution system is in place. Development projects including 1,000 square feet or more of new or modified landscaping would be required to comply with the Water Efficient Irrigation Ordinance (adopted as *San Francisco Administrative Code* Chapter 63 and the SFPUC Rules & Regulations Regarding Water Service to Customers) that establishes limits on water consumption for the purpose of irrigating landscaped areas.

The entire Plan area south of Mission Street is within the Eastside Reclaimed Water Use Area designated by Section 1209 of the Reclaimed Water Use Ordinance (approved November 7, 1991), which added Article 22 to the *San Francisco Public Works Code*. In this area, projects over 40,000 square feet in floor area that require a site permit, building permit, or other authorization, must provide for the construction and operation of a reclaimed water system for the transmission of the reclaimed water within buildings and structures.[71] That is, the building would need to be designed with separate plumbing (typically purple pipes) to service uses that could employ reclaimed water (e.g., toilets). The ordinance also requires that owners, operators, or managers of all development projects register their projects with the SFPUC. The SFPUC will issue a certificate of intention to use reclaimed water, and reclaimed water shall be used unless the SFPUC issues a certificate exempting compliance because reclaimed water is not available, an alternative water supply is to

68 Ibid.

69 SFPUC, 2013 Water Availability Study (WAS) for the City and County of San Francisco, M 2013; accessed August 15, 2013. Available online at: http://www.sfsewers.org/modules/showdocument.aspx?documentid=4168.

70 Calculations based on SFPUC residential per-unit and non-residential per-employee demand assumptions contained in the 2010 UWMP. Factors include 61 gallons per person per day for residential use and, for non-residential use, the following demand assumptions, in gallons per employee per day: Office – 18.3; Retail – 53.9; Cultural/Institutional/ Educational – 55.8; and Medical – 40.9; as well as 160 gallons per hotel room per day (American Water Works Association) and 75 gallons per 1,000 square feet per day for open space.

71 The terms "reclaimed water" and "recycled water" are used interchangeably and have the same meaning for the purposes of this analysis.

be used, or the sponsor has shown that the use of reclaimed water is not appropriate. (To date, no area-wide recycled water system has been developed.)

Development under the Plan would be required to adhere to *San Francisco Public Works Code,* Article 21, Restriction of Potable Water Use for Soil Compaction and Dust Control (Ordinance 175-91), which would require the use of non-potable water for soil compaction and dust control during demolition and construction activities associated with implementation of the Plan. To facilitate this, the SFPUC operates a recycled water truck-fill station at the Southeast Water Pollution Control Plant that provides recycled water for these activities.

Any localized effects (i.e., the need for new water lines) would be anticipated to be resolved in the design of individual development projects. As part of planning and environmental review phases of each of these projects, the ability of utility providers to meet project-specific demand would be assessed, as necessary. Individual development proposals under the Plan may, depending on their size and water demand, require preparation of a water assessment to meet the requirements of Water Code Sections 10910-10915.

Because Plan area residential and employment growth is included in the growth forecasts on which the 2013 Water Availability Study is based, because no substantial development resulting from the Plan would be approved, completed, and occupied prior to 2015, and because the SFPUC has a WSAP in place and has determined that it has sufficient water to serve existing and planned future uses, development resulting from implementation of the Plan would be sufficiently served by the SFPUC water supply system. Therefore, implementation of the Plan and subsequent development would not require major expansion of the SFPUC's water facilities, nor would it adversely affect the City's water supply. This impact would be less than significant.

Proposed Street Network Changes

The proposed street network changes would not alter the basic function of streets, although they would, in some cases, change the percentage of the right-of-way accommodated to specific modes of travel (e.g., increase the space available for pedestrians and bicycles and decrease the space devoted to autos). However, such changes would not increase potable water use, and there would be no effect on water supply or related facilities.

Proposed Open Space Improvements

The water demand estimates presented above includes a conservative estimate of water use for new open space in the Plan area, assuming that the potential new park on SFPUC property would be the only large new open space and the only open space that might require substantial irrigation. Because design-level details have not yet been developed for the Plan's proposed open spaces and open space improvements, an associated precise increase in water demand from irrigation cannot be estimated at this time. However, it is assumed that none of the new open spaces other than the potential SFPUC-site park would include substantial areas of grass or other high-water-use vegetation, and therefore demand would likely be limited. Moreover, development of these open space improvements would be subject to the Water Efficient Irrigation Ordinance (*San Francisco Administrative Code* Chapter 63), which requires all new landscaped

areas, including those operated by the City, to be planted with water efficient designs including climate-appropriate plants. Landscaping and irrigation plans for areas requiring irrigation would establish a Maximum Applied Water Allowance. These plans would be reviewed and approved by the SFPUC prior to installation. Further, as noted in the Project Description, the Plan area is the location of a proposed Eco-District, which may involve one or more district-wide programs involving water recycling for irrigation purposes, which could further reduce potable water demand for open spaces. Adherence to the provisions of the Water Efficient Irrigation Ordinance, in conjunction with Plan features, would limit water demand increases associated with the Plan's proposed open spaces and open space improvements, and this effect would be less than significant.

Mitigation: None required.

Impact UT-2: Development under the Plan could require or result in the expansion or construction of new wastewater treatment or stormwater facilities, exceed capacity of the wastewater treatment provider when combined with other commitments, or exceed the wastewater treatment requirements of the Regional Water Quality Control Board. (Potentially Significant)

Although, as established in Impact HY-2 (under Topic 15, *Hydrology and Water Quality*, below), the effects on the combined sewer system from stormwater alone would be less than significant, effects of subsequent development in the Plan area on the combined sewer system, as well as cumulative effects on the system, could combine with the less-than-significant stormwater effects to result in the potential need for new wastewater/stormwater infrastructure. Therefore, this topic will be further evaluated and included in the EIR.

Proposed Street Network Changes

With respect to the proposed street network changes, all of these improvements would occur within the public right-of-way, which is currently largely covered in impervious surfaces such as asphalt and concrete. These improvements would not increase the amount of impervious surface; instead, to the extent that the proposed street network changes incorporate landscaping, such as planting wells in widened sidewalks (as required by the Better Streets Plan), they would incrementally decrease the amount of impervious surface and thus incrementally decrease the amount of stormwater runoff into the combined sewer system. The proposed street network changes would not result in any increase in wastewater (sewage) flow to the combined sewer. Therefore, operational effects of the proposed street network changes on wastewater and stormwater facilities would be less than significant, and this issue will not be discussed further in the EIR with respect to the street network improvements. (Construction-period water quality impacts are discussed in Section D.15, Hydrology and Water Quality, p. 149.)

Proposed Open Space Improvements

Similar to the proposed street network chances, the proposed open space improvements would occur in areas currently largely covered in impervious surfaces such as asphalt and concrete. While the specific dimensions, design, and amenities of these open spaces have yet to be determined, and some may include

plazas, some would incorporate landscaped features and areas that would incrementally decrease the amount of impervious surface and thus incrementally decrease the amount of stormwater runoff into the combined sewer system. The proposed open space improvements would not result in any substantive increase in wastewater (sewage) flow to the combined sewer and any water used for irrigation would infiltrate rather than run off as stormwater. Therefore, operational effects of the proposed open space improvements on wastewater and stormwater facilities would be less than significant, and this issue will not be discussed further in the EIR.

Mitigation: None required for the proposed street network changes or open space improvements.

Impact UT-3: Development under the Plan and proposed street network changes would continue to be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by subsequent development in the Plan area and would comply with federal, state, and local statutes and regulations related to solid waste. (Less than Significant)

The Altamont Landfill has a permitted peak maximum daily disposal of 11,150 tons per day and accepted 1.16 million tons in 2012.[72] The landfill has an estimated remaining capacity of approximately 46 million cubic yards or 74 percent of its permitted capacity. The estimated closure date of the landfill is January 2025.[73] In 2012, San Francisco generated approximately 454,500 tons of solid landfilled waste and sent approximately 375,000 tons to the Altamont Landfill, about 40 percent of the total volume of waste received at that facility.[74]

In 1988, San Francisco contracted for the disposal of 15 million tons of solid waste at the Altamont Landfill. The City contract with the Altamont Landfill expires in 2015. Through August 1, 2009, the City had used approximately 12.5 million tons of this contract capacity. The City projects that the remaining contract capacity will be reached no sooner than August 2014. In 2009, the City announced that it could award its landfill disposal contract to a Recology subsidiary for shipment of solid waste by truck and rail to the Recology Ostrom Road Landfill in Yuba County. This facility has an expected closure date of 2066 with a total design capacity of over 41 million cubic yards.[75] The ultimate determination with respect to future landfill contracting will be made by the Board of Supervisors on the basis of solid waste planning efforts being undertaken by the City's Department of the Environment.

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72 CalRecycle, "2012 Landfill Summary Tonnage Report". Available online at: http://www.calrecycle.ca.gov/SWFacilities/Landfills/tonnages; accessed November 8, 2013.

73 CalRecycle, "Active Landfills Profile for Altamont Landfill and Resource Recovery (01-AA-0009)". Available online at: http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/, accessed on May 28, 2013.

74 Data includes only landfilled waste. Most of the City's remaining solid waste was sent to the Ox Mountain Landfill in San Mateo County. CalRecycle, Single-year Countywide Origin Detail, 2012, San Francisco. Available online at: http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=OriginJurisdictionIDs%3d438%26ReportYear%3d2012%26ReportName%3dReportEDRSJurisDisposalByFacility. Reviewed November 27, 2013.

75 San Francisco is currently participating as a responsible agency in the environmental review process that Yuba County has begun for the Recology Ostrom Road Green Rail and Permit Amendment Project and to conduct CEQA review of San Francisco's proposal to enter into one or more new agreements with Recology. On March 28, 2013, Yuba County and San Francisco entered into a Cooperative Agreement to designate Yuba County as the lead agency for this project and to outline their cooperative efforts concerning environmental review.

Recycling, composting, and waste reduction are expected to increasingly divert waste from the landfill, per California and local requirements. The City was required by the State's Integrated Waste Management Act (AB 939) to divert 50 percent of its waste stream from landfill disposal by 2000. The City met this threshold in 2003 and has since increased it to 69 percent in 2005 and 70 percent in 2006. San Francisco exceeded its goal to divert 75 percent of its waste by 2010 and will implement new strategies to meet its zero waste goal by 2020.[76] In 2011, the target disposal rate for San Francisco residents and employees was 6.6 pounds/resident/day and 10.6 pounds/employee/day. Both of these targeted disposal rates were met in 2011 (the most recent year reported), with San Francisco generating about 2.9 pounds/resident/day and about 4.4 pounds/per employee/per day.[77]

Development Under the Plan

Development in the Plan area would generate approximately 20,000 tons per year of solid waste that would necessitate disposal in a landfill.[78] This represents approximately 4.4 percent of the existing citywide annual total of landfilled materials. As with citywide waste generation, diversion factors would be expected to continue to increase gradually over time. This is in part due to growing enforcement of the City of San Francisco's 2009 Mandatory Recycling and Composting Ordinance (*Environment Code* Chapter 19), requiring all persons (including residents, employees, visitors, and commercial operations) to separate recyclables and compostables from landfilled trash. The addition of this volume of solid waste would not result in the City exceeding its landfill capacity during the anticipated lifetime of the Plan (to year 2040).

Regardless of whether San Francisco renews its contract with the Altamont Landfill, switches to the Ostrom Road Landfill, or selects another facility, residents and employees in the Plan area would participate in the City's recycling and composting programs and other efforts to reduce the solid waste disposal stream. Development in the Plan area would comply with the *San Francisco Building Code* Chapter 13C, which requires a minimum of 75 percent of all construction and demolition debris to be recycled and diverted from landfills. This requirement is enforced through the building permit process. Given the existing and anticipated increase in solid waste recycling and the existing and potential future landfill capacities, the Plan would not result in either landfill exceeding its permitted capacity or non-compliance with federal, State, and local statutes and regulations related to solid waste. Therefore, this impact would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would not separately result in any population or employment growth, and thus would generate no independent long-term demand for solid waste disposal capacity. Construction-period impacts for the proposed street network changes and open

[76] San Francisco Department of the Environment, Zero Waste webpage. Available at: http://www.sfenvironment.org/zero-waste/overview/goals.

[77] CalRecycle, Jurisdiction Diversion/Disposal Rate Detail, San Francisco, 2011. Available on the internet at: http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/JurisdictionDiversionDetail.aspx?JurisdictionID=438&Year=2011. These data do not provide separate averages for residential and non-residential generation, but merely different metrics for averaging overall citywide waste generation.

[78] Solid waste generation estimated by ESA on the basis of consolidated generation factors from CalRecycle, the City of San Diego, and the CalEEMod air quality and greenhouse gas model. Generation factors conservatively assume diversion from landfill of approximately 50 percent of discarded materials.

space improvements would include minor, temporary generation of solid waste (from demolition of streets, curbs, and the like), but not in sufficient quantities to rise to the level of significance under CEQA, because the proposed street network changes and open space improvements would involve relatively small-scale demolition and construction activities. Therefore, effects would be less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact C-UT-1: Development under the Plan and proposed street network changes, in combination with past, present, and reasonably foreseeable future projects in the vicinity, could contribute considerably to a significant cumulative impact on wastewater facilities, but would not contribute to cumulative impacts on other utilities and services. (Potentially Significant for wastewater facilities; Less than Significant for water supply and landfill capacity)

The Plan and the service territories of the utility providers serve as the geographical context for cumulative impact analysis for these topics. Over time, growth in the Plan area and in San Francisco as a whole would result in an increased demand for reliable water supply, wastewater treatment, and solid waste disposal. According to the Planning Department, San Francisco is expected to gain approximately 101,000 households and 270,000 people between 2010 and 2040, reaching a population of nearly 1 million, a 35 percent increase in population. Employment is forecast to increase by 34 percent (197,000 jobs) during this period, to a total of 760,000.[79,80] Citywide growth would also generate increased demand for utilities.

Water Supply

As described above, long-range growth forecasts with respect to potable water use are considered in the SFPUC's 2013 Water Availability Study. Therefore, there would be no cumulative impacts with regard to available water supply and Plan-related growth not would adversely affect the provision of potable water.

Wastewater

As stated above, effects of subsequent development in the Plan area on the combined sewer system, as well as cumulative effects on the system, could combine with the less-than-significant stormwater effects to result in the potential need for new wastewater/stormwater infrastructure. Cumulative effects to the City's combined sewer system will be further analyzed and included in the EIR.

Landfill Capacity

Long-range growth forecasts are considered in the City's planning for future landfill capacity, as described above. Therefore, there would be no cumulative impacts with regard to available landfill capacity and Plan-related growth not would adversely affect the collection and disposal of solid waste.

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79 ABAG and MTC, Plan Bay Area Jobs-Housing Connection Strategy, revised May 16, 2012 (see footnote 19).

80 San Francisco Planning Department, *San Francisco Land Use Allocation, Central SoMa*, January 6, 2014. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☒	☐	☐

Setting

San Francisco Police Department

The San Francisco Police Department (SFPD), headquartered at 850 Bryant Street in the Hall of Justice (located west of the Plan area), provides police protection services for the City. The SFPD averaged 1,644 sworn officers in 2012 which is below the City Charter mandate to maintain a sworn staff of 1,971. However, in June 2013, the SFPD drafted a six-year hiring plan, approved by the Mayor, to return the department to a staffing level of 1,971 sworn officers.[81]

Southern Station (also located at 850 Bryant Street) has jurisdiction over the Plan area. In addition to Southern Station, in March 2013, the SFPD opened the Sixth Street Safety Hub. The hub is an office (substation) from which the Mid Market Foot Beats patrol every day. The local foot beat officers use this office as their station (breaks, write reports, community meetings etc.), rather than traveling to and from Southern Station. The hub is not a holding facility where prisoners are housed. On Wednesdays the hub is used by other city agencies (District Attorney, Homeless Outreach Team, Adult Probation, and Community Ambassadors) to provide services to people in the area.[82]

A new Public Safety Building in the Mission Bay area is currently under construction and will be completed by summer of 2014 to house both the Police Department Command Center Headquarters and the Southern District Police Station, as well as to provide a new fire station for the Mission Bay Community.[83] The Public Safety Building will be in the Bayview Police District. With this upcoming move, the SFPD has started evaluating police district boundaries citywide and is in the process of soliciting consultant proposals to work with stakeholders in conducting a redistricting analysis. The redistricting analysis will look at the growth of the South of Market area, including the Plan area, as a

[81] San Francisco Police Department Annual Report 2012. Available online at: https://dl.dropboxusercontent.com/u/76892345/Annual%20Reports/2012%20Annual%20Report.pdf, accessed on October 19, 2013.
[82] Captain Michael Redmond, San Francisco Police Department, Personal Communication, November 7, 2013.
[83] The new building will be located at Block 8 in the Mission Bay South Redevelopment Area, specifically at Third and Mission Rock streets. Detailed information is available online at: http://buildsfpsb.com/; accessed June 6, 2013.

factor in determining future police district boundaries. Once complete, the redistricting analysis may recommend that patrol responsibility for a portion of the Plan area be covered by a different district station—likely the Tenderloin Station.

San Francisco Fire Department

The San Francisco Fire Department (SFFD), headquartered at 698 Second Street (located in the southeast portion of the Plan area), provides fire suppression and emergency medical services to the City and County of San Francisco, including the Plan area.[84] The SFFD consists of three divisions, which are subdivided into 10 battalions and 44 active stations located throughout the City, including one station in the Presidio and one on Treasure Island. Two stations are located in the Plan area—Station 1, newly relocated to 935 Folsom Street, at Fifth Street, and Station 8 at 36 Bluxome Street, at Fourth Street. Station 1 is equipped with one fire suppression engine, one ladder truck, and one heavy rescue vehicle, while Station 8 is equipped with one engine and one ladder truck. Other stations nearby include Station 36, at Oak and Franklin streets (one engine and the SFFD hazardous materials unit), Station 35, on the Embarcadero at Harrison Street (one engine and the Department's fire boats, at Pier 22½), and Station 29, at 16th and Vermont streets (one engine). The SFFD also provides emergency medical services (EMS) in the City, including advanced life support (ALS) ambulance services. In addition, several privately operated ambulance companies are authorized to provide ALS services.

San Francisco Unified School District

The San Francisco Unified School District (SFUSD) operates San Francisco's public schools. During the 2011-2012 academic year, the SFUSD managed 115 schools (73 elementary schools, 16 middle schools, 18 high schools, six alternative schools, and two continuation schools), with a total enrollment of 56,222.[85] The total enrollment in the 2011-2012 academic year represents a near nine percent decrease from the 16-year high of 61,174 students in the 1996-1997 academic year. Student enrollment within the SFUSD has slightly decreased during the past decade from 58,566 during the 2001-2002 academic year.[86] However, the SFUSD anticipates that elementary school enrollment will grow due to the large birth cohorts earlier in the decade. Middle school enrollment is anticipated to rise as well, but remain below current enrollment in 2013. High school enrollment will experience a continuous decline through the 2013-2014 school year due to the declining births of the 1990s.[87]

Schools closest to the Plan area include Bessie Carmichael /Filipino Education Center School (K-8) located at 375 Seventh Street (elementary school) and 824 Harrison Street (middle school), and International Studies Academy High School at 655 De Haro Street. Five Keys Charter School is located within the Plan area at 70 Oak Grove Street. Enrollment at Bessie Carmichael (2011-2012 academic year) was approximately

[84] San Francisco Fire Department official website, 2013. Available online at: http://www.sf-fire.org/index.aspx?page=1, accessed November 7, 2013

[85] Education Data Partnership, Fiscal, Demographics, and Performance Data on California's K-12 Schools, www.ed-data.k12.ca.us, accessed May 17, 2013.

[86] California Department of Education, Educational Demographics Office. Available online at: http://dq.cde.ca.gov/dataquest, accessed on May 17, 2013.

[87] San Francisco Unified School District (SFUSD), *Capital Plan, FY 2010-2019*, September 2009. Available online at: Francisco Unified School District (SFUSD), *Capital Plan,* accessed May 17, 2013.

672 students (K-8), up from approximately 400 students a decade ago; however, the school only served K – 5 at that time and grades 6 - 8 were subsequently added to the school during the period from 2005 through 2008. Enrollment at International Studies Academy High School is approximately 409 students, down from approximately 470 a decade ago.

Approach to Analysis

The Plan is a regulatory program and would result in new planning policies and controls for land use to accommodate additional jobs and housing. Specific development projects allowed under the Plan and associated increases in population and land use intensity would result in an increased demand for public services. The increased in demand was evaluated based on personal communication with service providers and published information regarding the various public services agencies with jurisdiction over the Plan area and their service capabilities.

This analysis takes a conservative approach by assuming the most aggressive land development scenario for analysis, which is high-rise Option B assuming the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus" (approximately 13,200 new residential units and up to about 56,400 new employees by 2040). While this level of development is unlikely to occur, it represents a conservative development program for analysis and forms the basis for the CEQA conclusions for this topic. The overall environmental effects of Option A, including the maximum residential development under the "Residential Focus" combined with the maximum commercial development under the "Office Focus," as well as the land use variant, would be less substantial than those of Option B.

Impacts and Mitigation Measures

Impact PS-1: Development under the Plan and proposed street network changes would not increase the demand for police service or fire protection service such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required in order to maintain acceptable levels of service. (Less than Significant)

Development under the Plan

Development within the Plan area would result in an increased demand for police services over the next several decades as a result of increases in population and employment, as described above. Although new development and a related population increase could result in an increase in calls for service, the new construction and rehabilitation of existing structures under the Plan would infill building sites currently vacant and underused; serve to revitalize the corridors and community; and could result in a reduction in criminal activity within the Plan area.

With regard to police protection services, although Southern Station currently receives approximately 25 percent of the City's call for service, the response times and services are adequate for the area. The redistricting analysis discussed in the Setting section above represents the Department's efforts to deal with Southern Station's high volume of calls for service and to plan for population growth within the

City. Southern Station personnel levels have increased over the last year and will increase with the department's hiring plan. The SFPD would not require additional personnel, equipment, or facilities to maintain adequate levels of service in the Plan area or citywide, given projected increases in population and employment.[88]

Should there be increased demand for fire services as a result of development in the Plan area, the increase would be gradual and incremental over the approximately 30-year horizon of the Plan. Increased congestion as a result of development under the Plan could affect fire response times. However, as discussed above, there are two stations currently located within the Plan area—935 Folsom Street and 36 Bluxome Street—as well as other stations in proximity to the Plan area. The SFFD conducts ongoing assessments of its service capacity and response times and would continue to do so in response to projected growth within the Plan area and citywide over the lifetime of the Plan. This assessment could identify the need for additional facilities as a result of growth within the Plan area. Any new fire facilities necessary to serve the Plan area would be located and constructed within the Plan area which is an urbanized and developed area. For the most part, any potentially adverse effects from new fire facilities would be similar to those anticipated by development under the Plan, such as noise, archeological impacts, air quality impacts such as emissions of dust and other pollutants, including diesel exhaust, and temporary street closures or other traffic obstructions.[89] Overall, potential impacts of new fire facilities, should new facilities be required, would be similar to those associated with development under the Plan. These potential impacts are either addressed in the other sections of this Initial Study or will be further analyzed and included in the EIR.

Therefore, development under the Plan would not result in the need for new or physically altered police protection facilities, and this impact would be less than significant. The potential significant effects of any new or physically altered fire facilities are analyzed in the other sections of this Initial Study or will be further analyzed and included in the EIR.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would not separately result in any population or employment growth, and thus would generate no independent demand for police or fire services. Therefore, effects would be less than significant. Lane reduction in combination with increased development pursuant to the Plan could increase traffic congestion and may affect emergency fire response times. As discussed above, any potential environmental impacts resulting from new fire facilities within the Plan area are either addressed in the other sections of this Initial Study or will be further analyzed and included in the EIR.

88 Captain Redmond, San Francisco Police Department, Personal Communication, November 7, 2013.

89 The *SFMOMA Expansion/Fire Station Relocation and Housing Project EIR* evaluated the 935 Folsom Street Station relocation and did not identify any significant impacts associated with fire station operations. Available online at: http://sf-planning.org/index.aspx?page=1828. Accessed February 7, 2014. Also available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2010.0275E.

Mitigation: None required.

Impact PS-2: Development under the Plan and proposed street network changes would not directly or indirectly generate school students and increase enrollment in public schools such that new or physically altered facilities would be required. (Less than Significant)

Development under the Plan

New residential development under the Plan would attract residents, including school-age children. According to Planning Department calculations, approximately 13,200 households would be added to the Plan area upon buildout of the Plan.[90] The SFUSD employs a student generation rate of 0.203 students per new housing unit for planning purposes.[91] Therefore, the resulting increase in students attributable to development under the Plan would be around 2,700 students. It is conservatively assumed that students would be new to the district and would attend public schools, though it is likely that a portion of the students would already be enrolled within the SFUSD or would attend a private school.

SFUSD currently uses a diversity index lottery system to assign students to schools based on a number of factors including parental choice, school capacity, and special program needs.[92] Under the diversity index lottery system, the students generated by development under the Plan may attend a SFUSD school other than the nearest schools; however, that school would have to have capacity. Thus, it is not assumed that all students generated by development under the Plan would attend the nearest school. The potential 2,700 additional K-12 students that could result from development under the Plan represent an approximate five percent increase in district enrollment from the 2011-2012 academic year.

Given the increase in students would occur gradually, a portion of those students also would be expected to attend private schools, the geographic distribution of students across the City resulting from the diversity index lottery system, and that the overall district enrollment has been down by approximately nine percent over the past 16 years, SFUSD would have adequate capacity within its existing facilities to accommodate new students generated by development under the Plan.

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), authorizes school districts to levy developer fees to finance the construction or reconstruction of school facilities. In January 2012, the State Allocation Board (SAB) approved maximum Level 1 developer fees at $0.51 per square foot of enclosed and covered space in any commercial or industrial development, and $3.20 per square foot for residential development.[93] These fees are intended to address the increased educational demands on the

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[90] The number of households conservatively assumes a 5 percent vacancy rate for the additional residential units assumed to be developed under the Plan by 2040 (see Table 5). Numbers in this discussion are rounded to the nearest increment of 100.

[91] City and County of San Francisco, *Western SoMa Community Plan Rezoning of Adjacent Parcels, and 350 Eighth Street Project, Final EIR*, Case No. 2008.0877E, Certified December 6, 2012. Available online at: http://www.sf-planning.org/index.aspx?page=1893, accessed on October 29, 2013.

[92] SFUSD, History of the Student Assignment Method, available online at: http://portal.sfusd.edu/apps/departments/educational_placement/HistoryStudentAssignment.pdf, 2011.

[93] State Allocation Board (SAB), Meeting Actions, www.documents.dgs.ca.gov/opsc/Resources/Index_Adj_Dev.pdf, *Developer Fee Adjustment*, January 25, 2012.

school district resulting from new development. Public school districts can, however, impose higher fees than those established by the SAB, provided they meet the conditions outlined in the act. Private schools are not eligible for fees collected pursuant to SB 50.

Local jurisdictions are precluded under state law (Senate Bill 50) from imposing school-enrollment–related mitigation beyond the school impact fees. The collection of these fees, therefore, is considered to fully mitigate any potential effects on schools associated with additional development that could result from implementation of the Plan and the impact would be considered less than significant. Therefore, although development under the Specific Plan could indirectly increase resident population and potential student enrollment in the SFUSD, payment of fees mandated under SB 50 prescribed by the statute is deemed full and complete mitigation. However, for the reasons described above, the SFUSD would have adequate capacity within its existing facilities to accommodate new students generated by development under the Plan. Therefore, development pursuant to the Plan would result in less-than-significant impacts on school district resources.

Proposed Street Network Changes and Proposed Open Space Improvements

The proposed street network changes and open space would not separately result in any population or employment growth, and thus would generate no independent demand for school services. Therefore, effects would be less than significant for the proposed street network changes and open space.

Mitigation: None required.

Impact C-PS-1: Development under the Plan and proposed street network changes, combined with past, present, and reasonably foreseeable future projects in the vicinity, would not result in a considerable contribution to cumulative impacts on police, fire, and school district services such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required in order to maintain acceptable levels of service. (Less than Significant)

The cumulative geographic context for public services considerations for development under the Plan and proposed street network changes consists of growth projections for the Plan area in addition to citywide growth projections to 2040, as public services are provided citywide.

Development Under the Plan

As noted above, the Southern Station currently receives approximately 25 percent of the City's call for service and the response times and services are adequate for the area. The redistricting analysis represents the Department's efforts to plan for population growth within the Plan area and the City as a whole. The SFPD would not require additional personnel, equipment, or facilities to maintain adequate levels of adequate levels of service in the Plan area or Citywide, given projected increases in population and employment (either directly as a result of growth in the Plan area or as a result of this growth in

conjunction with citywide growth).[94] Cumulative development, in combination with development under the Plan (including proposed open space improvements) would result in a less-than-significant cumulative impact on police protection services.

Cumulative development, in combination with development under the Plan (including proposed open space improvements) could result in the need for new fire facilities within the Plan area. However, as discussed above, any potential environmental impacts resulting from new fire facilities within the Plan area are either addressed in the other sections of this Initial Study or will be further analyzed and included in the EIR.

Regarding schools, as stated above, SFUSD has experienced substantially decreased enrollment over the past 16 years. In addition, pursuant to Senate Bill 50 (SB 50), individual project applicants would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Under SFUSD's diversity index lottery system, new students from the Plan area may attend schools elsewhere in the City. Considering the existing educational facilities citywide and in the vicinity of the Plan area, and declining enrollment trends, development under the Plan, in combination with past, present and reasonably foreseeable future projects, would not result in the need for new or physically altered school facilities and the impact would be less than significant.

Proposed Street Network Changes and Proposed Open Space Improvements

The proposed street network changes would not separately result in any population or employment growth, and thus would generate no independent demand for police, fire, or school services. As noted and addressed above, the proposed open space improvements may result in an increased demand for police services, and the impact would be less than significant. However, as with the proposed street network changes, the proposed open space improvements would not separately result in any population growth or student generation and thus would result in an increased demand for school services. Therefore, effects, with respect to police, fire, and school services, would be less than significant for the proposed street network changes and the proposed open space improvements.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☐	☒	☐	☐	☐

[94] Captain Michael Redmond, San Francisco Police Department, Personal Communication, November 7, 2013.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☐	☒
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?	☐	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☐	☒

Setting

The Plan area is fully developed with structures and roadways. No natural communities remain within the Plan area or vicinity, and there is currently very little open space throughout this fully urban area. No natural plant communities remain within the Plan area and vegetation consists of street trees and landscaping on the street and in occasional back yards throughout the area. The occasional areas of ruderal, or weedy, vegetation generally provide habitat only for species habituated to urban life and high disturbance levels.

The Plan area does not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS); therefore, topic 13(b) is not applicable to the Plan, subsequent development within the Plan area, or the proposed street network changes and open spaces. In addition, the Plan area does not contain any wetlands as defined by Section 404 of the Clean Water Act; therefore topic 13(c) is not applicable to the Plan and its proposed developments. Moreover, the Plan does not fall within any local, regional or state habitat conservation plans; therefore, topic 13(f) is not applicable to the Plan and its proposed developments.

Approach to Analysis

The Plan is a regulatory program and does not propose individual projects; however, subsequent individual projects developed pursuant to the Plan (including development projects, new open spaces, and changes to the street network) could result in new or modified structures. These changes would

occur in areas which are currently developed, where existing buildings or pavement are located. As stated above, these areas do not contain sensitive or protected habitat and are generally not suitable habitat for special-status species.[95] Individual projects would also be required to comply with the federal Endangered Species Act, California Fish and Game Code and the Migratory Bird Treaty Act (MBTA) which protect special-status species.

The analysis of biological resources incorporates reference materials available from the California Department of Fish and Wildlife, City data compiled pursuant to the Urban Forestry Ordinance, and a review of the City's Standards for Bird-Safe Buildings, as well consideration of the fact that the Plan area is a substantially built-out neighborhood proximate to Downtown San Francisco. Assumptions regarding the most aggressive land development scenario or growth projections are not necessary for this analysis. Environmental impacts related to biological resources are site specific and thus the impacts for all land development scenarios would be the same.

Impacts and Mitigation Measures

Impact BI-1: Development under to the Plan and the proposed street network changes has the potential to adversely affect special-status species and to interfere with the movement of wildlife species. (Less than Significant with Mitigation)

A review of the California Natural Diversity Database (CNDDB) was conducted for historic occurrences of listed species within the San Francisco North USGS 7.5-minute quadrangle (where the Plan area is located) and the surrounding quadrangles.[96] The Plan area, and the proposed street network changes that would extend east and west of the Plan area, are located in a developed area that is primarily covered by paved, impervious surfaces. Moreover, none of the reported occurrences of species documented in the CNDDB are within the Plan area. Therefore, most of the listed species are presumed to have been extirpated from the Plan area. However, there is the potential for some special-status bird and bat species to be present in the Plan area, as described below.

Special-status bird species. Peregrine falcon (*Falco peregrinus anatum;* CA Fully Protected), is known throughout California and is a year-around resident along the Pacific coast. Although typically nesting on tall cliffs, peregrines are also known to use urban sites, including the Bay Bridge and tall buildings in San Francisco, where the financial district has been considered a peregrine falcon territory since the late 1980s. American kestrel *(Falco sparverius)* is a relatively small member of the falcon family, common in open habitats, that mostly nests in tree cavities but may also use buildings for nesting. Two breeding

[95] For the purposes of this Initial Study, special-status species include plant and wildlife species listed as rare, threatened or endangered under the federal or state endangered species acts; species that are candidates for listing under either federal or state law; species formerly designated by the USFWS as Species of Concern or by CDFW as Species of Special Concern; species designated as "special animals" by the state (883 species "of greatest conservation need"); species designated as "fully protected" by the state (about 35, most also listed as either endangered or threatened); raptors (birds of prey), which are specifically protected by the California Fish and Game Code Section 3503.5; and species such as candidate species that may be considered rare or endangered pursuant to Section 15380(b) of the CEQA Guidelines.

[96] California Department of Fish and Wildlife, 2013. California Natural Diversity Database Commercial Version dated May 7, 2013.

pairs were observed in San Francisco during data collection for the San Francisco Breeding Bird Atlas.[97] Cooper's hawk (*Accipiter cooperi*) ranges over most of North America, including California. This species occasionally may forage in and around the Plan area; however, there is no suitable nesting habitat for this species there. Red-tailed hawk (*Buteo jamaicensis*) nests in a variety of trees in urban, woodland, and agricultural habitats and has been observed throughout the City. This hawk may forage in and around the Plan area; however, it is unlikely to nest there.

Special-status bat species. The Plan area provides limited potential roosting habitat for two special-status bat species, western red bat (*Lasiurus blossevillii*) and Townsend's big-eared bat (*Corynorhinus townsendii townsendii)*. However, foraging opportunities for these species are relatively low, with few open or vegetated areas and no areas of standing water to host insect populations. While the potential for their occurrence within the Plan area is low, it is possible that these bat species could be found in trees or underutilized buildings.

Given the limited quality of potential habitat, neither development within the Plan area nor the proposed street improvements would interfere substantially with migratory corridors. The Plan and the proposed street network improvements would not conflict with any local policies or ordinances directed at protecting biological resources. Tree protection regulations are discussed separately under Impact BI-4, below.

As a result of proposed street network changes, sidewalks would be widened on Howard, Folsom, Harrison, Bryant, Brannan, Third, and Fourth streets. These improvements may require the relocation or removal of trees within the existing sidewalk of these streets; demolition or renovation of existing buildings and construction of new buildings could also result in removal of existing trees.

Existing street trees could support native nesting birds protected under the *California Fish and Game Code* (Sections 3503, 3503.5) or the MBTA. Although the majority of these existing trees would not be directly affected by either development projects or street improvements, it is virtually certain that some trees would be removed during the lifetime of the Plan, including for street improvements. Removal of trees with active nests, and construction activities adjacent to such trees nesting during the bird season (March 1 through August 31) could result in nest destruction or injury or mortality of nestlings. However, compliance with the requirements of the Fish and Game Code and the MBTA would ensure that there would be no loss of active nests or bird mortality, and would ensure that no significant effects would ensue. These requirements may include one or more of the following:

- Undertaking tree removal during the non-breeding season (i.e., September through February) to avoid impacts to nesting birds, or conducting preconstruction surveys for work scheduled during the breeding season (March through August);
- Preconstruction surveys conducted by a qualified biologist no more than 15 days prior to the start of work during the nesting season to determine if any birds are nesting in, or in the vicinity of, the vegetation to be removed or construction to be undertaken; and

[97] San Francisco Field Ornithologists, San Francisco Breeding Bird Atlas, 2001-2003, available: http://www.sffo.org accessed July 26, 2010.

- Avoidance of any nests identified and the establishment by a qualified biologist of a construction-free buffer zone, to be maintained until nestlings have fledged.

Compliance with the *California Fish and Game Code* and the MBTA through implementation of the above procedures would preclude significant effects on nesting special-status birds.

As noted, existing trees, and potentially existing buildings, could support special-status bat species. Potential effects on such species would be avoided by implementation of Mitigation Measure M-BI-1.

Proposed Street Network Changes

The proposed street network changes would result in a net increase in street trees. Any removal of street trees required to permit construction to proceed would be followed by planting of additional trees and other vegetation. Therefore, on balance, the effect is likely to be a net increase in street trees. Construction-period effects could result in impacts on nesting birds, but these would be less than significant with compliance with the *California Fish and Game Code* and the MBTA, as discussed above. Effects on nesting bats would be reduced to a less-than-significant level with implementation of Mitigation Measure M-BI-1.

Proposed Open Space Improvements

The proposed new open spaces would likewise result in a net increase in street trees. Any tree removal at the start of construction could result in impacts on nesting birds, but these would be less than significant with compliance with the *California Fish and Game Code* and the MBTA, as discussed above. Effects on nesting bats would be reduced to a less-than-significant level by implementation of Mitigation Measure M-BI-1.

Mitigation Measure

M-BI-1: **Pre-Construction Bat Surveys:** Conditions of approval for building permits issued for construction within the Plan area shall include a requirement for pre-construction special-status bat surveys when large trees are to be removed or underutilized or vacant buildings are to be demolished. If active day or night roosts are found, a qualified biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with the CDFW allowing the biologist to handle and collect bats) shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition. A no disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer would necessary.

Level of Significance after Mitigation

With implementation of Mitigation Measure M-BI-1, requiring pre-construction surveys for special-status bats prior to construction of individual buildings or projects in the Plan area, the impacts on special-status species resulting from development under the Plan would be less than significant.

Impact BI-2: Development under the Plan and the proposed street network changes could interfere with the movement of migratory or native resident bird species. (Less than Significant)

It is estimated that, in North America alone, between 100 million and 1 billion birds are killed due to collisions with buildings and other structures each year.[98] Collisions are currently recognized as one of the leading causes of bird population declines worldwide.[99] Daytime collisions occur most often when birds fail to recognize window glass as a barrier. Regardless of overall building height, the ground floor and first few stories of buildings present the greatest hazards to most birds; reflections of attractive ground-level features like vegetation draw birds toward glass surfaces and often result in collisions. Recent increases in glass surfaces used to better daylight buildings can be considered a "biologically significant" issue, potentially affecting the viability of local and regional bird populations.[100] Transparent features – especially buildings where birds can see through two glass surfaces to vegetation on the other side – also attract birds and cause collisions. Vegetated areas and bodies of water provide potentially valuable stopover habitat for migratory birds. Open space areas adjacent to developed areas create bird habitats in the vicinity of proposed buildings, potentially resulting in higher bird collision risks.

Many collisions are induced by artificial night lighting, particularly from large buildings, which can be especially problematic for migrating songbirds since many are nocturnal migrants.[101] The tendency of birds to move towards lights at night when migrating, and their reluctance to leave the sphere of light influence for hours or days once encountered, has been well documented.[102] It has been suggested that structures located at key points along migratory routes may present a greater hazard than those at other locations.[103] Other research suggests that fatal bird collisions increase as light emissions increase, that weather often plays an important part in increasing the risk of collisions, and that nights with heavy cloud cover and/or precipitation present the conditions most likely to result in high numbers of collisions.[104] The type of light used may affect its influence on the birds: for example, studies have indicated that blinking lights or strobe lights affect birds substantially less than non-blinking lights.[105]

The San Francisco Board of Supervisors adopted Standards for Bird-Safe Buildings, *Planning Code* Section 139, in 2011.[106] The Standards for Bird-Safe Buildings include guidelines for types and use of glass

98 San Francisco Planning Department, Standards for Bird-Safe Buildings, Adopted July 14, 2011. Reviewed December 3, 2013. Available on the internet at: http://www.sf-planning.org/ftp/files/publications_reports/bird_safe_bldgs/Standards_for_Bird-Safe_Buildings_8-11-11.pdf.

99 Brown, H., Caputo, S., McAdams, E.J., Fowle, M., Phillips, G., Dewitt, C., Gelb, Y., Bird-safe Building Guidelines, New York Audubon, available online: http://nycaudubon.org, accessed 08/24/10.

100 Ibid.

101 Ogden, L.E., Collision Course: The Hazards of Lighted Structures and Windows to Migrating Birds, Special Report for the World Wildlife Fund and the Fatal Light Awareness Program, September 1996, available online: www.flap.org, accessed 08/25/10.

102 Ibid.

103 Ibid.

104 Ogden, L.E., Summary Report on the Bird Friendly Building Program: Effect of Light Reduction on Collision of Migratory Birds, Special Report for the Fatal Light Awareness Program, available online: www.flap.org, January 2002, accessed 08/24/10.

105 Gauthreaux, S.A., Belser, C.G., Effects of Artificial Night Lighting on Migrating Birds, In: Rich, C. and Longcore, T., Ecological Consequences of Night Lighting, Island Press, Covelo, CA, pp. 67-93, 2006.

106 See footnote 98, p. 129.

and façade treatments, wind generators and grates, and lighting treatments. Individual projects would be subject to the Standards for Bird-Safe Buildings, and therefore would result in less than significant hazards impacts to bird species.

The Standards identify location-specific hazards and building feature-related hazards. Location-specific hazards apply to buildings in, or within 300 feet of, and having a direct line of sight to, an Urban Bird Refuge; such a Refuge includes "open spaces two acres and larger dominated by vegetation, including vegetated landscaping, forest, meadows, grassland, or wetlands, or open water." Section 139 requires that 90 percent of glazing in the "Bird Collision Zone" (60 feet above grade, plus 60 feet above an adjacent vegetated roof two acres or larger) be treated (fritted, stenciled, frosted, or covered with netting, screens, grids, or bird-visible UV patterns). Lighting must also be minimized, and any wind generators must comply with Planning Department requirements, "including any monitoring of wildlife impacts that the Department may require."

In addition to buildings in and near an Urban Bird Refuge, Section 139 applies similar standards to certain building features citywide, including "free-standing glass walls, wind barriers, skywalks, balconies, and greenhouses on rooftops that have unbroken glazed segments 24 square feet and larger in size."

The Standards for Bird-Safe Buildings include guidelines for types and use of glass and façade treatments, wind generators and grates, and lighting treatments. The standards impose requirements for both location-related hazards and feature-related hazards, which are the same hazards identified in *Planning Code* Section 139.[107] Required treatments are generally as specified in Section 139:

For location-related hazards involving new buildings or additions to existing buildings (and replacement of 50 percent or more of the existing glazing within the Bird Collision Zone on façade(s) facing the Urban Bird Refuge), the following requirements apply:

- **Façade Treatments:** Bird-Safe Glazing Treatment is required such that the Bird Collision Zone consists of no more than 10 percent untreated glazing. Building owners are encouraged to concentrate permitted transparent glazing on the ground floor and lobby entrances to enhance visual interest for pedestrians.

- **Lighting Design:** Minimal lighting shall be used. Lighting shall be shielded. No uplighting shall be used. No event searchlights should be permitted for the property.

- **Wind Generators:** Sites must not feature horizontal access windmills or vertical access wind generators that do not appear solid.

For building feature-related hazards involving new buildings and new additions to existing buildings, the entirety of the hazard must be made bird-safe through such treatments as fritting, netting, permanent stencils, frosted glass, exterior screens, physical grids placed on the exterior of glazing or ultraviolet patterns visible to birds. Vertical elements of the window patterns should be at least 1/4 inch wide at a

[107] Ordinance No. 199-11, approved by the Board of Supervisors on September 27, 2011 (Board File No. 110785), and signed by the Mayor on October 7, 2011.

minimum spacing of 4 inches, or have horizontal elements at least 1/8 inch wide at a maximum spacing of 2 inches, according to the Standards.

The Standards prescribe the use of a checklist to educate project sponsors and their future tenants on potential hazards and applicable treatments. They also provide that treatments for designated historic buildings meet the *Secretary of the Interior's Standards for Rehabilitation*, and they exempt residential buildings less than 45 feet in height with limited glass facades. The Standards also recommend educational guidelines and voluntary programs.

Avian collisions are a potentially significant impact, inasmuch as they may affect special-status bird species. Moreover, as more research is undertaken with respect to bird collisions, the findings raise the potential that these collisions could be implicated in, and contribute to, the decline of some bird populations below self-sustaining levels or the substantial elimination of some bird communities in certain locales.

The existing environment is one of high ambient disturbance due to human activity and noise generated by City and freeway traffic. Therefore, nesting by raptors such as peregrine falcon, hawks, and kestrels is not expected to be common within the Plan area; however, raptors may use the area for foraging purposes. Because the Plan calls for increasing open space within the Plan area, foraging opportunities may increase for these birds due to increased planting of trees and other vegetation. However, changes in building heights and density, as well as construction of new buildings in the current prevailing architectural style, which are often characterized by large glazed expanses, could have a potentially adverse effect on raptors, as well as resident and migratory passerines, by increasing the risk for avian collisions with buildings.

Development Under the Plan

The Plan area currently contains street lights, parking lot lights, and building lights and is located in a generally urban setting, surrounded by other light sources. Therefore, existing lighting sources already provide a substantial source of illumination throughout the Plan area. New lighting sources in the form of taller buildings than currently exist, combined with the fact that most night-traveling migratory birds fly at heights lower than 1,640 feet,[108] has the potential to significantly heighten the risk of avian collisions over existing levels, particularly because the Plan would allow for taller buildings than currently exist, especially in the southern portion of the Plan area.

In addition, San Francisco has a policy encouraging the installation of on-site renewable energy systems, such as wind generators, and the Plan's Chapter 7, District Sustainability, calls for evaluation of the use of renewable energy in the Plan area, potentially including wind energy. Wind generators can result in bird and bat mortality, including that of special-status species and birds protected by the federal Migratory Bird Treaty Act and the *California Fish and Game Code*.

[108] Brown et al., *op. cit.* (see footnote 99, p. 129).

As discussed above, *Planning Code* Section 139, Standards for Bird-Safe Buildings, focuses on buildings that create location-specific hazards and building feature-related hazards. In the Plan area, Yerba Buena Gardens would likely be considered an Urban Bird Refuge, and thus projects within 300 feet of, and having a direct line of sight to, this open space would be subject to the Standards with respect to location-specific hazards. All development in the Plan area would be subject to applicable Standards for feature-related hazards.

Compliance with *Planning Code* Section 139 and the adopted Standards for Bird-Safe Buildings would ensure that potential impacts related to bird hazards would be less than significant.

Proposed Street Network Changes and Proposed Open Space Improvements

Neither the proposed street network changes nor the proposed open spaces would result in a substantial increase in the potential for bird strikes, as neither would result in the construction of large structures or structures that would constitute bird hazards. None of the proposed open spaces in the Plan area, including the potential park on SFPUC property, would be large enough to be considered an Urban Bird Refuge.

Mitigation Measures: None required.

Improvement Measures

Because no significant impacts were identified, no mitigation is required. However, the following improvement measure is identified to reduce potential effects on birds from night lighting within the Plan area. Implementation of this measure would further reduce the Plan's less-than-significant impacts on resident and migratory birds.

I-BI-2: **Night Lighting Minimization.** In compliance with the voluntary San Francisco Lights Out Program, the Planning Department could encourage buildings developed pursuant to the draft Plan to implement bird-safe building operations to prevent and minimize bird strike impacts, including but not limited to the following measures:

- Reduce building lighting from exterior sources by:
  - Minimizing the amount and visual impact of perimeter lighting and façade up-lighting and avoid up-lighting of rooftop antennae and other tall equipment, as well as of any decorative features;
  - Installing motion-sensor lighting;
  - Utilizing minimum wattage fixtures to achieve required lighting levels.
- Reduce building lighting from interior sources by:
  - Dimming lights in lobbies, perimeter circulation areas, and atria;
  - Turning off all unnecessary lighting by 11:00 p.m. through sunrise, especially during peak migration periods (mid-March to early June and late August through late October);
  - Utilizing automatic controls (motion sensors, photo-sensors, etc.) to shut off lights in the evening when no one is present;

- Encouraging the use of localized task lighting to reduce the need for more extensive overhead lighting;
- Scheduling nightly maintenance to conclude by 11:00 p.m.;
- Educating building users about the dangers of night lighting to birds.

Implementation of Improvement Measure I-BI-2 would further reduce the Plan's less-than-significant impacts related to bird strikes, and the effect would be less than significant.

Impact BI-3: Development under to the Plan and the proposed street network changes, would not substantially interfere with the movement of fish or impede the use of native wildlife nursery sites. (Less than Significant)

There are no streams or other bodies of water in the Plan area. Therefore, neither development in the Plan area, nor the proposed street network changes or proposed open space improvements would result in any adverse effects on the movement of fish.

As discussed above in Impact BI-1, nesting birds and bats potentially could be adversely affected by implementation of the Plan, including subsequent development projects and construction of the proposed street network changes and open space improvements. However, any impacts would be limited to isolated bird or bat nests in trees or, in the case of bats, potentially in underutilized buildings. Such limited effects, to the extent that they would occur, would not be sufficiently widespread to affect areas considered to be wildlife nursery sites. As also described in Impact BI-1, compliance with the MBTA and the *California Fish and Game Code* would avoid significant impacts to nesting birds, while implementation of Mitigation Measure M-BI-1 would reduce potential impacts to nesting bats to a less-than-significant level. Accordingly, effects on native wildlife nursery sites would be less than significant.

Mitigation: None required.

Impact BI-4: Development under the Plan and proposed street network changes would not conflict with the City's local tree ordinance. (Less than Significant)

The Planning Department, Department of Building Inspection (DBI), and Department of Public Works (DPW) have established guidelines to ensure that legislation adopted by the Board of Supervisors governing the protection of trees is implemented. *Public Works Code* Section 8.02-8.11 requires disclosure and protection of landmark, significant, and street trees, collectively referred to as protected trees, located on private and public property. There are no landmark trees within the Plan area.[109] A significant tree is one

[109] City and County of San Francisco, Department of Public Works, 2013. Significant and Landmark Trees website. Available online at: http://www.sfdpw.org/index.aspx?page=663, accessed June 2, 2013. City and County of San Francisco, Department of the Environment, 2013. Map of San Francisco's Landmark Trees website. Available online at: http://www.sfenvironment.org/article/landmark-tree-program/map-of-san-francisco%E2%80%9A%27s-landmark-trees, accessed June 2, 2013.

that is either on property under the jurisdiction of the DPW, or on privately owned land within 10 feet of the public-right-of-way, that is greater than 20 feet in height or that meets other criteria. The proposed street network changes and open spaces may require the removal or transplant of significant trees or street trees located along the areas proposed for street improvement.

Removal of a significant or street tree requires a permit from DPW. The Planning Department requires that a "Tree Planting and Protection Checklist" accompany all permit applications that could potentially affect a protected tree. Trees would be replaced, if not relocated, in accordance with the *Planning Code* and the Better Streets Plan. For example, Section 138.1 of the *Planning Code* requires that one 24-inch box tree be planted for every 20 feet of property frontage along each street, with any remaining fraction of 10 feet or more of frontage requiring an additional tree. By applying for tree removal permits and replacing trees in accordance with established regulations and plans, the Plan's proposed street network changes and open spaces would not conflict with the City's local tree ordinance.

As described in the Project Description, the Plan supports a substantial increase in planted surfaces within the Plan area. For example, in Chapter 4, Streetscape and Circulation, Implementation Strategy 1.5 calls for the addition of street trees to sidewalks wherever possible, to enhance the pedestrian environment. And Chapter 5, Open Space, sets forth an extensive network of open spaces, as illustrated in Figure 40 on page 61.

Implementation of the proposed street network changes and the proposed open space improvements would likewise comply with all applicable tree protection ordinances and regulations.

In light of the foregoing, this impact would be less than significant.

Mitigation: None required.

Impact C-BI-1: Development under the Plan and proposed street network changes, in combination with other past, present or reasonably foreseeable projects, would not result in a considerable contribution to cumulative impacts on biological resources. (Less than Significant)

The cumulative context for biological resources is the area proximate to the Plan area; that is, greater Downtown San Francisco. The Plan would not adversely affect biological resources with the exception of trees that may contain nesting habitat for special-status bird and bat species. With mitigation and compliance with the Migratory Bird Treaty Act, *California Fish and Game Code,* and the City's Standards for Bird-Safe Buildings, subsequent development pursuant to the Plan would have less-than-significant impacts to these species. Any tree removal would be permitted by DPW and replacement or relocation of street trees would occur in accordance with the *Planning Code* and the Better Streets Plan. All development proximate to the Plan area would be subject to the same laws and regulations. Therefore, no significant cumulative effects on biological resources would result from development within the Plan area, combined with development in the greater Downtown, and the effect would be less than significant.

In summary, the Plan and proposed street network changes and open space would not result in cumulatively considerable impacts to biological resources, and cumulative impacts would be less than significant.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	☐	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in the San Francisco Building Code, creating substantial risks to life or property?	☐	☐	☒	☐	☐
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?	☐	☐	☐	☐	☒
f) Change substantially the topography or any unique geologic or physical features of the site?	☐	☐	☐	☒	☐

Individual development projects constructed pursuant to the Plan would connect to the combined sewer system which is the wastewater conveyance system for San Francisco, and would not use septic tanks or other on-site land disposal systems for sanitary sewage. In addition, the proposed street network changes would not produce any additional wastewater. Therefore, initial study topic 14(e) is not applicable to the Plan.

The Plan area is generally flat, or, in the east-central portion of the area, relatively gently sloping. There are no unique topographic, geologic, or physical features within the Plan area. Neither construction of the individual projects in the Plan area nor the proposed street network changes would alter the topography of the Plan area. Therefore, there is no impact related to initial study topic 14(f).

Setting

The Plan area is relatively flat, with elevation ranging from 0 to 50 feet San Francisco City Datum (SFD).[110] The east central portion of the Plan area slopes upward towards Rincon Hill, reaching the highest elevation (50 feet SFD) at Second and Harrison streets. Elevations along Second Street range from 20 feet SFD at Market Street, up to 50 feet at Harrison Street, and back down to 10 feet SFD at Townsend Street. Elsewhere, the elevations generally slope downward from northeast to southwest: along Fourth Street, elevation ranges from 30 feet SFD at Market Street to 0 SFD at both Brannan and Townsend streets, while along Sixth Street, the elevation ranges from 34 feet SFD at Market Street to 0 SFD at Bryant, Brannan, and Townsend streets. Along Folsom Street, from east to west, elevation ranges from 42 feet SFD at Second Street to 0 feet SFD at Fifth Street and back up slightly to 2 feet SFD at Sixth Street.

The area is underlain by Quaternary age sediments deposited in the last 1.8 million years, including (from youngest to oldest) Undifferentiated Surficial Deposits, Dune Sand, Bay Mud, Marsh Deposit, Marine Sand, the Colma formation, Old Bay Clay (also referred to as the Yerba Buena Mud or the San Antonio Formation), and the Alameda Formation. Bedrock beneath San Francisco consists of sedimentary and volcanic rocks of the Jurassic and Cretaceous age (approximately 65 to 213 million years old) Franciscan complex.

Based on regional mapping[111,112] and analyses performed for the adjacent Transit Center District Plan,[113] geologic units beneath the Plan area are described as follows:

- **Dune Sand** (Holocene) – covering more than half of the City of San Francisco, this is the most widespread surficial deposit in the City, and can reach thicknesses of 150 feet. Regionally, this unit consists of well sorted fine to medium grained sand.

- **Undifferentiated Surficial Deposits** (Holocene) – regionally described as beach sand, marine deposits, artificial fill, alluvium, and landslides that interfinger with estuarine deposits of mud and silt (i.e. "bay mud") at the margin of the San Francisco Bay.

- **Bay Mud** (Holocene) – a highly compressible clay that continues to be deposited today. It is described as soft, plastic, and nearly fluid to moderately firm with high amounts of organic content. The consistency is similar to modeling clay. Locally, the Bay Mud contains lenses or irregular deposits of sand and mollusk shells.

- **Marsh Deposit** (late Pleistocene) – regionally described as very soft to soft silty mud, silt, and sand with high organic content.

- **Marine Sand** (late Pleistocene) – a gray or gray-green, loose to very dense sand, deposited under marine conditions. The Marine Sand underlies the Bay Mud.

[110] San Francisco City Datum (SFD) establishes the City's zero point for surveying purposes at approximately 8.6 feet above the mean sea level established by 1929 U.S. Geological Survey datum, and approximately 11.3 feet above the current 1988 North American Vertical Datum. Because tides are measured from mean lower low water, which is about 3.1 feet below mean sea level (MSL), an elevation of 0, SFD, is approximately 8.2 feet above MSL.

[111] Blake, M.C., Graymer, R.W. and Jones, D.L., Geologic Map and Map Database of parts of Marin, San Francisco, Alameda, Contra Costa, and Sonoma Counties, California. U.S. Geological Survey Miscellaneous Field Studies MF-2337, Version 1.0, 2000.

[112] Schlocker, J., *Geology of the San Francisco North Quadrangle, California,* U.S. Geological Survey Professional Paper 782, 109 p., scale 1:24,000, 1974.

[113] Treadwell & Rollo, Geotechnical Consultation, EIR Preparation, Downtown San Francisco Developments, San Francisco, California. October 17, 2008. Planning Department Case No. 2007.0558E and 2008.0789E.

- **Colma formation** (late Pleistocene) – regionally described as fine- to medium-grained sand with minor amounts of sandy silt, clay, and gravel as interbeds. Sand is well sorted, soft, and friable.

- **Old Bay Clay** (late Pleistocene) –generally consists of over-consolidated, stiff to hard clay with layers of dense, alluvial sand. This moderately compressible clay layer underlies the Colma formation and Marine Sand, where present. It is relatively thick.

- **Alameda Formation** (late Pleistocene) – a very stiff gravelly clay or dense gravelly sand. The gravel-size particles are angular and are remnants of the parent bedrock. This formation is of colluvial (gravity deposited) origin.

- **Franciscan Complex** (Jurassic and Cretaceous) –primarily highly fractured and sheared sandstone and shale. The bedrock outcrops along the northeast border of the Plan area and dips toward the southwest, reaching a depth of over 200 feet in the southwest corner of the Plan area.[114] A geotechnical investigation at 222 Second Street, slightly to the east of the Plan area, reports bedrock at an elevation of -150 to -160 feet City Datum [115] while a geotechnical investigation at 775 Harrison Street, more centrally located in the Plan area reports bedrock at an elevation of -65 to -115 feet City Datum.[116]

As shown on Figure 41, the U.S. Geological Survey indicates that the primary surficial units immediately underlying the Plan area are artificial fill and Dune Sand, the youngest geologic units within the Plan area. Small areas of Quaternary aged Undifferentiated Surficial Deposits and Cretaceous aged Franciscan Complex bedrock are mapped in the eastern portion of the Plan area. The historic (1852) shoreline of San Francisco crosses the borders of the Plan area near the intersections of Third and Townsend streets and Sixth and Brannan streets.[117] Areas that are bayward of this historic shoreline were formerly part of Mission Bay and were created by filling of the Bay. In all, four blocks of the Plan area were created when Mission Bay was filled. Based on a review of geotechnical reports for projects in the Plan area, groundwater within the Plan area is generally found at an elevation of approximately -5 SFD—that is, on the order of about 5 to about 25 feet below ground surface in most of the area, depending on location and site-specific conditions, with the shallower groundwater reported in the southwestern portion of the Plan area, closer to the historic Mission Bay shoreline.[118,119,120]

[114] U.S. Geologic Survey, Geohydrology, Water Quality, and Estimation of Groundwater Recharge in San Francisco, California, 1987-92, Steven P. Phillips, Scott N. Hamlin, and Eugene B. Yates. Water Resources Investigations Report 93-4019, 1993.

[115] Treadwell & Rollo, Geotechnical Due Diligence Study – Revision 3, 725 Harrison Street, San Francisco, California, May 29, 2009. Planning Department Case No. 2005.0759E.

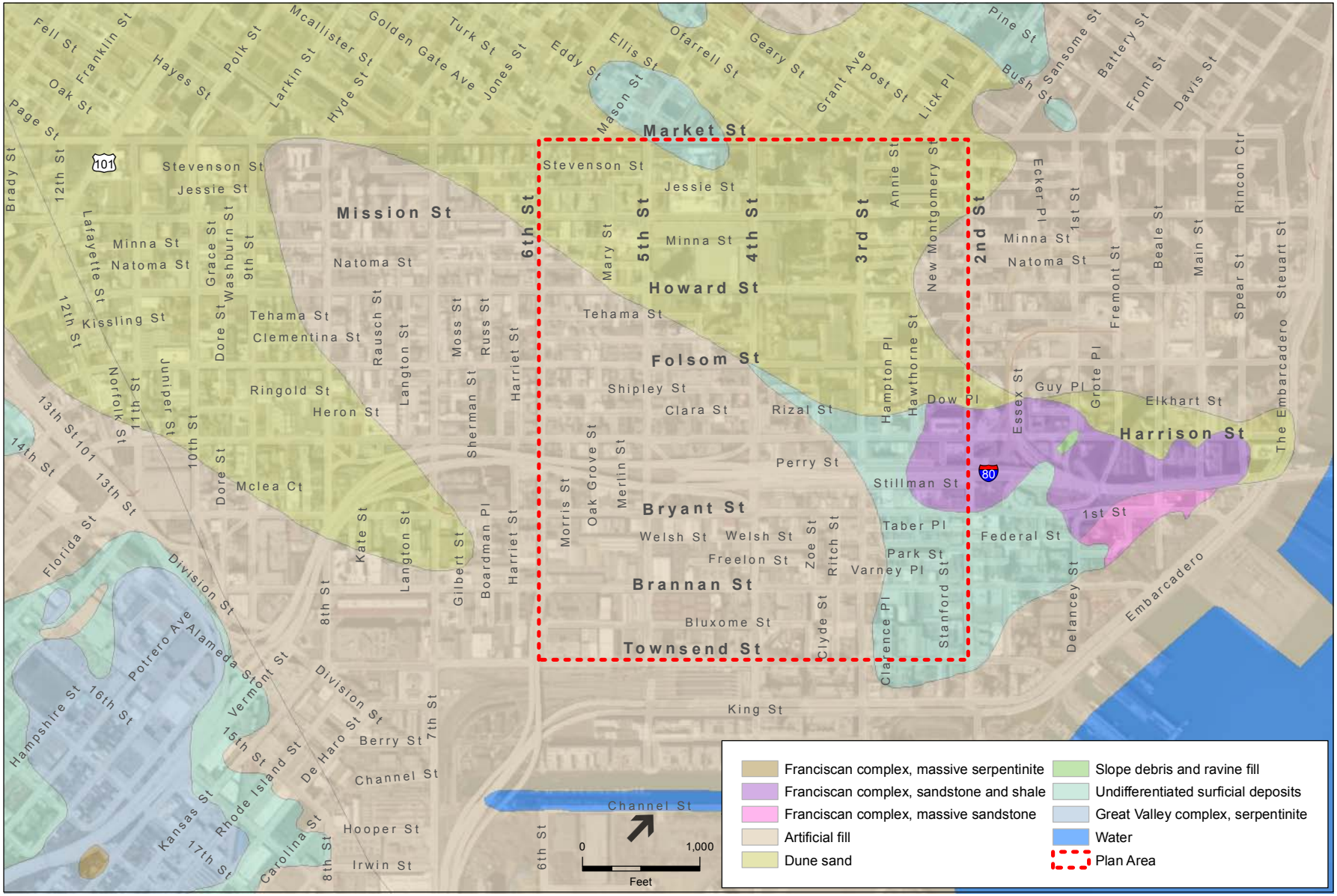
[116] Treadwell & Rollo, Geotechnical Due Diligence Study, 222 2nd Street, San Francisco, California, July 31, 2006. Planning Department Case No. 2006.1106E.

[117] U.S. Coast Survey map, San Francisco and Vicinity; 1853. Available on the internet at: http://www.davidrumsey.com/maps1645.html. Reviewed October 16, 2013.

[118] Geotechnical Consultants, Inc., Phase I Preliminary Geotechnical Report Moscone Center Expansion, San Francisco, California. April 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E.

[119] Treadwell & Rollo, Preliminary Geotechnical Report, 645- 5th Street, San Francisco, California. August 4, 2005.

[120] Federal Transit Administration and San Francisco Planning Department, *Central Subway Final Supplemental Environmental Impact Statement/ Supplemental Environmental Impact Report*. September 2008; p. 4-98. Available on the internet at: http://centralsubwaysf.com/FSEIS-SEIR. Reviewed October 24, 2013.



SOURCE: USGS MF- 2332, 2000

2011.1356E: Central Corridor Plan . 120623

Figure 41

Geology in the Plan Area

Based on several site-specific geotechnical investigations conducted within the Plan area, the artificial fill landward of the historic shoreline is up to approximately 10 feet thick.[119,121] Bayward of the shoreline, the fill reaches a thickness of almost 20 feet.[122,123] The fill generally consists of loose, weak, and relatively compressible sand and gravel with varying amounts of silt or clay and building debris, including debris from the 1906 earthquake and fire. Abandoned foundation elements are commonly encountered in the fill.

Approach to Analysis

The proposed project consists of implementation of the Central SoMa Plan, which primarily includes changes to allowable land uses, as well as changes to the street network. These changes would not directly result in impacts related to geology and soils. However, implementation of the Plan would increase the development density and subsequent individual development projects in the Plan area could include taller buildings, and therefore implementation of the Plan could expose a greater number of people to existing geologic hazards. In addition, the Plan includes changes to the street network, which are analyzed at a project level and could also result in direct physical impacts. Therefore, this section addresses the geology and soils impacts that would result from implementation of development that could be proposed and approved pursuant to the Plan, as well as impacts resulting from proposed street network changes.

Construction-related impacts could include potential erosion, excavation instability, settlement from excavation dewatering, and heave from pile installation. Potential seismic impacts related to implementation of the Plan could include seismically induced groundshaking as well as liquefaction and related ground failures that could damage structures constructed in the Plan area. Evaluation of these impacts is based on published geologic maps and reports as well as reports prepared for prior or planned projects within the Plan area, as cited in this section.

Impacts and Mitigation Measures

Impact GE-1: Development under the Plan and the proposed street network changes 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 groundshaking, seismically induced ground failure, or landslides. (Less than Significant)

Fault Rupture

The Plan area is not located within an Alquist-Priolo Earthquake Fault Zone, and no active or potentially active faults exist on or in the immediate vicinity of the site. Therefore, impacts of subsequent development in the Plan area related to surface fault rupture would be less than significant for both Plan area development under either Option A or Option B (including proposed open space improvements), and for the proposed street network changes.

[121] Engeo Incorporated, Geotechnical Exploration, Hotel SOMA, 690 5th Street, San Francisco, California. July 24, 2006.
[122] Treadwell & Rollo, Geotechnical Due Diligence Study, 222 2nd Street, San Francisco, California. July 31, 2006.
[123] Treadwell & Rollo, Geotechnical Due Diligence Study – Revision 3, 725 Harrison Street, San Francisco, California. May 29, 2009.

Groundshaking

The intensity of the seismic shaking, or strong ground motion, in the Plan area during an earthquake is dependent on the distance between the Plan area and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the Plan area. Earthquakes occurring on faults closest to the Plan area would most likely generate the largest ground motions and the intensity of earthquake-induced ground motions can be described in terms of "peak ground acceleration," which is represented as a fraction of the acceleration of gravity (g).[124]

The USGS concluded that there is a 63 percent probability of a strong earthquake (Mw 6.7 or higher) occurring in the San Francisco Bay region in the 30-year period between 2007 and 2036.[125] The faults nearest the Plan area that would be capable of causing strong groundshaking in the Plan area are the San Andreas fault, located within 8 miles; the Hayward fault, located within 9 miles; the San Gregorio fault, located within 11 miles; and the Calaveras, Mt. Diablo and Rodgers Creek faults, located 19 or more miles away.[126] Based on shaking hazard mapping prepared by ABAG, the Plan area would experience very strong to violent 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 Plan area.[127]

The California Geological Survey (CGS) estimates that peak ground accelerations within the Plan area would range from approximately 0.45 to 0.57g, depending on the soil and rock conditions.[128] However, these estimates of peak ground accelerations are used primarily for formulating building codes and for designing buildings, and are not intended for site-specific hazard analysis. Therefore, it would be necessary to conduct a site-specific evaluation to estimate peak ground accelerations at a level suitable for design of specific development projects developed pursuant to the Plan.

Although the Plan area would be subject to very strong to violent ground shaking in the event of a major earthquake, individual development projects would not expose people or structures to substantial adverse effects related to ground shaking because they would be designed and constructed in accordance with the most current *San Francisco Building Code*, which incorporates *California Building Code* requirements. The *Building Code* specifies definitions of seismic sources and the procedure used to calculate seismic forces on structures during groundshaking. During its review DBI, in consultation with the sponsor of each development project, would determine necessary engineering and design features for a structure to reduce potential damage to structures from groundshaking and to ensure compliance with all *San Francisco Building Code* provisions regarding structural safety.

[124] 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.
[125] U.S. Geologic Survey (USGS), The Uniform California Earthquake Rupture Forecast, Version 2 (UCERF 2), by the Working Group on California Earthquake Probabilities, Open File Report 2007-1437, 2008.
[126] Distance obtained from Jennings, C.W. and Bryant, W.A., compilers, California Geological Survey (CGS), *2010 Fault Activity Map of California*, CGS Geologic Data Map No. 6, also available online at http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html, accessed on May 3, 2013.
[127] Association of Bay Area Governments, Hazard Maps, Shaking Maps, 2003, www.abag.ca.gov, accessed May 5, 2013.
[128] California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zone Report 043, Seismic Hazard Zone Report for the City and County of San Francisco, California, 2000.

Proposed buildings over 160 feet tall could also be subject to compliance Administrative Bulletin 083 (AB-083), Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures,[129] implemented by DBI. This bulletin specifies the requirements and guidelines for the non-prescriptive design of new tall buildings that are over 160 feet high to ensure that the design meets the standards of the *San Francisco Building Code*. AB-083 requires a three-step process to demonstrate that a non-prescriptive building design provides for a seismic performance of the building that is equivalent to the code-specific seismic performance. The first step of this process includes a code-level evaluation to identify any exceptions taken to the prescriptive requirements of the *San Francisco Building Code* and to define the minimum required strength and stiffness for earthquake resistance. The second step is a service-level evaluation to demonstrate acceptable performance for moderate earthquakes, and the third step is an evaluation to verify that the structure has an acceptably low probability of collapse under severe earthquake ground motions. The design must be reviewed and approved by the Structural Design Reviewer and director of DBI, and the Structural Design Reviewer must provide a written statement that, in his or her professional opinion, the building elements under their review are equivalent in strength, durability, and seismic resistance of the building to those of a building designed according to the prescriptive provisions of the *Building Code*. DBI may also require a peer review of a proposed design to ensure adequacy of the non-prescriptive design. The details of any action granting approval of the non-prescriptive design are recorded and entered into the records of DBI. In the event of an earthquake, buildings designed to the requirements and guidelines of AB-083 would demonstrate a seismic performance at least equivalent to that of a building designed according to the code-prescriptive seismic standards of the *San Francisco Building Code*.

Incorporation of the appropriate engineering and design features into individual development projects in accordance with the *San Francisco Building Code* and AB-083 would ensure that a structure would not suffer substantial damage, that substantial debris such as building exterior finishes or windows would not separate from the building, that building occupants would be able to safely vacate the building following an earthquake, and that pedestrians and other bystanders would not be injured. While some damage could occur, building occupants could reoccupy the building after an earthquake with the completion of any necessary repairs. New structures in the Plan area would be required to meet one of these standards. Therefore, impacts related to ground shaking would be less than significant.

Proposed Street Network Changes and Proposed Open Space Improvements

The proposed street network changes would include construction of sidewalk improvements and other at-grade improvements as well as signalized mid-block crosswalks that would include construction of new traffic signals. Similarly, the proposed open space improvements would include at-grade construction. Although the at-grade improvements such as sidewalks and plazas could be damaged in the event of strong groundshaking, any damage would not create a hazard to life or health and would not be likely to cause damage to adjacent properties. Above-ground improvements could be damaged, and failure could affect human health and safety or damage property. However, development within the City

[129] Non-Prescriptive Seismic Design deviates from one or more of the specific standards contained in the *San Francisco Building Code.*

right-of-way is subject to DPW permitting requirements, including applicable health and safety requirements of Article 2.4 of the San Francisco Public Works Code, Excavation in the Public Right of Way. As with development of new buildings, these improvements would be designed to resist seismic and geologic hazards in compliance with applicable codes and design standards that take into account the expected seismic conditions. Further, the design would be subject to review by DPW as part of the permitting process. Therefore, impacts related to groundshaking are also considered less than significant for the proposed street network changes and open space improvements.

Liquefaction, Lateral Spreading, and Earthquake-Induced Settlement

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 groundshaking. 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 settlement[130] and lateral spreading.[131]

As shown in Figure 42, most of the Plan area is located in an area of liquefaction potential identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990.[132] Therefore, individual development projects implemented pursuant to the Plan could be subject to both liquefaction and earthquake-induced settlement, particularly those in the area that is bayward of the historic shoreline and was created by the placement of non-engineered fill. Further, the area of the former Mission Bay could potentially experience lateral displacement.

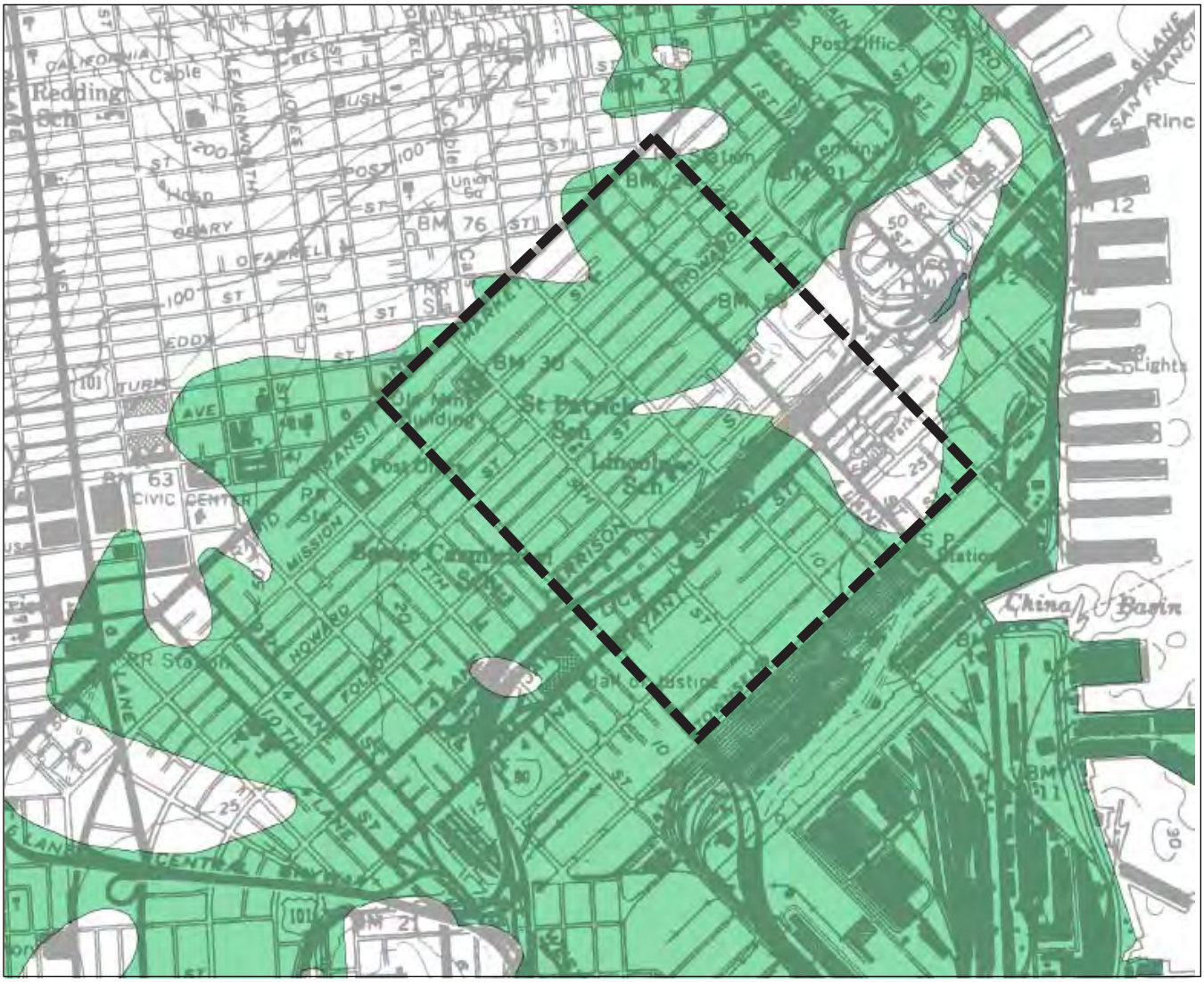
However, buildings constructed pursuant to the Plan would be supported on mat foundations or driven piles supported in the stiff clays, dense sands, and bedrock that underlie the Plan area, as determined appropriate by site-specific geotechnical investigations that would be required by DBI. Soils that could liquefy or experience earthquake-induced settlement or lateral displacement would be removed during construction. Removal of potentially liquefiable materials and appropriate foundation design would reduce the potential for settlement within the building footprints. However, adjacent streets and unimproved properties may experience settlement and lateral displacements, which could affect utilities and surface improvements such as sidewalks.

To address the potential for liquefaction, earthquake-induced settlement, and lateral displacement, DBI would, in its review of a building permit application, refer to a variety of information sources to determine existing hazards and assess requirements to reduce these hazards. Sources reviewed include maps of Special Geologic Study Areas and known liquefaction areas in San Francisco as well as the

[130] 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.

[131] 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.

[132] 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.



Central Corridor . 2013.0154E

SOURCE: Treadwell & Rollo

Figure 42
Liquefaction Hazard Zone

building inspectors' working knowledge of areas of special geologic concern. If a subsequently proposed development project is located in an area of potential liquefaction, DBI would require the project sponsor to prepare a geotechnical report pursuant to the State Seismic Hazards Mapping Act. The report would assess the nature and severity of the hazard(s) on the site and recommend project design and construction features that would reduce the hazards(s). The building plans and geotechnical report would be reviewed by DBI to determine that the necessary engineering and design features are included in the project to reduce potential damage to structures from liquefaction, earthquake-induced settlement, and lateral displacement, and to ensure compliance with all *San Francisco Building Code* provisions regarding structural safety. The design of any proposed buildings over 160 feet tall could also be subject to compliance with AB-083 for non-prescriptive design and peer review. Therefore, impacts of subsequent development in the Plan area related to liquefaction, earthquake-induced settlement, and lateral spreading would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes would include construction of sidewalk improvements and other at-grade improvements as well as signalized mid-block crosswalks that would include construction of new traffic signals. Similarly, the proposed open space improvements would include at-grade construction. Although the at-grade improvements, such as sidewalks and plazas, 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. Above-ground improvements could be damaged, and failure could affect human health and safety or damage property. However, development within the City right-of-way is subject to DPW permitting requirements, including applicable health and safety requirements of Article 2.4 of the San Francisco Public Works Code, Excavation in the Public Right of Way. As with development of new buildings, these improvements would be designed to resist seismic and geologic hazards in compliance with applicable codes and design standards that take into account the expected seismic conditions. Further, the design would be subject to review by DPW as part of the permitting process. Therefore, impacts related to liquefaction, earthquake-induced settlement, and lateral spreading are also considered less than significant for the proposed street network changes and open space improvements.

Earthquake-Induced Landslides

The Plan area is relatively flat and does not include any areas of mapped earthquake-induced landslide susceptibility identified by the California Department of Conservation under the Seismic Hazards Mapping Act of 1990.[133] Therefore, impacts of subsequent development in the Plan area related to earthquake-induced landslides would be less than significant for both Plan area development under either Option A or Option B (including proposed open space improvements), and the proposed street network changes.

[133] 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.

Mitigation: None required.

Impact GE-2: Development under the Plan and the proposed street network changes would not result in substantial erosion or loss of top soil. (Less than Significant)

The Plan area is primarily built out and covered with impervious surfaces, including buildings, streets, and sidewalks that would have involved removal of any top soil (a fertile soil horizon that typically contains a seed base) during construction. Therefore, there would be no impact related to loss of top soil.

Soil movement for foundation excavation could create the potential for wind- and water-borne soil erosion. However, the Plan area is relatively flat; therefore, substantial erosion and loss of soil would not be expected to occur during site preparation and construction of subsequent development projects. Furthermore, project sponsors of such subsequent development projects would be required to implement an erosion and sediment control plan for construction activities in accordance with Article 4.1 of the *San Francisco Public Works Code* (discussed in Topic 15, Hydrology and Water Quality) to reduce the impact of runoff from each construction site. The SFPUC must review and approve erosion and sediment control plans prior to implementation, and would conduct periodic inspections to ensure compliance with each plan. Therefore, impacts related to soil erosion and the loss of top soil would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would occur within the public right-of-way and would involve only minimal ground disturbance in a previously developed area with no top soil horizon. Where the proposed street network changes and open space improvements do require soil excavation, they would be likewise be subject to the erosion control measures of Article 4.1 of the *Public Works Code*. Therefore, the proposed street network changes and open space improvements would have no impact related to loss of top soil, and impacts related to erosion would be less than significant.

Mitigation: None required.

Impact GE-3: Neither development under the Plan nor the proposed street network changes would be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project. (Less than Significant)

Construction of individual development projects pursuant to the Plan could induce ground settlement as a result of excavation for construction of subsurface parking or basement levels, construction dewatering, heave during installation of piles, and long-term dewatering. These potential effects are described below, followed by DBI procedures in place to ensure that unstable conditions do not result.

Excavation

New development projects within the Plan area could require excavation to currently unknown depths for construction of basement levels and below-ground parking. During excavation, the artificial fill, Dune Sand, Bay Mud, Marsh Deposit, and Marine Sand (described above), could become unstable, potentially causing settlement of adjacent structures, including buildings, sidewalks, streets, and utilities. In accordance with the *California* and *San Francisco Building Codes*, shoring, such as rigid and water-tight internally braced secant walling,[134] would be required to prevent this soil from becoming unstable. Further, the DBI would require a monitoring program utilizing an inclinometer to monitor for movement at the face of the excavation. The monitoring program would include a baseline survey and frequent surveying of the excavation as construction progresses to evaluate the effects of construction and ensure that the soil does not become unstable. The final building plans would be reviewed by DBI, which would determine if an excavation monitoring plan would be required.

Construction-Related Dewatering

As stated above, groundwater is relatively shallow (encountered at a depth of 5 to 25 feet below ground surface in most of the Plan area). Therefore, there is the potential for substantial water inflow into the excavations during construction of individual development projects that could be proposed and approved pursuant to the proposed zoning controls. Dewatering could potentially result in settlement of adjacent structures, including buildings, sidewalks, streets, and utilities. Although a water tight shoring system could be used during excavation of structures, dewatering of excavations for installation of utilities and compaction of soil could be required. For each development project in the Plan area, the DBI could require a site-specific dewatering plan. The final building plans would be reviewed by DBI, which would determine if a dewatering plan would be required.

Any groundwater encountered during construction of subsequent development projects would be subject to requirements of the City's Sewer Use Ordinance (Article 4.1 of the *Public Works Code*; added by Ordinance No. 19-92, amended by Ordinance No. 116-97), as supplemented by Department of Public Works Order No. 158170, requiring a permit from the Wastewater Enterprise Collection System Division of the SFPUC. A permit may be issued only if an effective pretreatment system is maintained and operated. Each permit for such discharge shall contain specified water quality standards and may require the project sponsor of a development project to install and maintain meters to measure the volume of the discharge to the combined sewer system. In addition, if a subsequent project-specific geotechnical investigation determines that dewatering wells would likely be needed to draw the groundwater down below the planned depths of excavation, any dewatering wells needed for the proposed project would be subject to the requirements of the City's Soil Boring and Well Regulation Ordinance (Article 12B of the *Health Code*; added by Ordinance No. 113-05), requiring a project sponsor to obtain a permit from the Department of Public Health prior to constructing a dewatering well. A permit may be issued only if the project sponsors use construction practices that would prevent the contamination or pollution of groundwater during the construction or modification of the well or soil boring.

[134] A secant wall, in simplified form, is built by drilling a series of holes and filling them with concrete, resulting in a continuous series of concrete cylinders that form a water-tight barrier that retains soil behind it.

Heave as a Result of Pile Driving

Driving of displacement piles during construction of individual development projects may cause the ground to heave up to several inches, and the heave could adversely affect adjacent structures. Depending on the nature of a proposed construction project, the DBI may require a preconstruction survey and monitoring during pile driving to monitor these effects. The final building plans would be reviewed by DBI, which would determine if a preconstruction survey and subsequent monitoring would be required.

Permanent Dewatering

Groundwater could exert hydrostatic pressure on subsurface parking or basement levels constructed as part of individual development projects that could be proposed and approved pursuant to the proposed Plan, and permanent dewatering could be required to relieve this pressure. Dewatering could potentially result in settlement of adjacent structures, including buildings, sidewalks, streets, and utilities. For each development project, the DBI could require a site-specific dewatering plan. The final building plans would be reviewed by DBI, which would determine if such a plan would be required.

DBI Requirements

DBI would require a site-specific geotechnical report for each individual development project and would review the report to ensure that the potential settlement effects of excavation, pile driving, and dewatering are appropriately addressed in accordance with Section 1704.15 of the *San Francisco Building Code*. DBI would also require that the report include a determination as to whether a lateral movement and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets during construction. If a monitoring survey were recommended, DBI would require that a Special Inspector be retained by the project sponsor to perform this monitoring. Groundwater observation wells could be required to monitor potential settlement and subsidence during dewatering. If, in the judgment of the Special Inspector, unacceptable movement were to occur during construction, corrective actions would be used to halt this settlement. Groundwater recharge could be used to halt settlement due to dewatering. Further, the final building plans would be reviewed by DBI, which would determine if additional site-specific reports would be required.

With implementation of the recommendations provided in project-specific detailed geotechnical studies for individual development projects, subject to review and approval by DBI, and monitoring by a DBI Special Inspector (if required), impacts related to the potential for settlement and subsidence due to construction on soil that is unstable, or could become unstable as a result of such construction, would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would occur within the public right of way and would involve only minimal ground disturbance. No deep excavation, pile driving, or dewatering that could induce settlement would be conducted for the construction of these changes. Therefore, this impact would be less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact GE-4: Neither development under the Plan nor the proposed street network changes would create substantial risks to life or property as a result of location on expansive soils. (Less than Significant)

The presence of expansive soils is not an issue in the Plan area because the artificial fill and Dune Sand beneath the Plan area is sandy and would not be expansive, and because the Bay Mud and Marsh Deposits beneath the Plan area are generally below the groundwater table, and thus are permanently saturated. Therefore, impacts related to expansive soils would be less than significant for both the development projects constructed pursuant to the Plan (including the proposed open space improvements) and the proposed street network changes.

Mitigation: None required.

Impact C-GE-1: Development under the Plan and the proposed street network changes, in combination with other past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to cumulative impacts 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 geology and soils impacts is restricted to the Plan area and immediate vicinity because related risks are relatively localized or even site-specific.

As discussed above, implementation of individual development projects that could be proposed and approved within the Plan area could result in ground settlement from excavation for construction of subsurface parking or basement levels, from construction dewatering, from heave during installation of piles, and from long-term dewatering. However, these potential effects would be less than significant with implementation of DBI procedures described above, including preparation of a detailed geotechnical report and site specific reports as needed to address the potential settlement and subsidence impacts of excavation, dewatering, and pile driving; implementation of a lateral movement and settlement survey to monitor any movement or settlement of surrounding buildings and adjacent streets during construction and monitoring by a Special Inspector, if needed; and implementation of corrective actions, as necessary. With implementation of these requirements, the Plan would not contribute to cumulative impacts related to ground settlement.

With regard to seismically induced groundshaking and other earthquake hazards, development pursuant to the Plan would contribute to an increase in the number of persons potentially exposed to seismic risks in the Plan area and in greater downtown San Francisco, compared to existing conditions. As noted above, the Plan area is not subject to fault rupture, as there are no known earthquake faults in the Plan

area. The Plan area would be subject to very strong to violent groundshaking and portions of the Plan area could experience liquefaction in the event of an earthquake on a nearby fault. However, new buildings that would be permitted pursuant to the Plan would be designed in accordance with the most current building code requirements for seismic safety, providing for increased life-safety protection of residents and workers, compared to those in older buildings.

Therefore, the development under the Plan would not result in a cumulatively considerable contribution to cumulative impacts related to geology, soils and seismicity and the impact would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes would not result in significant impacts related to seismicity or ground settlement, and would not contribute to cumulative impacts related to these effects. All of the proposed street network changes and most of the open space improvements would occur within the public right-of-way and would be subject to DPW permitting requirements, including applicable health and safety requirements of Article 2.4 of the *San Francisco Public Works Code*, Excavation in the Public Right of Way. Therefore, these improvements would be designed to resist seismic and geologic hazards in compliance with applicable codes and design standards that take into account the expected seismic conditions. Further, the design would be subject to review by San Francisco Department of Public Works as part of the permitting process. To the extent that proposed open space improvements were not in the public right-of-way (for example, the potential park on SFPUC property and potential Mid-Block Connections; see Figure 40 in the Project Description), any improvements would be subject to applicable *Building Code* and/or *Park Code* provisions. Therefore, the proposed street network changes and open space improvements would not result in a cumulatively considerable contribution to cumulative impacts related to geology, soils and seismicity and the impact would be less than significant.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
15. HYDROLOGY AND WATER QUALITY— Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☒	☐	☐	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☐

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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 of siltation on- or off-site?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☒	☐	☐	☐	☐
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?	☐	☐	☒	☐	☐
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐	☐
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?	☒	☐	☐	☐	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒	☐

Setting

The Plan area is almost entirely covered by impervious surfaces (i.e., buildings, street, sidewalks, curbs and gutters, and other paved or concrete-covered surfaces) at present. There are no remaining streams or watercourses in the Plan area, nor are there surface impoundments, wetlands, natural catch basins, or settling ponds. As noted in Topic 14, Geology and Soils, groundwater is relatively shallow in most of the Plan area (approximately 5 to 25 feet below ground surface).

Approach to Analysis

The proposed project consists of implementation of the Central SoMa Plan, which primarily includes changes to allowable land uses, as well as changes to the street network. These changes would not directly result in impacts related to hydrology and water quality. However, the implementation of the Plan would increase the development density and implementation of subsequent individual development projects would increase the amount of construction within the Plan area. In addition, the Plan would include street network changes and open space improvements, which could also result in direct physical impacts. Therefore, this section evaluates hydrology and water quality impacts that would result from implementation of development that could be proposed and approved pursuant to the

proposed zoning controls of the Plan, as well as impacts resulting from proposed street network changes and open space improvements.

As discussed below, impacts related to discharges to the combined sewer system and potential flood impacts related to sea level rise will be further analyzed and included in the EIR to determine if such impacts would be significant.

Impacts and Mitigation Measures

Impact HY-1: Development under the Plan and the proposed street network changes could violate water quality standards or otherwise substantially degrade water quality. (Potentially Significant with respect to long-term discharges to the combined sewer system; Less than Significant with respect to construction-related stormwater discharges, construction dewatering and long-term dewatering)

As discussed in the impact analyses below, subsequent development in the Plan area would not result in water quality impacts as a result of construction-related stormwater discharges, construction-related dewatering, and long-term groundwater dewatering because these discharges would be managed in accordance with existing San Francisco regulations, described below. Once constructed, individual development projects implemented pursuant to the Plan would change the quantity of stormwater and wastewater discharged to the combined sewer and these changes have the potential to result in significant effects on the frequency or duration of combined sewer discharges. Accordingly, this topic will be further analyzed and included in the EIR to determine if such impacts would be significant.

Construction-Related Stormwater Discharges

Without proper controls, grading and earthmoving for construction of individual development projects implemented pursuant to the Plan would expose soil during construction and could result in erosion and excess sediments carried in stormwater runoff to the combined sewer system. Stormwater runoff from temporary on-site use and storage of vehicles, fuels, wastes and building materials could also carry pollutants to the combined sewer system if these materials were improperly handled.

However, stormwater with the Plan area 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 a National Pollutant Discharge Elimination System (NPDES) permit. Accordingly, construction stormwater discharges to the City's combined sewer system would be subject to the requirements of Article 4.1 of the San Francisco Public Works Code (supplemented by DPW Order No. 158170), which incorporates and implements the City's NPDES permit for the Southeast Plant, North Point Wet Weather Facility, and all of the Bayside wet weather facilities. This permit also incorporates the requirements of the federal Combined Sewer Overflow (CSO) Control Policy. At a minimum, the City requires that a project sponsor develop and implement an erosion and sediment control plan to reduce the impact of runoff from a construction site. The plan must be reviewed and approved by the City prior to implementation, and the City conducts periodic inspections to ensure compliance with the plan. Any stormwater drainage during construction that flows to the City's combined sewer system would receive

treatment at the Southeast plant or other wet weather facilities and would be discharged through an existing outfall or overflow structure in compliance with the City's existing NPDES permit. Therefore, water quality impacts related to violation of water quality standards or degradation of water quality due to discharge of construction related stormwater runoff during implementation of individual development projects pursuant to the Plan would be less than significant with implementation of erosion control measures in compliance with Article 4.1 of the *San Francisco Public Works Code*.

Proposed Street Network Changes and Open Space Improvements

Where the proposed street network changes require excavation of soil, they would be also be required to implement erosion control measures in accordance with Article 4.1 of the San Francisco Public Works Code. Therefore, water quality impacts related to violation of water quality standards or degradation of water quality due to discharge of construction related stormwater runoff are also considered less than significant for the proposed street network changes and open space improvements.

Construction-Related Groundwater Dewatering

As noted in Topic 14, Geology and Soils, the groundwater level in the Plan area is expected at about 5 to 25 feet below ground surface in most of the Plan area. Because individual development projects that could be implemented pursuant to the Plan could include construction of foundations or below-ground parking garages that could extend below this depth, dewatering during construction likely would be necessary for some projects. If any groundwater produced during construction dewatering required discharge to the combined sewer system, the discharge would be conducted in accordance with Article 4.1 of the *Public Works Code*, as supplemented by Order No. 158170, which regulates the quantity and quality of discharges to the combined sewer system. The discharge permit would contain appropriate discharge standards and may require installation of meters to measure the volume of the discharge. Although the groundwater could contain contaminants related to past site activities, as discussed in Topic 16, Hazards and Hazardous Materials, as well as sediment and suspended solids, the groundwater would be treated as necessary to meet permit requirements prior to discharge. With discharge to the combined sewer system in accordance with regulatory requirements, water quality impacts related to a violation of water quality standards or degradation of water quality due to discharge of groundwater during construction of individual development projects pursuant to the Plan would be less than significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would likely require only shallow excavation and thus would not extend to the groundwater table that is generally encountered 5 feet or more below ground surface, with the possible exception of the southwestern portion of the Plan area (south of Harrison Street and west of Fourth Street). In the event that groundwater dewatering would be required, the amount of dewatering would be minimal and the groundwater would be discharged to the combined sewer system in accordance with Article 4.1 of the *San Francisco Public Works Code*, supplemented by Order No. 158170, as discussed above. Therefore, impacts related to discharges of

groundwater during construction of the proposed street network changes and open space improvements would also be less than significant.

Long-Term Groundwater Dewatering

Development projects that include construction below the water table could also require dewatering year round. If any groundwater produced during dewatering required discharge to the combined sewer system, the discharge would be conducted in accordance with Article 4.1 of the *Public Works Code*, as supplemented by DPW Order No. 158170, which regulates the quantity and quality of discharges to the combined sewer system. This permit would contain appropriate discharge standards and may require installation of meters to measure the volume of the discharge. Although the groundwater could contain contaminants related to past site activities, as discussed in Topic 16, Hazards and Hazardous Materials, as well as sediment and suspended solids, the groundwater would be treated as necessary to meet permit requirements prior to discharge.

As an alternative to discharge to the combined sewer system, the extracted groundwater could be used on-site for non-potable purposes under the City's voluntary non-potable water program, if it is of suitable quality. Established through an ordinance adopted by the Board of Supervisors in September 2012, this program promotes and provides incentives for the on-site reuse of non-potable water. It includes guidelines for installing non-potable water systems and local regulations to ensure that appropriate water quality standards are met. To use a non-potable water system, a project applicant must submit a Water Budget Application to the SFPUC and a Non-Potable Water Engineering Report to the San Francisco Department of Public Health (SFDPH). The Engineering Report must demonstrate compliance with the SFDPH rules and regulations regarding the operation of on-site non-potable water treatment and reuse systems. A plumbing permit must also be obtained from DBI.

With reuse of the groundwater produced during permanent dewatering for individual development projects implemented pursuant to the Plan, or discharge to the combined sewer system in accordance with regulatory requirements, long-term groundwater discharges would not violate water quality standards or degrade water quality and this impact would be less than significant. Further, reuse of groundwater for non-potable purposes such as landscape irrigation, toilet and urinal flushing, and custodial uses would reduce the potable water demand of individual development projects, thereby incrementally reducing potable water use.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would likely require only shallow excavation and thus would not extend to the groundwater table that is generally encountered 5 feet or more below ground surface, with the possible exception of the southwestern portion of the Plan area (south of Harrison Street and west of Fourth Street). Further, the proposed street network changes would not include construction of any facilities that would require long-term dewatering to relieve hydrostatic pressure. Therefore, the proposed street network changes and open space improvements would have less-than-significant water quality impacts.

Mitigation: None required with respect to construction-related stormwater discharges or dewatering discharges during construction or over the long-term.

Impact HY-2: Development under the Plan and the proposed street network changes would not 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. (Less than Significant)

Implementation of the Plan would not result in depletion of groundwater resources because, other than potential pumping of groundwater during dewatering, subsequent development that would occur in the Plan area would not involve the use or extraction of groundwater. Rather, development projects constructed within the Plan area would use SFPUC-delivered water for potable purposes such as drinking, dishwashing, and showering. For non-potable purposes, the individual development projects could capture and use rainfall or reuse water generated on-site in accordance with the City's voluntary non-potable water program. If and when a supply of recycled water becomes available through the Eastside Recycled Water Project[135] or a local facility constructed within the Plan area, these developments would also use recycled water for non-potable uses.

Although groundwater dewatering could be required during construction and operation of individual projects that include construction below the water table, this dewatering would not deplete groundwater resources because the Downtown San Francisco Groundwater Basin is not used as a drinking water supply and there are no plans for development of this basin for groundwater production. Further, groundwater produced during long-term dewatering could be used for non-potable purposes as discussed in Impact HY-1.

Plan implementation would not interfere with groundwater recharge because the Plan area is almost completely covered with impervious surfaces under existing conditions, and projects constructed pursuant to the Plan would not increase impervious surface coverage or otherwise reduce infiltration or groundwater recharge. Rather, stormwater controls implemented pursuant to the Article 4.2 of the *San Francisco Public Works Code* and the San Francisco *Stormwater Design Guidelines* (described in Impact HY-4) could include stormwater BMPs to promote infiltration of stormwater—such as through incrementally decreasing the amount of existing impervious surfaces—which in turn may increase recharge to the groundwater basin.

Because the Downtown San Francisco Groundwater Basin is not used as a potable water supply, there are no plans for development of the basin for groundwater production, and there would be no net increase in impervious surfaces, impacts related to depletion of groundwater resources and interference with groundwater recharge would be less than significant.

[135] The SFPUC plans to provide 2 million gallons per day of high quality recycled water to the customers in the east side of the City through the Eastside Recycled Water Project for non-potable uses such as irrigation and toilet flushing. This project is still in the planning stages, and the implementation date is uncertain.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be included in the proposed street network changes. However, neither the proposed street network changes nor the open space improvements would include construction of new structures that would extend below the groundwater table, or increased the amount of impervious surfaces. Therefore, impacts related to groundwater depletion and groundwater recharge are also considered less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact HY-3: Development under the Plan and the proposed street network changes 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 Plan area 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 Plan area. Therefore, the Plan and subsequent development in the Plan area 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.

Currently, the Plan area is almost entirely paved or otherwise covered with impervious surfaces (e.g., buildings, streets), and stormwater runoff within the Plan area is primarily conveyed to the combined sewer system. Replacement of impervious surfaces as part of the development projects that could be proposed and approved pursuant to the Plan would not increase the rate, duration, or quantity of stormwater because, as discussed below in Impact HY-4, these projects would implement stormwater control measures as required by Article 4.2 of the *San Francisco Public Works Code* and the San Francisco's *Stormwater Design Guidelines*. This would decrease the potential for erosion and flooding, resulting in a less-than-significant impact.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes. However, neither the proposed street network changes nor the open space improvements would include construction of any facilities that would increase the amount of impervious surfaces or change stormwater flows to the combined sewer system. Therefore, impacts related to alteration of drainage patterns are also less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact HY-4: Development under the Plan and the proposed street network changes would not contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Less than Significant)

Development projects that discharge stormwater to either the combined sewer system or a separate storm sewer system must comply with Article 4.2 of the *San Francisco Public Works Code*. The SFPUC and the Port of San Francisco have developed *Stormwater Design Guidelines* that guide compliance with the specified stormwater management requirements. In accordance with these guidelines, development projects that could be proposed and approved pursuant to the Plan and that disturb more than 5,000 square feet of land would be required to implement low-impact design stormwater control measures to achieve the standards specified in LEED® SS6.1 (Stormwater Design: Quantity Control) to minimize the flow and volume of stormwater into the combined sewer system. For sites with greater than 50 percent impervious surfaces, including virtually the entire Plan area, a project sponsor of a subsequent development project must implement a stormwater management plan that results in a 25 percent decrease in the volume of stormwater runoff from the two-year 24-hour design storm, compared to conditions without a management plan. The Plan area is almost entirely covered by impervious surfaces at present and the vast majority of development projects in the Plan area that could be undertaken pursuant to the proposed zoning controls would be located on sites that are already developed. Therefore, a large majority of projects would be required to achieve a 25 percent reduction in stormwater flows.[136]

One method of reducing stormwater runoff volumes would be to increase the amount pervious surfaces by providing planters or other unpaved surfaces. Other options include replacing asphalt or concrete with pervious asphalt or other hard surfaces that allow rainwater to percolate into the ground. Vegetated roofs and green walls could also be used to capture a portion of the rainfall and reduce discharges to the combined sewer system. Stormwater runoff volumes could also be decreased by collecting stormwater runoff in tanks and using it for non-potable purposes such as such as landscape irrigation, toilet and urinal flushing, and custodial uses.

Implementation of source control best management practices (BMPs) would reduce potential pollutant loads in the stormwater runoff and improve the quality of the runoff for reuse or discharge to the combined sewer system. Source control measures in the *Guidelines* include covering and hydraulically isolating pollutant generating activities, implementing maintenance activities such as regular sweeping of exposed areas, and using non-polluting building and maintenance materials (including pesticides). Treatment BMPs would further reduce pollutant loads in stormwater via infiltration (e.g. permeable pavement or infiltration basins or trenches), detention (constructed wetlands, detention pond or vault, or wet pond), bioretention (e.g. flow through planter or rain garden), or biofiltration (e.g. vegetated areas; media, sand, or vegetated rock filters; use of swirl separators, water quality inlets, or drain inserts). One or more treatment BMPs could be required to address each of the potential stormwater pollutants of

[136] For sites with less than 50 percent impervious surfaces, this standard requires project sponsors to implement a stormwater management plan to prevent the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one and two-year 24-hour design storms. However, this condition would apply to few, if any, sites in the Plan area.

concern, and selection of the appropriate BMPs is guided by existing site conditions, design and development goals, and the pollutants of concern at the site.

In accordance with the *Stormwater Design Guidelines*, the project sponsor for a subsequent development project would be required to submit a Stormwater Control Plan describing the BMPs that would be implemented and a plan for post construction operation and maintenance of the BMPs. Specifically, the plan would include the following elements:

- Site characterization
- Design and development goals
- Site plan
- Site design
- Source controls
- Treatment BMPs
- Comparison of design to established goals
- Operations and maintenance plan

The Operations and Maintenance Plan would identify who has the operational responsibility for the facility, applicable maintenance requirements for each stormwater control, detailed requirements for each treatment and control BMP, and required maintenance of facilities. These requirements would transfer to any new owner, occupant, or lessee of the facility.

The Stormwater Control Plan must be reviewed and stamped by a licensed landscape architect, architect, or engineer. The SFPUC reviews the plan and certifies compliance with the Guidelines and inspects stormwater BMPs once they are constructed. Any issues noted by the inspection must be corrected before the Certificate of Occupancy can be issued for the building. Following occupancy, the owner is responsible for completing an annual self-certification inspection, and must submit completed checklists and maintenance logs for the year to the SFPUC. In addition, the SFPUC will inspect all stormwater BMPs every third year and any issues identified by either inspection must be resolved before the SFPUC can renew the certificate of compliance.

Implementation of stormwater controls for individual projects developed pursuant to the Plan in accordance with the *Stormwater Design Guidelines* would reduce the quantity and rate of stormwater runoff to the city's combined sewer system and improve the water quality of those discharges. Therefore, implementation of the Plan would not exceed the capacity of the existing stormwater system or create substantial additional sources of polluted runoff.

However, as discussed above in the Approach to Analysis and Impact HY-1, implementation of the Plan would increase the development density in the Plan area. Implementation of subsequent individual development projects could increase the amount of wastewater discharged to the combined sewer system and these changes have the potential to result in significant effects on combined sewer discharges if the

increased volume of discharges is greater than the decrease in stormwater discharges. Accordingly, this topic will be further analyzed and included in the EIR to determine if such impacts would be significant.

Proposed Street Network Changes and Open Space Improvements

The proposed street network changes and open space improvements would not include construction of any facilities that would increase the amount of impervious surfaces or change stormwater flows into the combined sewer system. Therefore, impacts related to contributing runoff water that would exceed the capacity of the combined sewer system or provide substantial additional sources of polluted runoff would be less than significant.

Mitigation: None required.

Impact HY-5: Development under the Plan and the proposed street network changes would not expose people, housing, or structures, to substantial risk of loss due to existing flooding risks and would not redirect or impede flood flows. (Less than significant)

As discussed in the impact analyses below, portions of the Plan area are located within identified flood zones but subsequent development within the area would not result in significant impacts related to flooding because the project sponsors for individual development projects would need to implement City requirements for projects in flood-prone zones as part of the permit approval process.

Existing Flooding Hazards

Areas located on fill or bay mud can subside to a point at which the sewers do not drain freely during a storm (and sometimes during dry weather) and there can be backups or flooding near these streets and sewers. As described in Topic 14, Geology and Soils, most of the Plan area is underlain by artificial fill, and a small portion is bayward of the historic shoreline. The SFPUC has specifically identified potential flooding hazards related to the depth of sewer lines relative to properties they serve, and the majority of the Plan area between Third and Sixth streets is in the South of Market Flood Zone, as shown in Figure 43.[137] Accordingly, applicants for building permits under the proposed Plan would be referred to the SFPUC at the beginning of the permit process to determine whether the project would result in ground level flooding during storms. If so, the applicant would be required to comply with SFPUC requirements for projects in flood-prone zones as part of the permit approval process. These measures could include providing a pump station for the sewage flow, raising the elevation of entryways, providing special sidewalk construction, and constructing deep gutters, among others.

[137] San Francisco Planning Department, Planning Director Bulletin No. 4, Review of Project Identified in Areas Prone to Flooding.



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SOURCE: SFPUC; San Francisco Floodplain Mangagement Program

Figure 43
Flood-Prone Area and Flood Hazard Zone

A small portion of the Plan area bounded by Townsend, Sixth, Brannan, and Fifth streets is located within a Special Flood Hazard Area identified on San Francisco's Interim Floodplain Map, also shown in Figure 43.[138] As part of the building permit review process, project applicants for buildings located in this flood hazard area would have to comply with the standards of construction specified in the City's floodplain ordinance passed in 2008 and amended in 2010.[139] Accordingly, the first floor of new structures would be required to be elevated above the flood elevation or otherwise flood-proofed.

Implementation of SFPUC requirements for projects in flood-prone zones and the City's floodplain ordinance requirements as part of the permit approval process would ensure that individual development projects developed pursuant to the Plan would not result in flood hazards that would endanger people or result in structural damage. Therefore, impacts related to placement of housing within a 100-year flood zone and impedance or redirection of flood flows would be less than significant.

Proposed Street Network Changes and Open Space Improvements

Neither the repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, nor the proposed open space improvements, would substantially alter the street system or include construction of any facilities that would increase the amount of impervious surfaces that could alter flood flows or be damaged by flood flows. Therefore, impacts related to flooding under existing conditions are less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact HY-6: Development under the Plan and the proposed street network changes could expose people, housing, or structures, to substantial risk of loss due to future flooding from sea level rise and would not redirect or impede flood flows. (Potentially Significant)

Portions of the Plan area are also located in areas that could be inundated by future flooding as a result of sea level rise and therefore there is a potential for significant effects related to future flooding. Accordingly, this topic will be analyzed and included in the EIR to determine if such impacts would be significant.

Future Flooding Hazards

In 2008, the Governor of California's Delta Vision Blue Ribbon Task Force adopted for planning purposes a projected sea level rise of 55 inches (4.6 feet) by 2100—until such time that an executive order determines otherwise.[140] Based on mapping by the Pacific Institute, the area roughly bounded by Townsend, Sixth,

[138] City and County of San Francisco, San Francisco Interim Floodplain Map, Northeast. Final Draft July, 2008.
[139] Office of the City Administrator, San Francisco Floodplain Management Program Fact Sheet, Revised January 25, 2011.
[140] Delta Vision Blue Ribbon Task Force, State of California Resources Agency, *Letter to Governor Schwarzenegger, Agenda Item 2, Attachment 1*, March 24, 2008. Available online at http://www.deltavision.ca.gov/BlueRibbonTaskForce/April2008/Item2_Attachment1.pdf, Accessed January 14, 2014.

Folsom, and Fourth streets could be inundated with this amount of sea level rise.[141] Later guidance developed by the Sea-Level Rise Task Force of the Coastal and Ocean Working Group of the California Climate Action Team in 2013 notes that until 2050 there is generally agreement on the amount of projected sea level rise among the various climate models assessed.[142] However, after 2050, projections of sea level rise become less certain because modeling results diverge and there are differences in estimations of the extent to which the international community will decrease greenhouse gas emissions. Although the extent of future flooding as a result of sea level rise and is uncertain, individual projects developed pursuant to the plan could be subjected to physical damage in the event of future flooding unless appropriately designed. Accordingly, this topic will be analyzed and included in the EIR.

Proposed Street Network Changes and Open Space Improvements

Neither the repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, nor the proposed open space improvements, would substantially alter the street system or include construction of any facilities that would increase the amount of impervious surfaces that could alter flood flows or be damaged by flood flows. Therefore, impacts related to flooding under future conditions are less than significant for the proposed street network changes and open space improvements. However, the EIR will also include a more detailed discussion of impacts of the proposed street network changes related to sea level rise.

Mitigation: To be determined in the EIR.

Impact HY-7: Development under the Plan and the proposed street network changes would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow. (No Impact)

The Plan area is not subject to reservoir inundation hazards and is not located in a volcanic area that could be subject to mudflow.[143]

Tsunamis (seismic sea waves) are long period waves that are typically caused by underwater seismic disturbances, volcanic eruptions, or submerged landslides. Tsunamis, which travel at speeds up to 700 miles per hour, are typically only 1 to 3 feet high in open ocean water but may increase in height to up to 90 feet as they reach coastal areas, causing potentially large amounts of damage when they reach land.[144] Low-lying coastal areas such as tidal flats, marshlands, and former bay margins that have been artificially filled but are

[141] Pacific Institute, California Flood Risk: Sea Level Rise, San Francisco North Quadrangle, 2009.

[142] The Climate Action Team (CAT) was formed pursuant to Executive Order S-3-05 and is made up of representatives from the California Environmental Protection Agency; Business, Transportation and Housing Agency; Department of Food and Agriculture; California Resources Agency; Air Resources Board; California Energy Commission; and Public Utilities Commission as well as numerous other Boards and Departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide greenhouse gas (GHG) targets that were established in the executive order and further defined under the Global Warming Solutions Act of 2006 (Assembly Bill 32).

[143] URS Corporation, City and County of San Francisco Hazard Mitigation Plan, December, 2008. Map C-14.

[144] URS Corporation, City and County of San Francisco Hazard Mitigation Plan, December, 2008.

still at or near sea level are generally the most susceptible to tsunami inundation. A seiche is caused by oscillation of the surface of an enclosed body of water, such as San Francisco Bay, during an earthquake.

Based on the state's official tsunami inundation maps, the Plan area is not located within a tsunami inundation zone.[145] Therefore, the Plan area would not likely be subject to a tsunami or seiche and there is no impact related to these hazards.

Mitigation: None required.

Impact C-HY-1: Development under the Plan and the proposed street network changes, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, could result in a considerable contribution to cumulative impacts on hydrology and water quality. (Potentially Significant with respect to discharges from the combined sewer system and sea-level rise; Less than Significant with respect to all other Hydrology and Water Quality topics)

As discussed in Impact HY-1, implementation of the Plan has the potential to result in significant effects on combined sewer discharges and this topic will be further analyzed and included in the EIR, including cumulative effects on combined sewer discharges. As discussed in Impact HY-6, subsequent development within the Plan area could be substantially affected by future climate-change-induced rises in sea level. The EIR will examine potential sea level rise impacts in greater detail, including cumulative effects related to sea-level rise.

Impacts resulting from implementation of individual development projects that would be implemented pursuant to the Plan are limited to potential water quality impacts on the Eastern Drainage Basin of the combined sewer system and central San Francisco Bay as well as adverse effects on groundwater resources of the Downtown Groundwater Basin. Therefore, the geographic scope of potential cumulative impacts on water quality encompasses central San Francisco Bay and the Downtown Groundwater Basin.

As discussed in Impacts HY-1, HY-3, HY-4, and HY-5, implementation of appropriate regulatory requirements would ensure that the proposed project would result in less than significant impacts related to erosion, stormwater discharges to the combined sewer system, alteration of drainage patterns, storm sewer system capacity, and flooding under existing conditions. As discussed in Impact HY-7, there would be no impact with respect to tsunami or seiche risk. Compliance with Article 4.1 of the *Public Works Code* and DPW Order No. 158170 (including implementation of an erosion control plan) would ensure that all discharges to the combined sewer system comply with the City's NPDES permit for the Southeast Plant, North Point Wet Weather Facility, and Bayside wet weather facilities and would not result in a violation of water quality standards Impact HY-1). Because future development projects in San Francisco would also be required to implement the same regulatory requirements, cumulative impacts related to these topics would be less than significant.

[145] California Emergency Management Agency, California Geological Survey, University of Southern California. Tsunami Inundation Map for Emergency Planning, San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay). June 15, 2009.

Compliance with Article 4.2 of the *San Francisco Public Works Code* and *Stormwater Design Guidelines* by all future development projects would also ensure that cumulative impacts related to the alteration of drainage patterns and exceedance of the storm sewer capacity would be less than significant (Impacts HY-3 and HY-4). This is primarily because most sites would be required to reduce stormwater flows from the site by 25 percent. Similarly, cumulative impacts related to flooding within an existing 100-year flood risk zone would be less than significant with implementation of the requirements imposed by the SFPUC and the City's floodplain ordinance (Impact HY-5) because the projects would include appropriate design features to alleviate or avoid adverse effects of flooding. Cumulative impacts related to groundwater recharge and depletion (Impact HY-2) would also be less than significant because future development projects in San Francisco would be required to implement low-impact development (LID) stormwater controls to enhance infiltration of stormwater to the groundwater in conformance with the San Francisco *Stormwater Design Guidelines*. Implementation of these LID measures may result in an overall increase in recharge to the groundwater basin. Further, the Downtown San Francisco Groundwater Basin is not used for potable purposes and there are no plans for development of the groundwater basin for groundwater production.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☐	☐	☒	☐	☐
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?	☐	☒	☐	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
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?	☐	☐	☐	☐	☒

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	☐	☐	☒	☐	☐

Setting

The Plan area has a long history of industrial and heavy commercial use, as well as historically unregulated placement of landfill prior to the advent of current regulations. In particular, in the 1850s heavy industry such as foundries concentrated along the original shoreline of Yerba Buena Cove (approximately First Street), while warehousing and rail lines were developed in the "South End," at the southeast corner of the Plan area. Within the Plan area proper, smaller-scale manufacturing facilities were located among residential and other uses. Much of the southeast portion of the Plan area was either under water in Mission Bay or occupied by marshlands along the bay front. Following the 1906 earthquake and fire, these areas were reclaimed, in part by filling with debris from destroyed buildings and streets. Rebuilding after 1906 reestablished many of the pre-earthquake land use patterns, with the major streets hosting both industrial and commercial activities and residential uses clustered in the mid-block alleys. Although heavy industry moved farther south to the Bayview District and ultimately outside of San Francisco, light industrial activities continued to dominate much of the Plan area throughout most of the 20th century. Accordingly, the potential exists to encounter subsurface contamination of soil and groundwater from a number of historic sources.

Approach to Analysis

The proposed project consists of implementation of the Central SoMa Plan, which primarily includes changes to allowable land uses, as well as changes to the street network. These changes would not directly result in impacts related to hazards and hazardous materials. However, implementation of the Plan would increase development density and implementation of subsequent individual development projects would increase the amount of construction within the Plan area and potentially increase the use of hazardous materials. In addition, the proposed changes to the street network, which are analyzed at a project level, could also result in direct physical impacts. Therefore, this section evaluates hazards and hazardous materials impacts that would result from implementation of development that could be proposed and approved pursuant to the proposed zoning controls of the Plan, as well as impacts resulting from proposed street network changes.

The assessment of the potential to encounter hazardous materials in the soil or groundwater is based on a technical report addressing hazardous materials conditions in the Plan area.[146] The technical report summarizes the results of an environmental database review conducted to identify permitted hazardous

[146] Geier + Geier Consulting, Hazardous Materials Technical Memorandum – Central SoMa Plan, October 25, 2013. Available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2011.1356E.

materials use sites, fuel cases and historic hazardous materials uses, and environmental cases within the Plan area. This section also summarizes the relevant regulatory framework for hazardous materials and evaluates the potential for persons to be exposed to contamination during both construction and operation of subsequent projects that could be developed in the Plan area, as well as during construction of the proposed street network changes.

Impacts and Mitigation Measures

The Plan area and street network change locations are not located within an airport land use plan area or in the vicinity of a private airstrip. Therefore, topics 16(e) and 16(f) are not applicable to the Plan or the proposed street network changes.

Impact HZ-1: Development under the Plan and the proposed street network changes would not create a significant hazard through routine transport, use, or disposal of hazardous materials. (Less than Significant)

Regulatory Framework for Hazardous Materials Handling

Several articles of the *San Francisco Health Code* implemented by the SFDPH address the handling of hazardous materials, extremely hazardous materials, and hazardous wastes:

- Article 21 of the *Health Code* provides for safe handling of hazardous materials in the City. It requires any person or business who handles, sells, stores, or otherwise uses specified quantities of hazardous materials to keep a current certificate of registration and to implement a hazardous materials business plan. A special permit is required for underground storage tanks (USTs). This article also incorporates state regulations controlling underground storage tanks.

- Article 21A of the *Health Code* provides for safe handling of federally regulated hazardous, toxic, and flammable substances in the City, requiring businesses that use these substances to register with DPH and prepare a Risk Management Plan that includes an assessment of the effects of an accidental release and programs for preventing and responding to an accidental release.

- Article 22 of the *Health Code* provides for safe handling of hazardous wastes in the City. It authorizes DPH to implement the state hazardous waste regulations, including authority to conduct inspections and document compliance.

Impacts Related to Hazardous Materials Use

The Plan would result in new planning policies and controls for land use to accommodate additional jobs and housing. None of the allowable land uses would be major industrial activities, but most of the new land uses developed as a result of Plan implementation would likely handle common types of hazardous materials related to cleaning and building maintenance such as cleaners, disinfectants, and chemical agents for sanitation. These commercial products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. They are typically consumed during use, and therefore site operations would not result in the production of large quantities of hazardous waste.

Article 21 of the *San Francisco Health Code* requires any business that handles or stores hazardous materials or petroleum products above threshold quantities (500 pounds, 55 gallons, or 200 cubic feet for compressed gasses) to comply with the requirements of the City's hazardous materials handling requirements. Similar to existing conditions, many of the new land uses implemented under the Plan would be required to implement these requirements. Accordingly, subject land uses would be required to obtain a Certificate of Registration from DPH and to implement a Hazardous Materials Business Plan that includes inventories, a program for reducing the use of hazardous materials and generation of hazardous wastes, site layouts, a program and implementation plan for training all new employees and annual training for all employees, and emergency response procedures and plans.

Facilities that store petroleum products in USTs would be required to obtain a permit for the UST in compliance with Article 21 of the *Health Code* and to comply with the regulatory requirements for inspection, monitoring, and secondary containment of USTs. Facilities that store petroleum products in above-ground tanks (ASTs) beyond a specified size would be required to submit a storage statement to the State Water Resources Control Board and prepare a Spill Prevention Control and Countermeasure Plan. In the unlikely event of a leak or tank rupture from a UST or AST, the spill would likely be contained within the secondary containment system for the tank.

In addition, DPH implements its Risk Management and Prevention Program specified in Article 21A of the *Health Code* and requires businesses that handle regulated substances to prepare a written Risk Management Plan. Similarly, any new businesses that handle hazardous waste must comply with the City's hazardous waste handling requirements specified in *Health Code* Article 22.

Compliance with the *San Francisco Health Code*, which incorporates state and federal requirements, would minimize potential exposure of site personnel and the public to any accidental releases of hazardous materials or waste and would also protect against potential environmental contamination. In addition, transportation of hazardous materials is well regulated by the California Highway Patrol and the California Department of Transportation. Therefore, the potential impacts related to the routine use, transport, and disposal of hazardous materials associated with Plan implementation would be less than significant.

Low-carbon or carbon-free community-scale energy producing systems may also be developed in accordance with the Eco-District Sustainability goals of the Plan. These may include Combined Heat and Power Systems or other innovative systems that would also use hazardous materials in the process of generating power. However, because these systems are not yet identified, subsequent environmental review would be required before they could be implemented.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes; and implementation of the proposed open space improvements would not involve the use of substantial quantities of hazardous materials, once constructed. Therefore, impacts related to the routine use, transport, and disposal of

hazardous materials would also be less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact HZ-2: Development under the Plan and construction of the proposed street network changes could occur on site(s) identified on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Excavation could also require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release into the environment during construction. (Less than Significant)

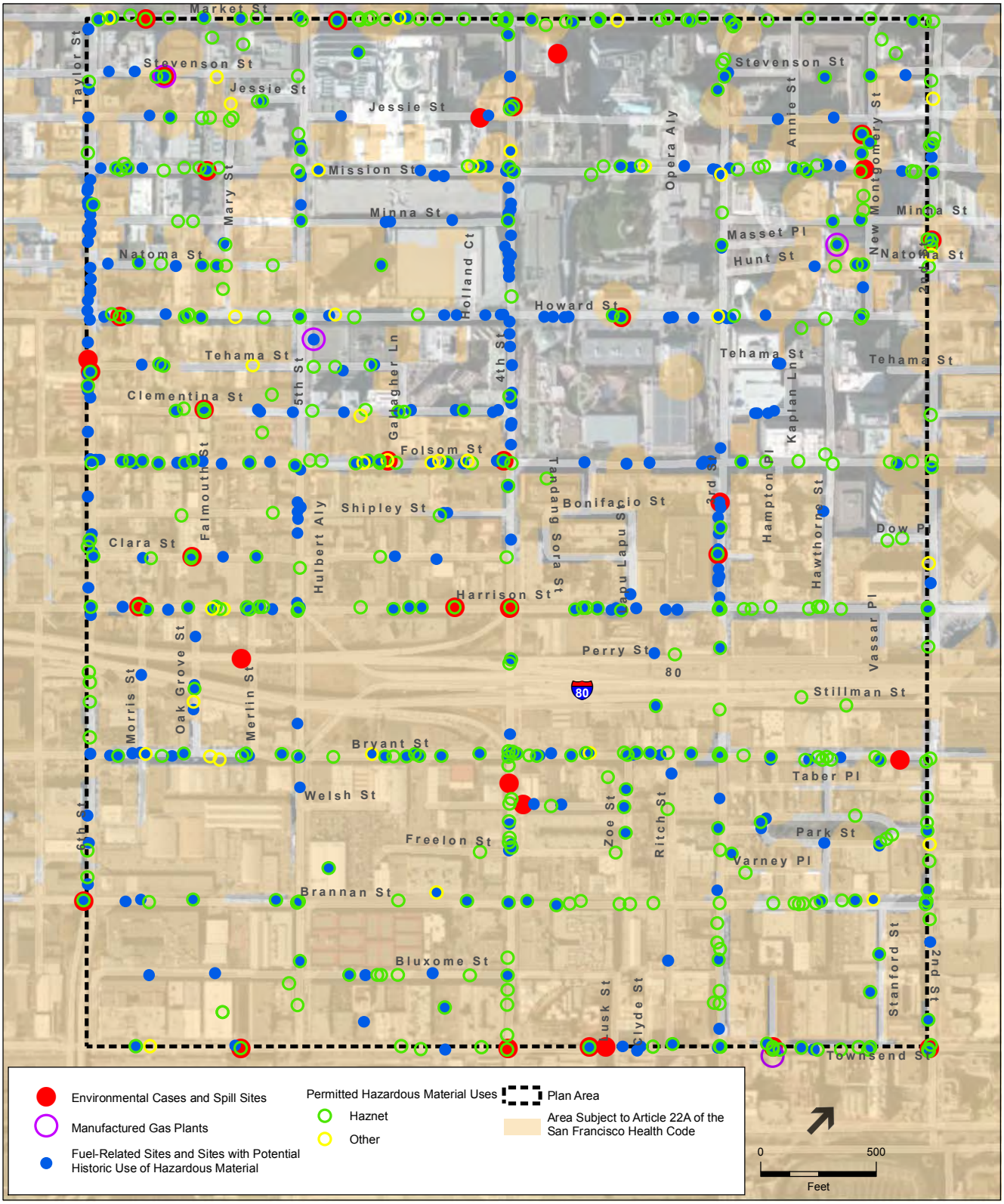
Implementation of the Plan would result in a greater development density within the 260-acre Plan area, and the development projects that could be proposed and approved pursuant to the proposed zoning controls could be constructed on a hazardous materials site identified on a list compiled pursuant to Government Code Section 65962.5 or otherwise contaminated site. As a result, construction activities could encounter hazardous materials in the soil and groundwater and future site occupants, workers, and visitors could also be exposed to hazardous materials. Excavated soil could require disposal as a hazardous waste, and groundwater pumped during dewatering could require treatment before it is discharged.

Potential to Encounter Hazardous Materials in Soil and Groundwater

As presented in the technical report, the environmental database review identified a total of 749 permitted hazardous materials use sites, environmental cases, or historical uses of hazardous materials within the Plan area (see Figure 44). Note that 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 Plan area is less than the total number of sites identified in individual databases.

Permitted Hazardous Materials Uses. Permitted uses are facilities that use hazardous materials or handle hazardous wastes and operate under appropriate permits in accordance with current hazardous materials and hazardous waste regulations; the Plan area includes 464 of these facilities. A total of 93 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. Seventy-one of the facilities reported emissions of toxic and criteria air pollutants to the Bay Area Air Quality Management District (BAAQMD) as part of an emissions inventory in 2008, and many of the emissions result from diesel generators used at the facilities.[147] Four sites are identified as administrative cases and pesticide enforcement actions and compliance activities related to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the Toxic Substances Control Act (TSCA), and the Emergency

[147] Additional information regarding these sites can be found at http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx



SOURCE: Environmental Data Resources, The EDR Radius Map Report with GeoCheck. Central Corridor, Market and 6th Streets, San Francisco, Ca, 94103. Inquiry Number 3493160.1s. January 11, 2013; Orion Environmental Associates.

Case No. 2011.1356E: Central SoMa Plan . 120623

Figure 44
Location of Sites Identified by Environmental Database Review

Planning and Community Right-to-Know Act (EPCRA). A total of 432 of the identified sites have manifested hazardous wastes for off-site disposal; sometimes the wastes are produced as a result of normal business activities while in other cases, the hazardous wastes include soil excavated for the development of new projects on contaminated properties and other sources.

Fuel-Related Sites and Identified Historic Land Uses. The Plan area includes 452 fuel-related sites and identified historic hazardous material use sites. For this analysis, fuel-related sites include those identified as a historic automobile service station, historic or current UST site, aboveground storage tank site, or leaking UST site where a release of petroleum products has occurred. Even though a release has occurred at the 97 leaking UST sites identified in the Plan area, these sites are included as a fuel-related case (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. Historic site uses identified by the environmental database review include historic dry cleaning facilities and manufactured gas plant sites and activities at these sites may have historically resulted in soil and/or groundwater contamination that is typically undetected until a site is redeveloped.

At fuel-related sites, there would be the potential to encounter petroleum products in the soil and/or groundwater during construction. At former dry cleaning facilities there would be the potential to encounter volatile organic compounds,[148] particularly perchloroethylene. As a result, special handling of soil and groundwater could be required during construction and remediation could be required to ensure that the levels of contaminants left in place after construction would not pose an unacceptable health risk to the site users or result in degradation of water quality, as discussed in Impact HY-1 under Topic 15, Hydrology and Water Quality.

The identified historic use sites with the greatest potential to encounter hazardous materials are the four manufactured gas plant sites in or adjacent to the Plan area, highlighted on Figure 44 on page 168 and described as follows:

- PG&E San Francisco Gas Light Company, bounded by Howard, Fifth, and Tehama streets
- PG&E Station T, 765 Stevenson Street (this site is also identified as an environmental case below)
- Pacific Bell, 140 New Montgomery Street
- PG&E Gas Plant, near King and Third streets

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),[149]

[148] Volatile organic compounds are emitted as gases from certain solids or liquids, such as paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment (i.e., copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions).

[149] Polynuclear aromatic hydrocarbons (PAHs) are group of chemicals that are formed during the incomplete burning of coal, oil, gas, wood, garbage, or other organic substances, such as tobacco and charbroiled meat. PAHs usually occur naturally, but they can be manufactured. A few PAHs are used in medicines and to make dyes, plastics, and pesticides. Others are contained in asphalt used in road construction. They can also be found in substances such as crude oil, coal, coal tar pitch, creosote, and roofing tar. They are found throughout the environment in the air, water, and soil. They can occur in the air, either as vapors attached to dust or ash particles, or as solids in soil or sediment.

petroleum hydrocarbons, benzene, cyanide, metals, and phenols which could have remained at the site and affected soil and groundwater quality.[150] Construction within the boundaries of these former manufactured gas plant sites could encounter residues of these hazardous materials during earthmoving activities.

Environmental Cases. The Plan area includes 34 environmental cases where a release of hazardous materials has occurred. Variable information is available in the database review report regarding existing site conditions at the other environmental cases within the Plan area. Those with site-specific information are as follows:

- C&M Plating Works at 598 Sixth Street was a permitted treatment, storage, and disposal facility under RCRA. The facility has been closed, and in 2001, the California Department of Toxic Substances Control (DTSC) issued a RCRA Facility Assessment (RFA) for the property which concluded that no further action was needed for the four solid waste management units at the facility.[151] Lead was identified at elevated concentrations in the soil during 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 into the air were not likely. The former buildings at the facility were demolished by 2001, and the site was capped with a slab foundation. A new residential building was constructed on this site, at Sixth and Brannan Streets, in 2001.

- PG&E Station T, a former manufactured gas plant at 465 Stevenson Street, is an environmental case where polynuclear aromatic hydrocarbons, 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 Filipino Education Center at 824 Folsom Street is an environmental case where methane vapors have migrated to the site through subsurface soils. The vapors originate from the degradation of diesel at an adjacent property. The assessment report for this site recommended a vapor barrier under the building and a venting system, and the DTSC concurred with this recommendation.

- The property at 143 Second Street is a land disposal site[152] and the potential contaminants of concern include heating oil and fuel oil.

- The property at 178 Townsend Street is an environmental case that was cleaned up using a Brownfields grant. Soil contamination was identified (including lead contamination), and the site remediation included implementation of land use restrictions to preclude contact with contaminants that were left in place. Construction of a residential development at the site was completed in 2012.[153]

- The property at 241 Sixth Street is an environmental case that was remediated under DTSC's Voluntary Clean Up program. A preliminary endangerment assessment report completed in 1993

[150] U.S. Environmental Protection Agency, 1999. *A Resource for MGP Site Characterization and Remediation, Expedited Site Characterization and Source Remediation at Former Manufactured Gas Plant Sites.* May, 1999.
[151] Cal-EPA, Department of Toxic Substances Control, RCRA Facility Assessment Document for Former C&M Plating Works. March 29, 2001.
[152] A land disposal site is one that is regulated under the State Water Resources Control Board Land Disposal program. The sites included are those with regulated discharges to land for treatment, storage, or disposal in waste management units.
[153] U.S. Environmental Protection Agency, EPA Region 9 Brownfields Program RLF Success Stories, Townsend St, San Francisco, CA. June 2012.

found elevated levels of PAHs as well as arsenic, lead, and other metals in the soil. The previous structures have been demolished and a four-foot thick concrete cap with a vapor barrier was installed to prevent contact with contamination remaining in place. DTSC issued a deed restriction and entered into an operations and maintenance agreement with the property owner requiring maintenance of the cap. A new residential building was constructed at the site in 1995 and residential uses in this building start on the second floor. Annual inspections have shown that the property is in compliance with the deed restriction as recently as March 2013.

Artificial Fill. As summarized in the technical report, much of the Plan area is also underlain by artificial fill most likely obtained from dune sands and quarried rock (including serpentinite bedrock found in many areas of San Francisco). The fill also commonly includes industrial refuse and building debris from the 1906 earthquake and therefore commonly contains PAHs, heavy metals, oil and grease, and volatile organic compounds.

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 including sites subject to the Maher Program; sites with known contamination that are being addressed on a voluntary basis under the Voluntary Cleanup Program; and sites affected by a release from a UST being addressed under the Local Oversight Program. DPH also administers UST and facility closure requirements.

Maher Program. Article 22A of the *San Francisco Health Code (*also known as the Maher Ordinance), as amended in August 2013, requires, prior to issuance of a building permit, that the project sponsor 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 site contamination and level of exposure risk associated with the project. Based on that information, the project sponsor may be required to conduct soil and/or groundwater 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 improvements 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.

The limits of the Maher area within the Plan area are shown on Figure 44, p. 168, although sites outside of this area that meet the following criteria would also be subject to the Maher Program:

- on a lot either currently or previously either zoned for or permitted for industrial use;
- within 150 feet of any of the elevated portions of U.S. Highway 101, Interstate 80 or Interstate 280;

- on a lot known or suspected by DPH to contain hazardous substances in the soil and/or groundwater; or
- on a lot known or suspected by DPH to contain or to be within 100 feet of an underground storage tank.

Voluntary Remedial Action Program. DPH implements the Voluntary Remedial Action Program for the cleanup of properties contaminated by hazardous materials in San Francisco, as authorized by California Health and Safety Code Sections 101480 through 101490. This program addresses any site not covered under the Maher Program that may require site investigation or remediation (examples are old dry cleaners or a drug lab that may not be subject to a building permit, but may have contamination). Under this program, the responsible party at a contaminated site may request the SFDPH to review Phase I and II investigations and supervise the remedial action taken at a site, set up cleanup goals, and issue a letter or other document that certifies that the cleanup goals have been met. To obtain these oversight services, which streamline the site assessment and remediation process, the responsible party must enter into a remedial action agreement with DPH. Depending on the contaminants present or complexity of site issues, some sites may be more appropriately handled by a state agency such as the DTSC or RWQCB.

Local Oversight Program. Under the Local Oversight Program, DPH provides oversight for sites that have experienced a release from a UST, pursuant to Title 23 of the California Code of Regulations, Chapter 16. Under this program, the State Water Resources Control Board provides regulatory guidance and also reviews, comments on, and approves site assessment reports, feasibility studies, and work plans; reviews monitoring data to evaluate the effectiveness of the remediation strategy; and upon completion of remediation, issues a letter or other document that certifies that the cleanup goals have been met.

UST and Facility Closure. Article 21 of the *San Francisco Health Code* addresses closure of USTs and other hazardous materials handling facilities. To close a facility (including USTs), 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 of. 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, is 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.

Impacts Related to Exposure to Hazardous Materials

During Plan implementation, existing facilities that use hazardous materials would be demolished or renovated. Workers and the public could be exposed to hazardous materials during these activities and also

during construction within a site with contaminated soil or groundwater once an existing facility has been closed. Soil and groundwater could also require special handling/disposal procedures if a release has occurred at one of these facilities. Once new developments are constructed, site occupants and workers could potentially be exposed to any hazardous materials left in place. These impacts are discussed below.

Closure of hazardous materials handling facilities and USTs. Impacts related to closure of hazardous materials handling facilities (including USTs) would be less than significant with compliance with Article 21 of the *San Francisco Health Code* which specifies procedures ensure that must be followed when a hazardous materials handling facility is closed. Compliance would include preparation and implementation of a closure plan along with implementation of any required sampling. Where a release is discovered, investigation and cleanup could be required under the oversight of the Local Oversight Program. In this case, a corrective action plan may be required and DPH would determine the adequacy of the plan and may also request state or federal agency review. The DPH findings would be published for public review. Alternatively, a UST could be abandoned in place if removal were infeasible.

Construction in areas within contaminated materials. Based on the number of historic and current land uses in the Plan area that involved hazardous materials, the presence of earthquake fill throughout most of the area, and the number of duel-related and environmental cases within the area, there is a high potential to encounter soil and groundwater contamination during construction activities associated with implementation of the Plan. Without implementation of proper precautions, workers or the community could be exposed to hazardous materials during construction activities such as excavation, grading, and dewatering, or during related site investigation and remediation. Site occupants and workers could also be exposed to hazardous materials if these materials were left in place. Vapors, if present, could also accumulate in structures constructed as a result of subsequent development within the Plan area, causing nuisance vapors, adverse health effects, or flammable or explosive conditions. However, implementation of the requirements of the Maher Program, Voluntary Remedial Action Program and Local Oversight Program, described above, would ensure that impacts associated with construction within contaminated soil and groundwater would be less than significant by the requirement to conduct appropriate assessment of the potential for contaminated soil or groundwater, and requiring implementation of site investigation and remediation activities should the potential for contamination be identified.

Disposal of contaminated materials. 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.

As noted in Topic 14, Geology and Soils, the groundwater level in the Plan area is expected at about 5 to 25 feet feet below ground surface in most of the Plan area. Because individual development projects that could be proposed and approved pursuant to the proposed zoning controls would include construction

of foundations and below-ground parking garages that could extend below this depth, dewatering likely would be necessary for some projects during construction. If any groundwater produced during construction dewatering required discharge to the combined sewer system, the discharge would be conducted in compliance with Article 4.1 of the *San Francisco Public Works Code*, as supplemented by Order No. 158170, which specifies conditions and criteria for discharge of groundwater (see Topic 15, Hydrology and Water Quality for further discussion of Article 4.1 and Order No. 158170). This article also prohibits discharge of hazardous wastes into the combined sewer system. The discharged water would have to be sampled during dewatering to demonstrate that discharge limitations in the ordinance are met. If the groundwater does not meet discharge requirements, on-site pretreatment may be required before discharge to the sewer system. If standards could not be met with on-site treatment, off-site disposal by a certified waste hauler would be required. Long-term dewatering could also be required to alleviate hydrostatic pressure on below-ground features such as parking garages. Much of the groundwater produced during this dewatering could be put to beneficial reuse in the buildings for non-potable purposes (such as toilet flushing) as described in Topic 15, Hydrology and Water Quality. However, some of it could also be discharged to the combined sewer in accordance with Article 4.1 of the *San Francisco Public Works Code*, as supplemented by Order No. 158170 as described above.

With implementation of the regulatory requirements described above, impacts related to the discharge of contaminated groundwater would be less than significant.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, as well as implementation of the proposed open space improvements, would be subject to the same potential to encounter subsurface contaminated soil and groundwater as would construction of development projects, and would also be subject to the same regulations that would reduce impacts to a less-than-significant level.[154] Therefore, impacts related to potential soil or groundwater contamination would also be less than significant for the proposed street network changes and open space improvements.

Impact HZ-3: Demolition and renovation of buildings as part of individual development projects implemented pursuant to the Plan could potentially expose workers and the public to hazardous building materials including asbestos-containing materials, lead-based paint, polychlorinated biphenyls (PCBs), bis (2-ethylhexyl) phthalate (DEHP), and mercury, or result in a release of these materials into the environment during construction. (Less than Significant with Mitigation)

Because the Plan area was nearly completely rebuilt during by the first two decades of the 20th century, after the 1906 earthquake and fire, many of the existing buildings may contain hazardous building materials, including asbestos-containing materials, lead-based paint, and electrical equipment containing

[154] *Health Code* Article 22A contains a provision in Sec. 22A.17 specifically to ensure the application of this article to construction on City property.

PCBs. Most of the existing buildings could also include fluorescent light ballasts containing PCBs or DEHP, and fluorescent light tubes containing mercury vapors. All of these materials were commonly employed until the second half of the 20th century. If a building is demolished or renovated as part of a development project implemented pursuant to the Plan, workers and the public could be exposed to hazardous building materials if they were not abated prior to demolition. However, as discussed below, there is a well-established regulatory framework for the abatement of asbestos-containing materials and lead-based paint, and impacts related to exposure to these hazardous building materials would be less than significant with compliance with regulatory requirements. Impacts related to exposure to other hazardous building materials would be potentially significant.

Asbestos Containing Materials. Section 19827.5 of the *California Health and Safety Code* requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable Federal regulations regarding hazardous air pollutants, including asbestos. The BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and must be notified ten days in advance of any proposed demolition or abatement work. Notification includes the following:

- the names and addresses of operations and persons responsible;
- a description and location of the structure to be demolished/altered including size, age and prior use;
- the approximate amount of friable asbestos that would be removed or disturbed;
- the scheduled starting and completion dates of demolition or abatement;
- the nature of the planned work and methods to be employed;
- the procedures to be employed to meet BAAQMD requirements; and
- the name and location of the waste disposal site to be used.

The District randomly inspects asbestos removal operations. In addition, the BAAQMD will inspect any removal operation when a complaint has been received.

The local office of the State Occupational Safety and Health Administration (Cal-OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in 8CCR1529 and 8CCR341.6 through 341.17 where there is asbestos-related work involving 100 square feet or more of asbestos-containing material. Asbestos removal contractors must be certified as such by the Contractors Licensing Board of the State of California. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest which details the hauling of the material from the site and the disposal of it. Pursuant to California law, DBI would not issue the required permit until the applicant has complied with the notice and abatement requirements described above.

These regulations and implementation of the required procedures during the development process would ensure that any potential impacts due demolition or renovation of structures with asbestos-containing materials would be less than significant.

Lead-based Paint. Work that could result in disturbance of lead paint must comply with Section 3425 of the *San Francisco Building Code*, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Where there is any work that may disturb or remove lead paint on the exterior of any building built prior to 1979, Section 3425 requires specific notification and work standards, and identifies prohibited work methods and penalties. (The reader may be familiar with notices commonly placed on residential and other buildings in San Francisco that are undergoing re-painting. These notices are generally affixed to a drape that covers all or portions of a building and are a required part of the Section 3425 notification procedure.)

Section 3425 applies to the exterior of all buildings or steel structures on which original construction was completed prior to 1979 (which are assumed to have lead-based paint on their surfaces, unless demonstrated otherwise through laboratory analysis), and to the interior of residential buildings, hotels, and childcare centers. The ordinance contains performance standards, including establishment of containment barriers, at least as effective at protecting human health and the environment as those in the U.S. Department of Housing and Urban Development Guidelines (the most recent Guidelines for Evaluation and Control of Lead-Based Paint Hazards) and identifies prohibited practices that may not be used in disturbances or removal of lead-based paint. Any person performing work subject to the ordinance shall, to the maximum extent possible, protect the ground from contamination during exterior work; protect floors and other horizontal surfaces from work debris during interior work; and make all reasonable efforts to prevent migration of lead paint contaminants beyond containment barriers during the course of the work. Clean-up standards require the removal of visible work debris, including the use of a High Efficiency Particulate Air Filter (HEPA) vacuum following interior work.

The ordinance also includes notification requirements and requirements for signs. Prior to the commencement of work, the responsible party must provide written notice to the Director of DBI, of the address and location of the project; the scope of work, including specific location within the site; methods and tools to be used; the approximate age of the structure; anticipated job start and completion dates for the work; whether the building is residential or nonresidential, owner-occupied or rental property; the dates by which the responsible party has fulfilled or will fulfill any tenant or adjacent property notification requirements; and the name, address, telephone number, and pager number of the party who will perform the work. Further notice requirements include a Posted Sign notifying the public of restricted access to the work area, a Notice to Residential Occupants, Availability of Pamphlet related to protection from lead in the home, and Notice of Early Commencement of Work (by Owner, Requested by Tenant), and Notice of Lead Contaminated Dust or Soil, if applicable. Section 3425 contains provisions regarding inspection and sampling for compliance by DBI, as well as enforcement, and describes penalties for non-compliance with the requirements of the ordinance.

Demolition or renovation of other structures that include lead-containing materials on the interior could also result in exposure of workers and the public to lead. However, these activities would be subject to the Cal/OSHA Lead in Construction Standard (8 CCR Section 1532.1). This standard requires development and implementation of a lead compliance plan when materials containing lead would be disturbed during construction. The plan must describe activities that could emit lead, methods that will be used to comply with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. Cal/OSHA would require 24-hour notification if more than 100 square feet of materials containing lead would be disturbed.

Implementation of procedures required by Section 3425 of the *Building Code* and the Lead in Construction Standard would ensure that potential impacts of demolition or renovation of structures with lead-based paint would be less than significant.

Other Hazardous Building Materials. Other hazardous building materials that could be present within the Plan area include electrical transformers that could contain PCBs, fluorescent light ballasts that could contain PCBs or DEHP, and fluorescent light tubes that could contain mercury vapors. Disruption of these materials could pose health threats for construction workers if not properly disposed of, a potentially significant impact. However, implementation of **Mitigation Measure M-HZ-3, Hazardous Building Materials Abatement**, would require that the presence of such materials be evaluated prior to demolition or renovation and, if such materials were present, that they be properly handled during removal and building demolition or renovation. This would reduce the potential impacts of exposure to these hazardous building materials to a less-than-significant level.

Mitigation Measure

M-HZ-3: **Hazardous Building Materials Abatement.** The project sponsor of any development project in the Plan area shall ensure that any building planned for demolition or renovation is surveyed for hazardous building materials including, electrical equipment containing polychlorinated biphenyl (PCBs), fluorescent light ballasts containing PCBs or bis(2-ethylhexyl) phthalate (DEHP), and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Light ballasts that are proposed to be removed during renovation shall be evaluated for the presence of PCBs and in the case where the presence of PCBs in the light ballast cannot be verified, they shall be assumed to contain PCBs, and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

Level of Significance after Mitigation

Implementation of Mitigation Measure M-HZ-3 would reduce impacts related to exposure to hazardous building materials during implementation individual development projects pursuant to the Plan to a less-than-significant level.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, as well as implementation of the proposed open space improvements, would not involve the demolition of existing structures and therefore would not result in the exposure to hazardous building materials. Therefore, impacts related to exposure to hazardous building materials would be less than significant for the proposed street network changes and open space improvements.

Impact HZ-4: Development under the Plan and the proposed street network changes would not result in adverse effects related to hazardous emissions or handling of acutely hazardous materials within one-quarter mile of an existing school. (Less than Significant)

The State of California defines extremely hazardous materials in Section 25532 (2)(g) of the Health and Safety Code. Construction that could occur under the proposed Plan would use only common hazardous materials: paints, solvents, cements, adhesives, and petroleum products (such as asphalt, oil, and fuel), and none of these materials is considered extremely hazardous. Further, none of the new land uses that could be developed as a result of Plan implementation would be anticipated involve the use of extremely hazardous materials.

The California Air Resources Board (ARB) and the BAAQMD have identified toxic air contaminants that constitute hazardous air emissions. There are several public schools within the Plan area or within one-quarter mile, including Bessie Carmichael Middle School/Filipino Education Center, Bessie Carmichael Elementary School, and Bessie Carmichael Early Education School and there are a number of child care centers, as well. However, none of the new land uses that could be developed as a result of Plan implementation would be expected to involve emissions of toxic air contaminants as identified by the ARB and BAAQMD, with the exception of diesel particulate matter (DPM) from operation of diesel-powered backup generators in high-rise buildings. (Effects of DPM emissions, including construction emissions, will be addressed in the EIR's analysis of Air Quality.)

With respect to DPM, BAAQMD's Regulation 2, Rule 5, New Source Review, would require a health risk analysis for any diesel generators near sensitive receptors such as schools. For any individual project with an excess cancer risk of greater than 1 in a million, or non-cancer hazard index greater than 0.2, this rule would require the project sponsor to implement Best Available Control Technology to reduce DPM emissions. The rule would also prohibit the granting of permits for generators with DPM emissions that would exceed the threshold of 10 excess cancer cases in a million or a non-cancer index of 1.0. With compliance with these regulatory requirements, enforced through the BAAQMD permitting process, impacts related to hazardous emissions or the use of extremely hazardous materials within one-quarter mile of a school would be less than significant during operation of individual development projects implemented pursuant to the Plan. Analysis of air quality impacts will be included in the EIR.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, as well as any construction associated with the proposed open space improvements, would result in temporary DPM emissions during construction, and the effects of construction emissions will be addressed in the EIR's analysis of Air Quality. Neither the proposed street network changes nor the open space improvements would include the construction of any new structures that would use diesel generators or other features that would involve hazardous emissions or the use of extremely hazardous materials. Therefore, once construction is completed, proposed street network changes and open space improvements would not have the potential to result in effects related to hazardous emissions or the use of extremely hazardous materials within one-quarter mile of a school and this impact would be less than significant.

Mitigation: None required.

Impact HZ-5: Development under the Plan and the proposed street network changes would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

Occupants of new buildings that would be constructed as a result of implementation of the Plan could contribute to congestion if an emergency evacuation of the greater Downtown were required. However, Section 12.202(e)(1) of the *San Francisco Fire Code* requires that all owners of high-rise buildings (over 75 feet) "shall establish or cause to be established procedures to be followed in case of fire or other emergencies. All such procedures shall be reviewed and approved by the chief of division." Additionally, project construction would have to conform to the provisions of the *Building Code* and *Fire Code* which require additional life-safety protections for high-rise buildings.

Although not adopted by legislative action, the City has a published Emergency Response Plan, prepared by the Department of Emergency Management as part of the City's Emergency Management Program, which also includes plans for hazard mitigation and disaster preparedness and recovery.[155] The Emergency Response Plan identifies hazards to which San Francisco is particularly susceptible as earthquake, hurricane, tsunami, flood, winter storm, and act 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 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

[155] San Francisco Department of Emergency Management, *City and County of San Francisco Emergency Response Plan,* December 2009. Available at: http://www.sfdem.org/Modules/ShowDocument.aspx?documentid=1154. Reviewed September 9, 2011.

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.

The Emergency Response Plan contains 16 "annexes" (similar to appendices), consistent with a federally established framework, that cover topics including firefighting, public works and engineering, mass casualty care, and earthquakes, among numerous others. The Earthquake Annex, in particular, sets forth planning assumptions for a series of earthquakes of varying magnitudes on different faults, and sets forth procedures for assessment of damage and injuries, and operational response and strategies in the event of a major earthquake.

Development pursuant to the Plan would increase both the residential population and, in particular, the daytime employment population in the City that would be subject to a potential disaster, including a major earthquake or any of the other hazards identified in the Emergency Response Plan. With regard to earthquake hazards, in particular, the Plan area, like other parts of San Francisco and the Bay Area, is subject to ground shaking from potentially large earthquakes on the San Andreas and Hayward faults, as well as on other faults in the region as discussed in Topic 14, Geology and Soils. Relatively more of the Plan area is subject to stronger groundshaking intensity than some other parts of the City because much of the Plan area is built on fill materials. However, new buildings that would be developed pursuant to the Plan would be subject to more stringent building and structural standards than most existing buildings, particularly older structures. Therefore, persons living and working in new buildings would be relatively safer than those in some older existing buildings.[156] However, during a major earthquake, glass, and in some cases building cladding, may endanger those on the streets and sidewalks. Bridges leading to and from San Francisco may be damaged, as was the case with the Bay Bridge east span in the 1989 Loma Prieta Earthquake (although the new east span now open will perform better in an earthquake). Bay Area Rapid Transit (BART), Muni, and Caltrain rail service could be interrupted, and power outages would likely occur. However, the Plan, which would increase the potential allowable development, would not obstruct implementation of the City's Emergency Response Plan, nor would it necessarily interfere with emergency evacuation planning. With compliance with the *San Francisco Fire Code* and implementation of the Emergency Response Plan, as discussed above, impacts related to interference with emergency response or evacuation plans would be less than significant.

Proposed Street Network Changes

Implementation of the proposed street network changes could slightly affect the capacity of existing streets where the number of lanes would be reduced by construction of wider sidewalks, separated cycle tracks, and sidewalk bulbs. These changes to the street network would not obstruct implementation of the City's emergency response plan or interfere with emergency evacuation planning, and this impact would be less than significant.

[156] *San Francisco Building Code* requirements with respect to tall buildings are discussed in Topic E.14, Geology, Soils, and Seismicity.

Mitigation: None required.

Impact HZ-6: Development under the Plan and the proposed street network changes would not expose people or structures to a significant risk of loss, injury or death involving fires. (Less than Significant)

San Francisco ensures fire safety primarily through provisions of the *San Francisco Building Code* and *Fire Code*. Existing and new buildings are required to meet standards contained in these codes. The final building plans for any new residential project greater than two units and multi-story developments would be reviewed by the San Francisco Fire Department (as well as DBI) to ensure conformance with these provisions, and construction of high-rise buildings (taller than 75 feet), must also conform to the code provisions that require additional life-safety protections for such structures. Construction that would occur as a result of implementation of the Plan would be required to conform to these standards, which (depending on the building type) may also include development of an emergency procedure manual and an exit drill plan.

The proposed Plan, an area plan that would include adoption of changes in the City's *Planning Code* and *General Plan*, would not directly result in any direct physical changes. Although the Plan would facilitate development projects within the Plan area, all such development would occur in the developed area of San Francisco, where fire, medical, and police services are available and provided. The existing street grid provides ample access for emergency responders and egress for residents and workers, and the proposed Plan would neither directly nor indirectly alter that situation to any substantial degree. Therefore, the Plan would not directly or indirectly result in any additional exposure of residents or workers to fire risk. Any development and/or redevelopment in the Plan area would occur in a fully urbanized area, which lacks the "urban-wildland interface" that tends to place new development at risk in undeveloped areas of California. Therefore, the Plan would not expose people or structures to a significant risk of loss, injury or death involving fires.

Compliance with the *San Francisco Building Code* and *Fire Code* through the City's ongoing permit review process would ensure that potential fire hazards related to development activities would be minimized. Therefore, this impact would be less than significant.

Proposed Street Network Changes and Open Space Improvements

Repaving, construction of wider sidewalks and sidewalk bulbs, and installation of mid-block traffic signals that would be conducted as part of the proposed street network changes, as well as implementation of the proposed open space improvements, would not be anticipated to result in substantial fire hazards, and effects would be less than significant for the proposed street network changes and open space improvements.

Mitigation: None required.

Impact C-HZ-1: Development under the Plan and the proposed street network changes, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would not result in a considerable contribution to cumulative impacts related to hazardous materials. (Less than Significant)

Hazardous materials impacts related to implementation of individual development projects pursuant to the Plan could result from use of hazardous materials, conducting construction activities within potentially contaminated soil and groundwater, and demolition of structures that contain hazardous building materials. These impacts would be primarily restricted to the Plan area and immediate vicinity; therefore, the geographic scope for cumulative impacts related to hazards includes the Plan area and immediate vicinity.

As discussed above, implementation of the Plan would not result in any significant impacts with respect to hazards or hazardous materials that could not be mitigated to a less-than-significant level, with the possible exception of interference with emergency response, which will be further analyzed and included in the EIR. All cumulative development in San Francisco would be subject to the same regulatory framework as would development in the Plan area, and these existing regulations would serve to avoid any significant cumulative impacts. Any impacts of cumulative development, such as those related to hazardous building materials in structures or soil contamination, would be investigated and, as necessary, abated on a project-by-project basis. Therefore, no significant cumulative impacts that could not be mitigated to a less-than-significant level are anticipated, and the Plan, therefore, would not contribute considerably to any such cumulative impacts.

Neither the Plan, the proposed street network changes, nor subsequent development within the Plan area is anticipated to interfere with an adopted emergency response plan or emergency evacuation planning.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

Impact ME-1: Development under the Plan and the proposed street network changes would not result in the loss of availability of a known mineral resource or locally-important mineral resource recovery. (No Impact)

All land in the City of San Francisco, including the Plan area, is designated by the CGS as Mineral Resource Zone Four (MRZ-4) under the Surface Mining and Reclamation Act of 1975. The MRZ-4 designation indicates that adequate information does not exist to assign the area to any other MRZ; thus, the area is not one designated to have significant mineral deposits. The majority of the Plan area has previously been developed, and future evaluations of the presence of minerals in the Plan area would therefore not be affected by the developments proposed in the Plan. Further, developments included in the Plan, including the proposed street network changes, would not have an impact on any off-site operational mineral resource recovery sites.

In addition, because the Plan area has been designated as having no known mineral deposits, neither the Plan, nor subsequently proposed development projects therein, nor the proposed street network changes would result in the loss of availability of a locally- or regionally- important mineral resource, and would have no impact on mineral resources.

Mitigation: None required.

Impact ME-2: Development under the Plan and the proposed street network changes would not result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (Less than Significant)

The Plan would be considered a Type 2 Eco-District,[157] which is defined by the City Planning Department as a district "characterized by its mix of land uses and is comprised of undeveloped, underdeveloped, and developed land owned by different property owners implementing development projects under different time frames." Essentially, this type of Eco-District would focus on aligning development timeframes to maximize opportunities to meet environmental goals, with the overarching goals to focus on neighborhood-level sustainability through district-serving water, energy conservation and/or waste reduction projects.

In order to implement the Plan as an Eco-District, notable implementation measures associated with Plan include 1) establishing a Central SoMa Eco-District Task Force charged with establishing goals and objectives for the Eco-District; 2) performing a district assessment to evaluate opportunities to address energy, water, community identity, habitat and ecosystem function, and materials management as well as maintain consistency with the U.S. Environmental Protection Agency and SFPUC district utility analysis measures; 3) establishing a Sustainability Management Association (SMA) to govern Eco-District

[157] An "Eco-District" provides a way to achieving ambitious sustainability goals at the neighborhood or district level. Such districts use a set of performance metrics to guide and shape such projects and to monitor their progress over time. For a complete definition of Eco-Districts, please refer to Chapter 7, *District Sustainability*, in the Draft Central Corridor Plan for Public Review available: http://www.sf-planning.org/ftp/files/Citywide/Central_Corridor/Central-Corridor-Plan-DRAFT-FINAL-web.pdf; accessed May 20, 2013.

implementation; and 4) developing an implementation and funding strategy for priority projects, policies and programs.

Throughout the past decade, there have been several federal, State, and citywide policies and measures that have been enacted aimed at promoting energy efficiency and reducing current demands on non-renewable resources. For example, the federal Energy Policy Act of 2005 allows consumers and businesses to attain federal tax credits for purchasing fuel-efficient appliances and products as well as buying hybrid vehicles and building energy-efficient buildings. Senate Bill 1389, passed in 2002, requires the California Energy Commission to biannually develop an integrated energy plan for electricity, natural gas, and transportation fuels, for the California Energy Report. The draft California Energy Report calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. California's Building Energy Efficiency Standards (set forth in Title 24, Part 6, of the California Code of Regulations) last updated August 2009 (2013 Standards will go into effect in July 2014), were established to regulate energy consumed in buildings for heating, cooling, ventilation, water heating, and lighting. Title 24 is implemented through the local planning and permit process. San Francisco adopted a Green Building Code in 2008 and, in 2010, adopted the State of California's *Green Building Standards Code* ("CALGreen"), with modifications (2013 updates went into effect in January 2014). The City's Green Building Code is codified in Chapter 13C of the *San Francisco Building Code*. Chapter 13C, which is to be used in conjunction with the 2013 California Green Building Standards Code, places more stringent energy, materials, and construction debris management requirements on new residential and commercial buildings than Title 24. For example, new residential buildings are to achieve at least 75 GreenPoints from the GreenPoints Single Family New Construction Checklist or the GreenPoints Multifamily New Construction Checklist, or LEED® "Silver" certification. New large commercial buildings must achieve LEED® "Gold" certification. Chapter 13C, along with Chapter 13A and with Chapter 12A of the *San Francisco Housing Code*, also requires projects to meet minimum standards for water conservation (in accordance with the City's Commercial and Residential Water Conservation Ordinances). As noted above, development projects including 1,000 square feet or more of new or modified landscaping would be required to comply with the Water Efficient Irrigation Ordinance (adopted as *San Francisco Administrative Code* Chapter 63 and the SFPUC Rules & Regulations Regarding Water Service to Customers) that establishes limits on water consumption for the purpose of irrigating landscape areas. For commercial buildings in excess of 25,000 square feet, new projects must reduce potable water use for landscaping by 50 percent and potable water use within the building by 30 percent, compared to conventional construction as set forth in the federal Energy Policy Act of 1992.

Approval of the Plan would not result in wasteful consumption of fuel, water, or energy because these planning decisions would have no direct effect on the environment. These approvals could, however, cause an indirect effect relating to the consumption of fuel, water, or energy because any future development that would occur consistent with them would cause demands on these resources. However, any such future project would be infill development located near existing modes of public transportation, and existing water supply and energy infrastructure. Further, future development projects in the Plan

area would be subject to the most current energy and water efficiency standards in effect at the time the project is proposed and would be subject to the established performance metrics set forth in the Eco-District guidelines. Therefore, the implementation of the Plan would not result in wasteful consumption of fuel, water, or energy and this impact would be less than significant.

Proposed Street Network Changes

The proposed street network changes are expressly intended to increase the attractiveness and usability of alternative modes of travel to automobiles, such as walking, bicycling, and transit. Therefore, the proposed street network changes, over time, would likely result in an incremental decrease in fuel use, and thus in energy use, in the area affected by these improvements. Therefore, the proposed street network changes would not result in a wasteful consumption of fuel, water, or energy, and this impact would be less than significant.

Mitigation: None required.

Impact C-ME-1: Development under the Plan and the proposed street network changes, in combination with other past, present or reasonably foreseeable projects would result in less-than significant impacts to mineral and energy resources. (Less than Significant)

The geographic context for cumulative mineral and energy impacts is the City of San Francisco. No known minerals exist in the Plan area or in the vicinity, as all of the City of San Francisco falls within MRZ-4, as described above. Therefore, neither the Plan nor the proposed street network changes would contribute to any cumulative impact on mineral resources.

All development that would occur under the Plan would be required to comply with all State and local requirements concerning energy and water efficiency, including regulations and provisions that would be established by the Eco-District Task Force and SMA. The proposed street network changes would likewise be subject to applicable efficiency requirements. Other projects proposed in the area, including the 5M project, University of California San Francisco, Harrison Gardens, Golden State Warriors Arena, the 706 Mission Street, and the 598 Brannan Street project, likewise would be subject to the same or similar requirements. Therefore, the Plan, combined with past, present, and reasonably foreseeable future projects in the vicinity, would not result in wasteful consumption of fuel, water, or energy and the cumulative impact on energy resources would be less than significant.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
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?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
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)?	☐	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
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?	☐	☐	☐	☒	☐

Impact AF-1: Development under the Plan and the proposed street network changes would not (a) convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; (b) conflict with existing zoning for agricultural use, or a Williamson Act contract; (c) conflict with existing zoning for or cause rezoning of forest land or timberland; (d) result in the loss of forest land or conversion of forest land to non-forest use; or (e) involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use. (No Impact)

The Plan area is located within an urban area of the city that is used for the mix of residential, commercial, industrial, and other uses described in Topic 1, Land Use and Land Use Planning. None of the land in the Plan area is designated for agricultural or forest-related uses.

California Department of Conservation, under the Division of Land Resource Protection, identifies in the Farmland Mapping and Monitoring Program (FMMP) that the Plan area as *Urban and Built-Up Land,* and not as any of the "Farmland" classifications,[158] Therefore, none of the individual components of the Plan or the Plan as a whole would convert Farmland to non-agricultural use. The Plan area is not zoned for

[158] The five agricultural land classifications ("Farmland") include Prime Farmland, which consists of the land best able to sustain long-term crop production; Farmland of Statewide Importance, which are lands with similar land use, irrigation system and physical characteristics as prime farmland but with minor shortcomings such as steeper soils; Unique Farmland, which consists of lands with lesser quality soils but that are used to produce California's leading agricultural cash crops; Farmland of Local Importance, which are designated by individual counties; and Grazing Land, which consists of lands most suited for livestock grazing. Available online at *www.consrv.ca.gov*. Accessed on May 20, 2013.

agricultural use and is not subject to a Williamson Act contract.[159] Therefore, the Plan, including the proposed street network changes, would not conflict with any such zoning or contracts. In addition, the Plan area does not contain any forest land, and the Plan would not result in the loss of forest land or conversion of forest land to non-forest use. The Plan area does not contain any farmland or forest land, nor would it involve other changes that, due to their location or nature, would result in conversion of farmland or forest land. Likewise, the proposed street network changes would not adversely affect agricultural or forest land.

Mitigation: None required.

Impact C-AF-1: Development under the Plan and the proposed street network changes, in combination with other past, present or reasonably foreseeable projects would not result in impacts to agricultural and forest resources. (No Impact)

As described above, the individual components of the Plan or the Plan as a whole would have no impact with respect to agriculture and forestry resources; therefore, neither the Plan nor the proposed street network changes would contribute to any cumulatively considerable impact to agricultural and forest resources.

Mitigation: None required.

Topics:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*	*Not Applicable*
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?	☒	☐	☐	☐	☐
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.)	☒	☐	☐	☐	☐
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐

[159] Ibid.

The Plan and subsequent developments could result in adverse impacts to the environment with respect to land use, aesthetics/visual quality, air quality, noise, cultural resources, transportation and circulation, wind and shadow, wastewater, and sea level rise. These topics will be further analyzed and included in the EIR. Mitigation measures have been included in this Initial Study to reduce potential impacts related to biological resources and hazardous materials to a less-than-significant level.

The Plan would not have cumulatively considerable impacts on topics that are fully analyzed in this Initial Study, as discussed under each applicable environmental topic. A cumulative impacts analysis for those topics not addressed in this Initial Study will be provided in the EIR.

Potential adverse effects on human beings have been considered as a part of the analysis of individual environmental topics in this Initial Study. The individual components of the Plan and the Plan as a whole would not result in environmental impacts that would cause substantial adverse effects on humans. A discussion of effects on human beings for those topics not addressed in this Initial Study will be provided in the EIR.

E. Mitigation Measures and Improvement Measures

Although the following mitigation measures relate to topics that will not receive additional analysis in the EIR, the EIR will contain a Mitigation Measures chapter that describes all mitigation measures for the Plan, including those listed below. The mitigation measures listed below are necessary to reduce potential hazardous materials impacts to less-than-significant levels and would be required to be implemented by project sponsors of subsequent development project in the Plan area, as applicable.

M-BI-1: **Pre-Construction Bat Surveys:** Conditions of approval for building permits issued for construction within the Plan area shall include a requirement for pre-construction special-status bat surveys when large trees are to be removed or underutilized or vacant buildings are to be demolished. If active day or night roosts are found, a qualified biologist (i.e., a biologist holding a CDFW collection permit and a Memorandum of Understanding with the CDFW allowing the biologist to handle and collect bats) shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition. A no disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer would necessary.

M-HZ-3: **Hazardous Building Materials Abatement.** The project sponsor of any development project in the Plan area shall ensure that any building planned for demolition or renovation is surveyed for hazardous building materials including PCB-containing electrical equipment, fluorescent light ballasts containing PCBs or DEHP, and fluorescent light tubes containing mercury vapors. These materials shall be removed and properly disposed of prior to the start of demolition or renovation. Old light ballasts that are

proposed to be removed during renovation shall be evaluated for the presence of PCBs and in the case where the presence of PCBs in the light ballast cannot be verified, they shall be assumed to contain PCBs, and handled and disposed of as such, according to applicable laws and regulations. Any other hazardous building materials identified either before or during demolition or renovation shall be abated according to federal, state, and local laws and regulations.

F. Public Notice and Comment

The Planning Department prepared and distributed 1) a Notice of Availability of a NOP of an EIR and Notice of Public Scoping Meeting for the Central SoMa Plan on April 24, 2013.[160] The notices were mailed to adjacent cities and counties, other public agencies and interested parties. A public scoping meeting was held at the Mendelsohn House, 737 Folsom Street (within the Plan area) on May 15, 2013, at which oral comments from the public were received and transcribed. At the public meeting four people commented. Written comments regarding the scope of the EIR were accepted for a standard 30-day period from April 24, 2013 until May 24, 2013. Seventeen total comment letters were received, of which two arrived after the close of the comment period.

Comments on the following topics were raised during the public scoping period and are addressed in this Initial Study or will be addressed in the EIR:

- **Project Objectives/Goals** (specific expansions and revisions to project objectives statements are recommended);
- **Project Description** (specific street improvements within the Plan area including sidewalk widening, additional signals and signage are suggested; the Plan should include policies for local hire and training goals; the Plan should increase residential space instead of office space; the Planning Department should consider expansion/enhancement of the Youth and Family Special Use District; and increased height or floor plate limits for specific properties were requested);
- **Land Use and Planning** (the Plan would isolate the Plan area from neighborhoods to the south);
- **Aesthetics** (the Plan has the potential to impact the character of the neighborhood and to result in visually unappealing elements; the EIR should analyze effects to existing views);
- **Population and Housing** (the EIR should evaluate potential displacement impacts to residences and businesses, the impact on affordable housing needs and obligations, and the impact on local employment opportunities; the Plan could result in loss of land and jobs from rezoning areas that currently allow PDR uses);
- **Transportation and Traffic** (analysis of large events at Moscone Center should be included; impacts to cyclists and pedestrians should be evaluated, and specifically impacts to the Yerba Buena Neighborhood and pedestrians with limited mobility; the EIR should evaluate impacts to local and State transportation facilities, public transit facilities and projects [e.g., Caltrain], and should consider proposed Golden Gate Transit bus route changes);

[160] The Plan was known as the Central Corridor Plan at the time of the scoping meeting.

- **Greenhouse Gases** (the Plan could increase the City's carbon footprint);
- **Shadow, Wind** (the EIR should evaluate the potential for the Plan to result in increased shadow and wind impacts);
- **Recreation** (the EIR should evaluate the direct and indirect impacts to parks and recreation facilities within and near the Plan area, such as South Park, Yerba Buena Gardens, Gene Friend Recreation Center and Victoria Manalo Draves Park);
- **Public Services** (the EIR should evaluate cumulative impacts to public restrooms);
- **Cumulative Impacts** (the EIR analysis should include time frames for major projects including the Central Subway); and
- **Alternatives** (mid-range build out zoning alternatives are suggested).

G. 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.

Sarah B. Jones
Environmental Review Officer
for
John Rahaim
Director of Planning

DATE Feb 10, 2014

H. Initial Study Preparers

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APPENDIX C
Historical Resources

TABLE APX-C-1:
HISTORIC ARCHITECTURAL RESOURCES IN THE PLAN AREA AND VICINITY

Blk	Lot	Address	Year Built	Name	In PA	LM	Ex. Dist.	Dist. Rat.	Art 11	Con. Dist.	HT	NR Dist.	Rat.	Prior Svy.	Rat.	HR	Pot. Dist.	C?	Final Rating	Architect (if known)
3707	002	20 Second	1914	Schwabacher Bldg.	N				IV	N-S			3S			C*				
3707	004	36 Second	1907	Morgan Bldg.	N				IV	N-S						C				Wm D. Shea
3707	005	42 Second	1907		N				IV	N-S						C				
3707	006	48 Second	1907	Kentfield & Esser Bldg.	N				IV	N-S						C				A.V. Clark
3707	007	52 Second	1907		N				IV	N-S						C				E.A. Bozio
3707	008	60 Second	1906		N				IV	N-S						C				S. Schnaittacher
3707	009	70 Second	1906		N				IV	N-S						C				Salfield & Kohlberg
3707	010	76 Second	1908		N				IV	N-S						C				Meyers & Ward
3707	012	90 Second	1906		N				IV	N-S						C				
3722	001	118 Second	1907	Stevenson Bldg.	N				IV	N-S						C				E.J. Vogel
3722	002	120 Second	1907		N				IV	N-S						C				Sutton and Weeks
3722	003	132 Second	1907	Morton Cook Bldg.	N				I	N-S		SH	1D			B				John Cotter Pelton
3722	004	144 Second	1908;'82	Bothin Real Estate Bldg.	N				IV	N-S			6X			C				J.A. Ettler
3722	005	156 Second	1908	Byron Jackson Bldg.	N				IV	N-S		SH	1D			C				
3722	016	168 Second	1907		N				IV	N-S		SH	1D			C				Hermann Barth
3722	019	182 Second	1909	Barker, Knickerbocker Bostwick Bldg.	N				IV	N-S		SH	1D			C				
3735	055	240 Second		Marine Firemen's Union	N									TC	3S					
3735	008	282 Second	1907	Planters Hotel	N									TC	3S					
3763	001	400 Second	1917		Y									SoM	3CS					
3775	001	500 Second	1919	Auerbach Bldg.	Y		SE	C						SoM	3D	C				
3775	002	512 Second	1909	Dahlia Loeb Warehouse	Y		SE	C				SE	2D	SoM	3D	C*				Sahlfield & Kolberg
3775	004	522 Second	1923	Macdonald & Kahn Bldg.	Y		SE	C				SE	2D	SoM	3D	C				Samuel Heiman
3775	005	544 Second	1923	Kohler Company Bldg.	Y		SE	C				SE	2D	SoM	3D	C				Samuel Heiman
3775	008	580 Second/ 300 Brannan	1912	Blinn Estate Bldg.	Y		SE	C				SE	2D	SoM	3B	B				C.C. Frye/G.A. Schastey
3788	002	640 Second	1925	U.S. Radiator Bldg.	Y		SE	C				SE	2D	SoM	2D2	C				Herman C. Baumann
3788	054	650 Second	1925	B.F. Goodrich Rubber	Y		SE	C				SE	2D	SoM	2D2	C*				H. C. Baumann
3788	043	670 Second	1918	Moore Investment Co. Bld	Y		SE	C				SE	2D2	SoM	2D2	C*				L. Rosener, engr.
3788	044	678 Second	1913	Moore Ship Bldg.	Y		SE	C				SE	2D	SoM	3D	C*				L. Rosener, engr.
3788	006	698 Second	1909	SFFD Pump House #1	Y		SE	C				SE	2D	SoM	1S	B*				T.W. Ransom, engr.
3707	057	1 Third			N				I	N-S			3S			C				

Key:

In PA – In Plan Area (Yes/No)	Art. 11 – Article 11 Rating	NR Dist – National Register of Historic Places	HR – San Francisco Heritage Rating:
	I, II – Significant Building	MS – Market Street Theater and Loft District	A: Highest Importance; B – Major Importance;
LM = City Landmark Number, if Applicable – Shaded Blue	III – Contributory Bldg. (outside Consrv. Dist.)	SE – South End District	C – Contextual Importance; D – Minor/None
	IV – Contributory Bldg. (in Conservation Dist.)	SH – Second and Howard Streets District	
Ex. Dist. – Existing Article 10 Historic District (SE – South End Hist. Dist.)	Conservation Districts:	Rat . – NR/CR Rating – see end of table	Pot. Dist. – Potential Historic District
	K-S – Kearny-Market-Mason-Sutter (KMMS)	Buildings listed on National Register shaded red.	KM-A – KMMS District Addition
Dist. Rat. – C = Contributor	N-S – New Montgomery-Mission-Second St.		SE-A – South End District Addition
NC = Non-Contributor		Prior Svy. – Prior Historic Resources Survey	MM – Mint-Mission District
	HT – Building listed in *Here Today*.	SoM – South of Market Survey	SP – St. Patrick's Church and Rectory
		TC – Transit Center District Plan Survey	C? – Contributor (C) or Non-Contributor (NC)

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Blk	Lot	Address	Year Built	Name	In PA	LM	Ex. Dist.	Dist. Rat.	Art 11	Con. Dist.	HT	NR Dist.	Rat.	Prior Svy.	Rat.	HR	Pot. Dist.	C?	Final Rating	Architect (if known)
3706	093	86 Third	1906	Mercantile Bldg.	N					N-S	Y			TC	3S, 3CB					
3722	259	125 Third; 689–93 Mission	1907	Williams Bldg.	N					N-S						B			2D2	Clinton Day
3762	003	428 Third	1917		Y									SoM	3S					
3776	115	500 Third	1927		Y									SoM	3S					
3775	073	501 Third	1920		Y									SoM	5S3	C				
3776	008	566 Third	1907		Y									SoM	3S					
3788	020	601 Third	1920	General Cigar Co. Bldg.	Y		SE	C				SE	2D	SoM	3D	C				-
3787	005	620 Third	1924	Colgate Bldg.	Y									SoM	5D3					
3788	045	625 Third		Transcontinental Freight Co	Y		SE	C				SE	2D	SoM	3B	B				George A. Dodge
3787	008	660 Third	1902	South End Terminal Whse	Y		SE	C				SE	2D	SoM	3D	B				William Koenig
3788	041	665 Third	1916	M.J. Brandenstein Bldg.	Y		SE	C				SE	2D	SoM	3D	B				G. Albert Lansburgh
3788	015	679 Third	1906		Y		SE	C						SoM	3D	C*				
3788	014	689 Third	1917	Anna Davidow Bldg.	Y		SE	NC					6X	SoM	3D	D			3D	A. Burgen
3705	004	54 Fourth		Keystone Hotel	N				I							B	KM-A	C	5B	
3752	008	360 Fourth	1982	Salvation Army Bldg.	Y								2S	SoM	6Z					
3752	010	360 Fourth	1925	Senior Activities Center	Y									SoM	2S	A				Alfred I. Coffey
3762	112	401 Fourth			Y									SoM	5S3					
3777	001	500 Fourth	1908		Y									SoM	3S	B				
3777	002	508 Fourth	1925		Y									SoM	5S3	C				Walter C. Falch
3776	117	525 Fourth	1924		Y									SoM	5S3					
3777	020	564 Fourth	1936		Y									SoM	5S3					
3787	052	601 Fourth			Y									SoM	3S	B				
3786	035	620 Fourth	1907		Y									SoM	5S3					
3704	3	40 Fifth	1907	Oakwood Hotel	N				V							C*	MM	3	3CB	McDougall Brothers
3705	039	55 Fifth	1913	Lankershim Hotel	N												KM-A	C	5D3	John W. Reid, Jr
3705	021	67 Fifth		Pickwick Hotel Garage	N				I							B	KM-A	C	5B	
3705	023	85 Fifth	1923	Pickwick Hotel	N				I								KM-A	C	5B	
3704	011	88 Fifth	1869–74	The Old Mint	N	236			I		Y		1CL			A				Alfred B. Mullet
3725	097	110 Fifth	1967	San Francisco Chronicle	N														3CS	

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3753	008	372 Fifth	1906		Y									SoM	5S3					
3753	009	388 Fifth	1909		Y									SoM	5S3					
3760	012	480 Fifth	1925		Y									SoM	3CS	C*				
3785	002	650 Fifth	1924		Y									SoM	3CS	C				
3704	053	35 Sixth	1908		Y									SoM	3D	C*				
3704	052	39 Sixth	1906		Y									SoM	3D					
3704	051	43 Sixth	1907		Y									SoM	3D					
3704	026	65 Sixth	1913		Y									SoM	3D	C				
3725	081	101 Sixth	1915		Y									SoM	3D	C				
3725	064	133 Sixth			Y									SoM	3D	C*				
3725	063	139 Sixth	1909		Y									SoM	3D	C				
3725	062	151 Sixth	1925		Y									SoM	3D					
3725	061	157 Sixth	1907		Y									SoM	3D	C*				
3732	124	201 Sixth	1907	Orlando Hotel	Y				I				2S2	SoM	3B	B				E.A. Bozio
3732	123	219 Sixth	1908		Y									SoM	3D					
3786	039	36 Bluxome	1939		Y									SoM	3CS					
3786	019A	53 Bluxome	1917	Hopkins, Timothy, W'hses	Y									SoM	5S2	C				E.A. Garin
3785	004A	135 Bluxome	1923		Y									SoM	5D3					
3785	024	157 Bluxome	1916	National Biscuit Company	Y								5S2	SoM	5B	C				J. R. Torrance
3775	101	334 Brannan	1929		Y		SE					SE	2D	SoM	3D					
3775	016	350 Brannan	1929		Y		SE					SE	2D	SoM	3D	C				
3788	024A	355 Brannan	1928		Y								3D	SoM	5S3					C.W. Zollmer
3788	024	361 Brannan	1928		Y								3D	SoM	5S3					C.W. Zollmer
3787	048	415 Brannan	1923		Y									SoM	5D3					
3787	033	425 Brannan	1924		Y									SoM	5B					Arthur S. Bugbee
3776	015	426 Brannan	1926		Y									SoM	5S3	D				
3776	151	434 Brannan			Y									SoM	5S3		SE-A	C	5B	
3787	151	435 Brannan	1910		Y									SoM	5B					
3776	020	444 Brannan	1924		Y									SoM	5S3					O'Brien Brothers
3775	086	453 Bryant	1912		Y									SoM	5S3					
3775	085	457 Bryant	1909		Y									SoM	3CS					
3763	015A	460 Bryant	1907	Fleischmann Co. Bldg.	Y									SoM	5S3	C				James R. Miller
3775	084	461 Bryant	1912		Y									SoM	5S3	C				Oliver Everett
3776	094	531 Bryant			Y									SoM	5S3					
3776	041	539 Bryant	1912		Y									SoM	3S	B				Nathaniel Blaisdell

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3762	021	556 Bryant	1921		Y									SoM	5S3					
3778	001	701 Bryant T	1926		Y									SoM	3CS					
3760	014	704 Bryant	1914		Y									SoM	5S3					
3753	056	215 Clara	1927		Y									SoM	5S3					Arthur S. Bugbee
3753	048	241 Clara	1916		Y									SoM	5S3					
3788	012	166 Towns'nd/ 21 Clarence	1906	Calif. Electric Light Co.	Y		SE	C				SE	2D	SoM	3D	A				Percy & Hamilton
3732	064	444 Clem'ntina	1925		Y									SoM	5S3	C				
3787	017	18 Clyde	1907		Y									SoM	5D3					
3787	021	36 Clyde	1923		Y									SoM	5B					
3735	013	666 Folsom	1964	Pacific Telephone	N									TC	3S					John Carl Warnecke
3733	019	844 Folsom	1923		Y									SoM	5S3					R.W. Jenkins
3733	020	848 Folsom	1923		Y									SoM	5S3					
3733	020A	854 Folsom	1926		Y									SoM	5S3					
3733	024	868 Folsom	1935		Y									SoM	3CS					N. B. Green (eng.)
3753	145	915 Folsom	1907		Y									SoM	5S3					Frederick Noonan
3753	132	969 Folsom	1922		Y									SoM	5S3					Samuel C. Heiman
3732	151	974 Folsom	1936		Y									SoM	5S3					
3763	105	645 Harrison	1947		Y									SoM	3S					H. C. Baumann
3763	099	665 Harrison	1946		Y									SoM	3S					
3762	116	735 Harrison	1915		Y									SoM	3S					
3760	081	943 Harrison	1947		Y									SoM	5S3					
3753	029	986 Harrison	1926		Y									SoM	5S3					None
3735	041	20 Hawthorne	1925		N				III							B				
3722	020	606 Howard			N					N-S		SH	1D			C*				
3735	005	621 Howard	1929	William Volker Bldg.	N				II	N-S			3S			C				George Kelham
3735	039	667 Howard	1907		N				III							B				Trobridge & Livingston
3733	088	821 Howard		Southern Police Station	N											C			3CS	
3733	084	835 Howard	1909	Home Telephone Bldg.	N				II							A				Coxhead & Coxhead
3733	082	843 Howard			N														3CS	
3707	032	163 Jessie		Hess Bldg.	N					N-S				TC	3S, 3CB					
3705	034	308 Jessie			N												KM-A	C	5D3	
3705	008	315 Jessie	1907	Guggenheim/Heuter Bldg.	N				II							B*				Chas. F. Whittlesey

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3704	079	410 Jessie	1926	Hale's Warehouse & Food	N								1S			C	MM	C	3CB	
3704	028	471 Jessie	1912		N				V							C	MM	C	3CD	
3704	029	431 Jessie			N												MM	C	3CD	
3704	035	440 Jessie			N												MM	C	3CD	
3704	024	481 Jessie		Hulse Bradford Bldg.	N												MM	C	3CB	
3787	022	25 Lusk	1917		Y									SoM	5B	C				
3787	019	45 Lusk	1922		Y									SoM	5B					
3707	001	601 Market	1917;'21	Santa Fe/West Coast Life	N				IV	N-S			2S2			B				Wood & Simpson
3707	002A	609 Market	1914		N				IV	N-S			3S			C				Alfred H. Jacobs
3707	061	625 Market			N					N-S			3S							
3707	052	643 Market	1909;'15–'26;'50	Palace Hotel, Garden Courtyard	N	18		C	II	N-S	Y		3S			A				Trowbridge & Livingston; G.Kelham
3707	051	681 Market	1906	Monadnock Bldg.	N				I	N-S			3S			B				Meyer and O'Brien
3706	001	701 Market	1896; 1938	Call/Claus Spreckels Bldg.	N				III				3S			B				Reid Bros.; Albert Roller
3706	064	715 Market	1906; 1940	Kamm Bldg./Morris Plan Co. Bldg.	N											C			5S3	Bliss& Faville;Bliss & Fairweather;Hurt
3706	062	725 Market	1908	Bancroft Bldg.	N				II	K-S			3S			B				Cunninghan & Politeo
3706	061	735 Market	1907	Carroll and Tilton Bldg.	N				II	K-S			1S			B				Willis Polk
3706	075	785 Market	1907	Humboldt Bank Bldg.	N				I	K-S	Y		3S			A				Meyer & O'Brien
3705Z	001	801 Market	1907	Pacific Bldg.	N					K-S			3S							C. F. Whittlesey
3705	037	825 Market	1908	Commercial Bldg.	N				II	K-S			3S			B				Louis Hobart
3705	050	845 Market	1896; 1908	The Emporium	N				I	K-S	Y		2D2			A				Albert Pissis and Joseph Moore
3705	042	865 Market		Westfield Center	N					K-S			3S							
3704	001	901 Market	1912	Hale Brothers Dep't. Store	N				I	K-S	Y	MS	1S			A				Reid Brothers
3704	069	973 Market	1900; 1907	Wilson Bldg.	N				II		Y	MS	1D			A				G. Percy & H. Meyers; Henry Schulze
3704	068	979 Market	1900'; 05;'07	Hale Brothers Dep't. Store	N				II			MS	1D			A				Reid Brothers
3722	071	138 Minna	1902; 1910	Rialto Bldg.	N				I	N-S			3S			A				Meyer & O'Brien; Bliss & Faville
3722	068	150 Minna	1907	McLaughlin Bldg.	N					N-S				TC	3CD	C				William Koenig
3725	094	425 Minna	1967	San Francisco Chronicle	N														3CS	
3725	076	447 Minna	1907	Dempster Brothers Printing	N				I							B			3S	Mooser & Milwain
3725	075	453 Minna			N													C	5S3	

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3704	144	8 Mint	1924	Hale Brothers	N								1S				MM	C	3CD	
3704	113	10 Mint	1924	Hale Brothers	N								1S				MM	C	3CD	
3704	034	14 Mint	1907	Haas Candy Factory	N				I				1S			B	MM	C	1S, 3CB	William Curlett
3704	012	66 Mint	1916		N				I							B	MM	C	3CB	Frederick Whitton
3722	073	617 Mission	1902;'08	The Crellin Bldg.	N				IV	N-S			2D2			C				Walter J. Mathews
3722	069	647 Mission	1907	Veronica Bldg.	N				I	N-S				TC	3S, 3CB	C				Salfield & Kohlberg
3707	020	658 Mission	1902;'06	Textile Bldg.	N				I	N-S				TC	3S, 3CB	C				
3706	276	736 Mission	1906–09	Jessie Street Substation	N	87					Y		1S			A				Willis Polk
3706	068	748 Mission	1872	Saint Patrick's Church	N	4		C			Y		2S			C				
3706	014	766 Mission		St. Patrick's Ch'ch Rectory	N												SP	C	3CD	
3705	007	808 Mission			N				II							B				
3725	093	901 Mission		San Francisco Chronicle	N											C*			3CS	
3725	088	951 Mission		Ford Apartments	N											C	MM	C	3CD	
3725	087	959 Mission	1905–06	California Casket Co.	N				II							A	MM	C	3CB	Albert Pissis
3404	017	936 Mission	1915	Chronicle Hotel	N				V							C	MM	C	3CD	
3704	017	948 Mission	1907	Alkain Hotel	N				V							C	MM	C	3CB	Phillip Schwerdt
3704	019	966 Mission			N												MM	C	3CD	
3704	021	972 Mission			N												MM	C	3CB	
3704	022	980 Mission			N												MM	C	3CB	
3722	006	116 Natoma	1910	N. Clark and Sons	N				I	N-S		SH	1D			B				Cunningham & Politeo
3722	014	145 Natoma	1968		N					N-S				TC	3S, 7N1					
3722	013	147 Natoma	1908	Underwriters Fire Patrol Bldg.	N				I	N-S	Y			TC	3S, 3CB	B*				Clifton Day
3725	042	430 Natoma			N													C	3CS	
3725	060	496 Natoma	1926		Y									SoM	3D					
3707	035	39 N. Mont'g'y	1912	The Sharon Bldg.	N	163			I	N-S	Y		3S			A				George W. Kelham
3707	064	74 N. Mont'g'y	1914	Call Bldg.	N				I	N-S	Y		3S			A				Reid Brothers
3707	014	77 N. Mont'g'y	1907;'20	Crossley Bldg.	N				I	N-S			3S			C				Mel. Schwartz ('20)
3722	072	111 N Mont'g'y	1907	Standard Bldg.	N				IV	N-S		SH	1D			C				Reid Brothers
3722	007	137 N Mont'g'y	1907		N				IV	N-S		SH	1D			C				Henry Schluze

Key:

In PA – In Plan Area (Yes/No)	Art. 11 – Article 11 Rating	NR Dist – National Register of Historic Places	HR – San Francisco Heritage Rating:
	I, II – Significant Building	MS – Market Street Theater and Loft District	A: Highest Importance; B – Major Importance;
LM = City Landmark Number, if Applicable – Shaded Blue	III – Contributory Bldg. (outside Consrv. Dist.)	SE – South End District	C – Contextual Importance; D – Minor/None
	IV – Contributory Bldg. (in Conservation Dist.)	SH – Second and Howard Streets District	
Ex. Dist. – Existing Article 10 Historic District (SE – South End Hist. Dist.)	Conservation Districts:	Rat . – NR/CR Rating – see end of table	Pot. Dist. – Potential Historic District
	K-S – Kearny-Market-Mason-Sutter (KMMS)	Buildings listed on National Register shaded red.	KM-A – KMMS District Addition
Dist. Rat. – C = Contributor	N-S – New Montgomery-Mission-Second St.		SE-A – South End District Addition
NC = Non-Contributor		Prior Svy. – Prior Historic Resources Survey	MM – Mint-Mission District
	HT – Building listed in *Here Today*.	SoM – South of Market Survey	SP – St. Patrick's Church and Rectory
		TC – Transit Center District Plan Survey	C? – Contributor (C) or Non-Contributor (NC)

TABLE APX-C-1:
HISTORIC ARCHITECTURAL RESOURCES IN THE PLAN AREA AND VICINITY (cont'd.)

Blk	Lot	Address	Year Built	Name	In PA	LM	Ex. Dist.	Dist. Rat.	Art 11	Con. Dist.	HT	NR Dist.	Rat.	Prior Svy.	Rat.	HR	Pot. Dist.	C?	Final Rating	Architect (if known)
3722	080	140 N Mont'g'y	1925	Pacific Telephone and Telegraph Company	N				I	N-S						A				T. Pflueger, J.R. Miller;A.A. Cantin
3722	022	170 N Mont'g'y	1920	S.F. Furniture Exchange	N				IV	N-S			3S			C				Ken. Macdonald, Jr.
3762	106	120 Perry	1919		Y									SoM	3S					
3787	040	360 Ritch	1920	Old: S.F. Pie Co.	Y									SoM	5D3					
3753	097	229 Shipley	1916		Y									SoM	5S3					None
3775	181	1 South Park	1913	Tobacco Co. of California	Y		SE					SE	2D	SoM	3D	B				William H. Crim, Jr
3775	046	17 South Park	1934		Y									SoM	5D3					
3775	042	21 South Park			Y									SoM	5B	C				
3775	048	22 South Park	1915		Y									SoM	5B	C*				
3775	049	26 South Park	1907		Y									SoM	5D3	C				
3775	102	33 South Park	1920		Y		SE							SoM	5B	C				
3775	040	41 South Park	1911		Y									SoM	5D3	C				
3775	039	45 South Park	1909		Y									SoM	5D3	C				
3775	054	76 South Park	1906		Y									SoM	5D3	C				
3775	057	102 S. Park	1912		Y									SoM	5B	C				
3775	058	104 S. Park	1907		Y									SoM	5D3					
3775	059	108 S. Park	1914		Y									SoM	5D3					
3775	179	117 S. Park			Y									SoM	5D3					
3775	061	126 S. Park	1907		Y									SoM	5D3					
3775	062	130 S. Park	1913		Y									SoM	5D3	D				
3775	033	135 S. Park	1925		Y									SoM	5D3					
3775	064	140 S .Park	1907		Y									SoM	5D3					
3775	030	155 S. Park	1925		Y									SoM	5D3					
3775	066	156 S. Park	1924		Y									SoM	5D3					
3775	067	160 S. Park	1920		Y									SoM	5D3	C				
3775	028	165 S. Park			Y									SoM	5D3	C				
3775	070	166 S. Park			Y									SoM	5D3	C				
3775	137	171 S. Park	1910		Y									SoM	5D3	C				
3707	044	111 Stevenson	1921	Palace Garage	N				I	N-S			3S			B				O'Brien Brothers
3704	059	443 Stevenson			N												MM	C	3CD	
3763	033	31 Stillman	1906		Y									SoM	5S3					
3762	037	177 Stillman	1924		Y									SoM	3CS					
3788	008	130 Townsend	1906	Inglenook Vineyard Agcy.	Y		SE	CA				SE	2D	SoM	3D	B				
3788	009	136 Townsend	1913	Clinton Fireproofing Co.	Y		SE	C				SE	2D	SoM	3D	C				R.V. Woods, engr.

Key:

In PA – In Plan Area (Yes/No) LM = City Landmark Number, if Applicable – Shaded Blue Ex. Dist. – Existing Article 10 Historic District (SE – South End Hist. Dist.) Dist. Rat. – C = Contributor NC = Non-Contributor	Art. 11 – Article 11 Rating I, II – Significant Building III – Contributory Bldg. (outside Consrv. Dist.) IV – Contributory Bldg. (in Conservation Dist.) Conservation Districts: K-S – Kearny-Market-Mason-Sutter (KMMS) N-S – New Montgomery-Mission-Second St. HT – Building listed in *Here Today*.	NR Dist – National Register of Historic Places MS – Market Street Theater and Loft District SE – South End District SH – Second and Howard Streets District Rat . – NR/CR Rating – see end of table Buildings listed on National Register shaded red. Prior Svy. – Prior Historic Resources Survey SoM – South of Market Survey TC – Transit Center District Plan Survey	HR – San Francisco Heritage Rating: A: Highest Importance; B – Major Importance; C – Contextual Importance; D – Minor/None Pot. Dist. – Potential Historic District KM-A – KMMS District Addition SE-A – South End District Addition MM – Mint-Mission District SP – St. Patrick's Church and Rectory C? – Contributor (C) or Non-Contributor (NC)

TABLE APX-C-1:
HISTORIC ARCHITECTURAL RESOURCES IN THE PLAN AREA AND VICINITY (cont'd.)

Blk	Lot	Address	Year Built	Name	In PA	LM	Ex. Dist.	Dist. Rat.	Art 11	Con. Dist.	HT	NR Dist.	Rat.	Prior Svy.	Rat.	HR	Pot. Dist.	C?	Final Rating	Architect (if known)
3788	009A	144 Townsend	1922	Clinton Construction Co.	Y		SE	C				SE	2D	SoM	3D	C				H. C. Baumann
3788	074	164 Townsend	1920	Winchester-Simmons Co..	Y		SE	C				SE	2D	SoM	3D	C				H. C. Baumann
3788	013	180 Townsend	1905	California Wine Assn.	Y		SE	C				SE	2D	SoM	3D	B*				Meyer & O'Brien/ J. Powers
3786	263	310 Townsend	1920		Y						Y		6Y	SoM	6Z	B*				
3786	015	350 Townsend	1905	Paul Wood Warehouse	Y								2S2			B				
3785	005	466 Townsend	1920	Holbrook Merrill & Stetson	Y								2S2	SoM	2S2	C				

CALIFORNIA REGISTER/ NATIONAL REGISTER STATUS CODES (RATINGS)

1 Properties listed in the National Register (NR) or the California Register (CR)
1D - Contributor to a district or multiple resource property listed in NR by the Keeper. Listed in the CR.
1S - Individual property listed in NR by the Keeper. Listed in the CR.
1CL - Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after 12/97 and recommended for listing by the SHRC.

2 Properties determined eligible for listing in the National Register (NR) or the California Register (CR)
2D - Contributor to a district determined eligible for NR by the Keeper. Listed in the CR.
2D2 - Contributor to a district determined eligible for NR by consensus through Section 106 process. Listed in the CR.
2S - Individual property determined eligible for NR by the Keeper. Listed in the CR.
2S2 - Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.

3 Appears eligible for National Register (NR) or California Register (CR) through Survey Evaluation
3B - Appears eligible for NR both individually and as a contributor to a NR eligible district through survey evaluation.
3D - Appears eligible for NR as a contributor to a NR eligible district through survey evaluation.
3S - Appears eligible for NR as an individual property through survey evaluation.
3CB - Appears eligible for CR both individually and as a contributor to a CR eligible district through a survey evaluation.
3CD - Appears eligible for CR as a contributor to a CR eligible district through a survey evaluation.
3CS - Appears eligible for CR as an individual property through survey evaluation.

4 Appears eligible for National Register (NR) or California Register (CR) through other evaluation

5 Properties Recognized as Historically Significant by Local Government
5D3 - Appears to be a contributor to a district that appears eligible for local listing or designation through survey evaluation.
5S2 - Individual property that is eligible for local listing or designation.
5S3 - Appears to be individually eligible for local listing or designation through survey evaluation.
5B - Locally significant both individually (listed, eligible, or appears eligible) and as a contributor to a district that is locally listed, designated, determined eligible or appears eligible through survey evaluation.

6 Not Eligible for Listing or Designation as specified

7 Not Evaluated for National Register (NR) or California Register (CR) or Needs Revaluation
7N1 - Needs to be reevaluated (Formerly NR SC4) – may become eligible for NR w/restoration or when meets other specific conditions.

NOTE: List includes only those status codes that appear in the table.

Key:

In PA – In Plan Area (Yes/No)	Art. 11 – Article 11 Rating	NR Dist – National Register of Historic Places	HR – San Francisco Heritage Rating:
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	Conservation Districts:	Rat . – NR/CR Rating – see end of table	Pot. Dist. – Potential Historic District
Ex. Dist. – Existing Article 10 Historic District (SE – South End Hist. Dist.)	K-S – Kearny-Market-Mason-Sutter (KMMS)	Buildings listed on National Register shaded red.	KM-A – KMMS District Addition
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Dist. Rat. – C = Contributor		Prior Svy. – Prior Historic Resources Survey	MM – Mint-Mission District
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		TC – Transit Center District Plan Survey	C? – Contributor (C) or Non-Contributor (NC)

APPENDIX D
Noise

Reference Column	Existing - Scenario 1	Existing + Central SoMa Land Uses - Scenario 3		Existing + LU + One-Way Howard/Folsom - Scenario 4			Existing + LU + Two-Way Howard/Folsom - Scenario 5				Cumulative - Scenario 6		Cumulative + Central SoMa Land Uses - Scenario 7			Cumulative + One-Way Howard/Folsom - Scenario 8				Cumulative + Two-Way Howard/Folsom - Scenario 9				
		1 (A)		2 (B)		3	4 [C]		5	6	7 (D)		8 [E]		9 [F]	10 [G]		11 [H]	12	13 [J]		14 [K]	15	16
Segment	Noise (dBA)	Noise (dBA)	Chg. fr. Existing	Noise (dBA)	Chg. fr. Existing	Chg. fr Land Use	Noise (dBA)	Chg. fr. Existing	Chg. fr Land Use	Chg. fr. One-Way	Noise (dBA)	Chg. fr. Existing	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Chg. fr Land Use	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Chg. fr Land Use	Chg. fr. One-Way
1 Second (Market-Mission)	66.9	67.0	0.1	67.0	0.1	0.0	67.1	0.2	0.1	0.1	65.4	-1.4	65.1	-1.8	-0.3	65.7	-1.2	0.2	0.6	65.4	-1.4	0.0	0.3	-0.2
10 Second (Mission-Howard)	68.9	69.1	0.2	69.3	0.4	0.2	69.2	0.4	0.1	-0.1	67.3	-1.5	66.8	-2.0	-0.5	68.0	-0.9	0.7	1.1	68.1	-0.7	0.8	1.3	0.1
19 Second (Howard-Folsom)	70.4	70.6	0.2	70.9	0.5	0.4	70.3	-0.1	-0.3	-0.7	68.9	-1.5	68.6	-1.8	-0.3	68.9	-1.5	0.1	0.4	69.5	-0.9	0.6	0.9	0.6
28 Second (Folsom-Harrison)	69.7	69.8	0.1	70.4	0.7	0.6	71.1	1.5	1.4	0.8	68.6	-1.1	68.4	-1.2	-0.1	68.7	-1.0	0.2	0.3	69.1	-0.6	0.5	0.7	0.4
37 Second (Harrison-Bryant)	71.2	71.3	0.1	72.1	1.0	0.9	72.3	1.2	1.0	0.2	70.9	-0.2	71.0	-0.2	0.0	71.6	0.4	0.6	0.6	71.5	0.3	0.5	0.5	-0.1
46 Second (Bryant-Brannan)	70.9	71.1	0.2	70.8	-0.2	-0.3	70.8	-0.1	-0.3	0.0	71.9	1.0	72.0	1.0	0.0	71.5	0.5	-0.5	-0.5	71.1	0.2	-0.8	-0.9	-0.3
55 Second (Brannan-Townsend)	69.4	69.9	0.5	71.2	1.8	1.3	71.4	2.0	1.5	0.2	70.5	1.1	70.8	1.4	0.3	72.0	2.6	1.6	1.3	71.8	2.4	1.3	1.0	-0.2
64 Second south of Townsend	67.2	66.9	-0.2	68.3	1.1	1.3	67.0	-0.1	0.1	-1.2	68.0	0.9	68.5	1.3	0.5	68.0	0.8	-0.1	-0.5	67.6	0.4	-0.4	-0.9	-0.4
73 New Montgomery (Market-Mission)	70.8	70.8	0.0	70.8	0.1	0.1	70.5	-0.3	-0.3	-0.4	71.7	0.9	71.5	0.7	-0.2	71.7	0.9	0.0	0.2	70.9	0.1	-0.7	-0.6	-0.7
82 New Montgomery (Mission-Howard)	70.5	70.4	-0.1	70.5	0.0	0.1	70.3	-0.2	-0.1	-0.2	71.7	1.2	71.5	1.0	-0.2	71.5	1.0	-0.2	0.0	71.0	0.5	-0.7	-0.5	-0.6
91 Hawthorne (Howard-Folsom)	68.2	67.9	-0.3	68.2	0.0	0.3	68.1	-0.1	0.3	0.0	69.0	0.8	69.3	1.1	0.3	69.4	1.2	0.4	0.1	68.7	0.5	-0.3	-0.6	-0.7
100 Hawthorne (Folsom-Harrison)	68.0	67.6	-0.4	68.1	0.1	0.4	68.6	0.6	1.0	0.5	68.5	0.5	69.2	1.2	0.8	69.6	1.6	1.2	0.4	70.0	1.9	1.5	0.7	0.3
109 Third (Market-Mission)	72.4	73.0	0.5	72.3	-0.1	-0.7	72.6	0.1	-0.4	0.3	73.4	1.0	73.6	1.2	0.2	73.0	0.5	-0.4	-0.6	73.1	0.6	-0.3	-0.5	0.1
118 Third (Mission-Howard)	72.6	73.1	0.6	72.4	-0.1	-0.7	72.7	0.2	-0.4	0.3	74.0	1.5	74.1	1.6	0.1	73.1	0.6	-0.9	-1.0	73.5	0.9	-0.5	-0.7	0.4
127 Third (Howard-Folsom)	72.9	73.4	0.5	72.8	-0.1	-0.6	72.0	-0.9	-1.4	-0.8	74.1	1.2	74.3	1.3	0.1	73.2	0.3	-0.9	-1.0	72.4	-0.5	-1.7	-1.8	-0.8
136 Third (Folsom-Harrison)	72.5	73.0	0.5	72.4	-0.1	-0.6	72.6	0.2	-0.3	0.3	73.8	1.3	73.9	1.4	0.1	72.9	0.4	-0.9	-1.0	73.4	0.9	-0.4	-0.5	0.5
145 Third (Harrison-Bryant)	73.4	73.9	0.4	73.5	0.0	-0.4	73.3	-0.2	-0.6	-0.2	75.0	1.6	74.9	1.5	0.0	74.1	0.7	-0.9	-0.8	74.0	0.6	-1.0	-1.0	-0.1
154 Third (Bryant-Brannan)	73.2	73.3	0.1	73.3	0.0	0.0	73.2	-0.1	-0.2	-0.1	74.3	1.1	74.1	0.9	-0.2	73.5	0.3	-0.8	-0.6	73.4	0.1	-1.0	-0.8	-0.2
163 Third (Brannan-Townsend)	72.9	73.0	0.1	72.8	-0.1	-0.2	72.9	0.0	-0.1	0.0	74.0	1.1	73.8	0.9	-0.2	73.5	0.6	-0.5	-0.3	73.5	0.6	-0.5	-0.3	0.0
172 Third south of Townsend	72.5	72.7	0.2	72.5	0.0	-0.1	72.4	-0.1	-0.3	-0.1	74.2	1.7	74.2	1.7	-0.1	73.9	1.4	-0.4	-0.3	74.0	1.5	-0.3	-0.2	0.1
181 Fourth (Market-Mission)	72.0	71.9	-0.1	71.7	-0.4	-0.2	71.5	-0.6	-0.4	-0.2	72.4	0.4	72.3	0.3	-0.1	71.9	-0.1	-0.5	-0.4	71.6	-0.4	-0.8	-0.7	-0.3
190 Fourth (Mission-Howard)	72.1	71.9	-0.2	71.8	-0.3	-0.2	71.6	-0.5	-0.4	-0.2	72.7	0.6	72.5	0.4	-0.2	71.9	-0.2	-0.8	-0.6	71.7	-0.4	-1.0	-0.8	-0.2
199 Fourth (Howard-Folsom)	72.8	72.9	0.1	71.5	-1.3	-1.4	72.5	-0.3	-0.4	1.0	73.4	0.6	73.3	0.5	0.0	71.7	-1.1	-1.7	-1.7	73.0	0.2	-0.4	-0.4	1.3
208 Fourth (Folsom-Harrison)	72.7	73.1	0.4	71.9	-0.8	-1.2	72.4	-0.3	-0.7	0.6	73.5	0.8	73.3	0.6	-0.2	71.8	-0.9	-1.7	-1.5	73.0	0.2	-0.6	-0.4	1.1
217 Fourth (Harrison-Bryant)	68.7	69.2	0.5	68.6	-0.1	-0.6	68.3	-0.3	-0.8	-0.2	69.3	0.7	69.4	0.7	0.0	68.5	-0.2	-0.8	-0.9	68.7	0.1	-0.6	-0.6	0.2
226 Fourth (Bryant-Brannan)	68.5	69.5	1.0	69.4	0.9	-0.1	68.7	0.2	-0.8	-0.7	70.7	2.2	70.9	2.3	0.1	70.7	2.2	0.0	-0.1	71.6	3.1	0.9	0.7	0.9
235 Fourth (Brannan-Townsend)	69.0	70.2	1.2	69.6	0.6	-0.5	68.4	-0.6	-1.8	-1.3	72.1	3.1	71.7	2.7	-0.4	71.4	2.4	-0.7	-0.3	71.9	2.9	-0.2	0.2	0.5
244 Fourth south of Townsend	71.0	71.8	0.8	71.8	0.9	0.0	71.2	0.2	-0.6	-0.7	73.0	2.1	73.0	2.1	0.0	73.1	2.2	0.1	0.1	73.5	2.6	0.5	0.5	0.4
253 Fifth (Market-Mission)	71.2	71.8	0.6	72.1	0.9	0.3	72.1	0.9	0.3	0.0	73.0	1.9	73.2	2.1	0.2	73.1	1.9	0.1	-0.2	73.3	2.1	0.2	0.0	0.2
262 Fifth (Mission-Howard)	72.0	72.9	0.9	72.9	1.0	0.0	73.0	1.0	0.1	0.0	73.9	1.9	74.2	2.2	0.3	74.0	2.1	0.2	-0.2	73.9	2.0	0.1	-0.3	-0.1
271 Fifth (Howard-Folsom)	72.0	72.6	0.6	72.4	0.4	-0.2	72.6	0.7	0.0	0.3	73.3	1.3	73.5	1.5	0.2	73.7	1.7	0.4	0.2	73.4	1.4	0.1	-0.1	-0.3
280 Fifth (Folsom-Harrison)	71.9	72.6	0.7	72.6	0.7	0.0	72.4	0.5	-0.2	-0.2	73.2	1.3	73.3	1.5	0.1	73.7	1.9	0.5	0.4	73.1	1.3	0.0	-0.2	-0.6
289 Fifth (Harrison-Bryant)	71.5	72.6	1.1	72.1	0.6	-0.5	72.2	0.7	-0.4	0.1	73.5	2.0	74.0	2.5	0.5	73.2	1.7	-0.3	-0.8	72.5	1.0	-1.0	-1.5	-0.7
298 Fifth (Bryant-Brannan)	71.2	72.6	1.4	72.3	1.1	-0.3	72.4	1.2	-0.2	0.1	74.0	2.8	74.5	3.3	0.5	73.6	2.4	-0.3	-0.9	73.1	1.9	-0.9	-1.4	-0.5
307 Fifth (Brannan-Townsend)	68.8	70.7	1.8	71.3	2.4	0.6	71.2	2.3	0.5	-0.1	70.0	1.1	71.5	2.7	1.6	72.0	3.1	2.0	0.4	71.2	2.3	1.2	-0.3	-0.8
316 Sixth (Market-Mission)	73.0	73.2	0.3	73.3	0.3	0.1	73.3	0.3	0.1	0.0	73.0	0.1	73.1	0.1	0.1	73.2	0.2	0.2	0.1	72.9	0.0	-0.1	-0.2	-0.3
325 Sixth (Mission-Howard)	73.1	73.3	0.2	73.4	0.3	0.0	73.4	0.3	0.1	0.0	73.2	0.1	73.4	0.3	0.2	73.4	0.3	0.2	0.0	73.1	0.0	-0.1	-0.3	-0.3
334 Sixth (Howard-Folsom)	73.6	73.8	0.2	74.1	0.5	0.3	74.6	1.0	0.8	0.5	73.8	0.3	73.7	0.2	-0.1	74.2	0.6	0.3	0.4	74.8	1.2	0.9	1.0	0.6
343 Sixth (Folsom-Harrison)	74.2	74.6	0.3	74.9	0.7	0.4	74.9	0.7	0.3	-0.1	75.1	0.8	75.2	1.0	0.1	75.6	1.3	0.5	0.4	75.2	1.0	0.2	0.0	-0.3
352 Sixth (Harrison-Bryant)	74.4	74.3	-0.1	74.8	0.5	0.5	74.7	0.3	0.4	-0.1	75.3	0.9	75.3	1.0	0.1	75.5	1.1	0.2	0.2	75.2	0.8	-0.1	-0.2	-0.3
361 Sixth (Bryant-Brannan)	74.7	74.8	0.1	75.1	0.4	0.3	75.0	0.4	0.2	-0.1	75.8	1.1	75.9	1.2	0.1	76.2	1.6	0.4	0.3	75.9	1.3	0.1	0.1	-0.3
370 Seventh north of Mission	71.6	71.8	0.2	71.6	0.1	-0.1	71.7	0.1	0.0	0.1	73.2	1.6	73.2	1.6	0.1	73.2	1.7	0.1	0.0	73.1	1.5	0.0	-0.1	-0.1
379 Seventh (Mission-Howard)	72.3	72.5	0.2	72.3	0.1	-0.1	72.4	0.1	-0.1	0.1	73.8	1.5	73.9	1.6	0.1	73.9	1.6	0.1	0.0	73.9	1.6	0.1	0.0	-0.1
388 Seventh (Howard-Folsom)	72.9	73.2	0.2	73.2	0.3	0.1	73.5	0.6	0.3	0.2	73.8	0.8	73.8	0.8	0.0	74.0	1.0	0.2	0.2	74.3	1.3	0.5	0.5	0.3
397 Seventh (Folsom-Harrison)	73.0	73.3	0.3	72.4	-0.6	-0.9	72.5	-0.5	-0.8	0.1	74.2	1.2	74.3	1.3	0.1	73.9	0.9	-0.3	-0.4	74.1	1.1	0.0	-0.2	0.2
406 Seventh (Harrison-Bryant)	72.7	73.0	0.3	72.6	-0.1	-0.4	72.5	-0.3	-0.5	-0.1	74.1	1.4	74.2	1.5	0.1	73.6	0.9	-0.5	-0.6	74.1	1.4	0.1	0.0	0.5
415 Seventh (Bryant-Brannan)	73.6	73.8	0.2	73.9	0.4	0.1	73.9	0.4	0.1	0.0	74.9	1.3	74.9	1.4	0.1	75.0	1.4	0.1	0.1	75.1	1.6	0.3	0.2	0.1
424 Eighth north of Mission	73.1	73.1	0.0	73.1	0.1	0.0	73.2	0.1	0.1	0.1	73.5	0.5	73.5	0.5	0.0	73.6	0.5	0.0	0.0	73.6	0.5	0.0	0.0	0.0
433 Eighth (Mission-Howard)	72.2	72.2	0.0	72.3	0.1	0.0	72.3	0.1	0.1	0.0	72.7	0.5	72.8	0.6	0.1	72.8	0.6	0.1	0.0	72.8	0.6	0.1	0.1	0.0
442 Eighth (Howard-Folsom)	72.1	72.2	0.1	72.2	0.1	0.0	71.8	-0.3	-0.4	-0.4	72.9	0.8	72.9	0.8	0.0	73.1	1.0	0.1	0.2	72.1	0.1	-0.8	-0.7	-0.9
451 Eighth (Folsom-Harrison)	71.8	71.7	0.0	71.7	0.0	0.0	71.7	-0.1	-0.1	-0.1	72.3	0.6	72.4	0.7	0.1	72.5	0.8	0.2	0.1	72.1	0.3	-0.3	-0.4	-0.5
460 Eighth south of Harrison	71.7	72.0	0.3	71.9	0.3	0.0	72.1	0.4	0.1	0.1	72.5	0.8	72.9	1.2	0.4	72.7	1.1	0.3	-0.1	72.3	0.7	-0.1	-0.5	-0.4
469 Ninth north of Mission	75.1	75.0	-0.1	75.1	0.0	0.1	75.1	0.0	0.1	0.0	75.7	0.7	75.7	0.6	0.0	75.7	0.7	0.0	0.0	75.6	0.5	-0.2	-0.1	-0.2
478 Ninth (Mission-Howard)	74.8	74.8	0.0	74.9	0.0	0.1	74.8	0.0	0.1	0.0	75.5	0.6	75.5	0.6	0.0	75.5	0.7	0.0	0.0	75.3	0.4	-0.2	-0.2	-0.2
487 Ninth (Howard-Folsom)	74.1	74.1	-0.1	74.2	0.0	0.1	74.0	-0.1	0.0	-0.1	74.9	0.8	75.0	0.8	0.0	75.0	0.9	0.1	0.1	74.6	0.5	-0.3	-0.3	-0.4
496 Ninth (Folsom-Harrison)	74.1	74.1	0.0	74.1	0.0	0.1	74.1	0.0	0.1	0.0	74.8	0.6	74.8	0.7	0.1	74.8	0.7	0.1	0.0	74.7	0.6	0.0	-0.1	-0.1
505 Ninth (Harrison-Bryant)	72.8	72.9	0.1	72.9	0.0	0.0	72.9	0.0	0.0	0.0	74.1	1.3	74.0	1.1	-0.2	73.9	1.1	-0.2	0.0	73.7	0.9	-0.4	-0.2	-0.2
514 Ninth south of Bryant	72.0	72.1	0.1	72.0	0.0	-0.1	72.0	0.0	-0.1	0.0	73.3	1.3	73.4	1.5	0.2	73.4	1.4	0.1	-0.1	73.1	1.1	-0.2	-0.3	-0.3
523 Tenth north of Mission	73.1	73.2	0.1	73.2	0.1	0.0	73.3	0.2	0.1	0.1	73.9	0.8	73.7	0.6	-0.2	73.8	0.6	-0.1	0.1	74.0	0.9	0.1	0.3	0.3
532 Tenth (Mission-Howard)	72.7	72.7	0.0	72.7	0.0	0.0	72.8	0.1	0.1	0.1	73.4	0.7	73.3	0.6	-0.1	73.4	0.7	-0.1	0.1	73.4	0.7	0.0	0.2	0.1
541 Tenth (Howard-Folsom)	73.4	73.4	0.0	73.4	0.0	0.0	73.6	0.2	0.2	0.2	74.1	0.7	74.0	0.7	-0.1	74.1	0.7	0.0	0.1	74.4	1.0	0.3	0.4	0.3
550 Tenth (Folsom-Harrison)	72.6	72.7	0.1	72.8	0.2	0.1	72.8	0.2	0.1	0.0	73.4	0.8	73.2	0.6	-0.2	73.4	0.8	0.1	0.3	73.6	1.0	0.3	0.4	0.2
559 Tenth south of Harrison	73.3	73.5	0.2	73.4	0.1	-0.1	73.3	0.0	-0.2	-0.1	74.0	0.6	74.2	0.9	0.2	74.1	0.8	0.1	-0.1	73.9	0.6	0.0	-0.2	-0.2
568 Eleventh north of Howard	67.9	68.0	0.1	67.7	-0.2	-0.4	68.3	0.4	0.3	0.6	68.6	0.7	68.5	0.6	-0.1	68.8	0.9	0.1	0.2	69.0	1.1	0.4	0.5	0.2
577 Eleventh (Howard-Folsom)	68.6	69.2	0.6	69.0	0.4	-0.2	66.8	-1.8	-2.4	-2.2	70.0	1.5	70.4	1.9	0.4	70.4	1.9	0.4	0.0	69.1	0.5	-1.0	-1.4	-1.4
586 Eleventh south of Folsom	68.8	69.1	0.3	68.6	-0.3	-0.5	68.1	-0.7	-1.0	-0.5	69.0	0.1	69.0	0.1	0.0	69.0	0.2	0.1	0.1	68.3	-0.5	-0.7	-0.7	-0.7
595 Eleventh north of Bryant	68.5	68.9	0.4	68.9	0.4	0.0	68.6	0.2	-0.2	-0.2	69.6	1.1	69.6	1.1	0.0	69.4	0.9	-0.2	-0.2	69.9	1.5	0.3	0.4	0.5
604 South Van Ness north of Mission	74.5	74.7	0.2	74.7	0.2	0.0	74.7	0.2	0.0	0.0	75.1	0.6	75.1	0.6	0.0	75.3	0.8	0.2	0.1	75.2	0.7	0.1	0.1	-0.1
613 South Van Ness south of Mission	73.4	73.5	0.1	73.6	0.1	0.1	73.5	0.1	0.0	0.0	74.2	0.8	74.1	0.7	-0.1	74.3	0.9	0.1	0.2	74.2	0.8	0.0	0.1	-0.1
622 Market east of Second	68.8	68.9	0.1	69.1	0.3	0.2	69.0	0.2	0.1	-0.1	67.9	-0.9	67.8	-1.0	-0.1	67.9	-0.9	0.0	0.1	65.9	-2.9	-2.0	-1.9	-2.0
631 Market (N. Montgomery-Second)	69.3	69.7	0.4	69.5	0.2	-0.2	69.5	0.3	-0.1	0.0	67.7	-1.6	67.5	-1.8	-0.2	67.5	-1.8	-0.2	0.0	65.9	-3.4	-1.8	-1.6	-1.6
640 Market (Third-N. Montgomery)	69.2	71.7	2.5	71.3	2.1	-0.4	71.4	2.2	-0.3	0.1	71.6	2.4	71.7	2.5	0.1	71.3	2.1	-0.3	-0.4	71.0	1.8	-0.7	-0.8	-0.4
649 Market (Fourth-Third)	67.5	67.7	0.2	67.8	0.3	0.1	67.6	0.1	-0.1	-0.2	66.4	-1.1	66.4	-1.1	0.0	66.4	-1.1	0.1	0.1	65.0	-2.5	-1.4	-1.4	-1.4
658 Market (Fifth-Fourth)	67.4	67.4	0.0	67.6	0.2	0.2	67.6	0.1	0.1	0.0	65.8	-1.6	65.7	-1.8	-0.1	65.9	-1.5	0.1	0.2	65.3	-2.1	-0.5	-0.4	-0.6
667 Market (Sixth-Fifth)	65.8	65.9	0.1	66.0	0.2	0.1	65.9	0.1	0.1	-0.1	63.4	-2.3	63.4	-2.3	0.0	63.6	-2.1	0.2	0.2	62.0	-3.7	-1.4	-1.4	-1.6
676 Market (west of Sixth)	66.9	66.8	0.0	67.1	0.3	0.3	67.0	0.2	0.2	-0.1	65.3	-1.6	65.2	-1.7	-0.1	65.6	-1.3	0.3	0.4	64.9	-2.0	-0.4	-0.3	-0.7
685 Mission east of Second	71.4	71.5	0.1	71.5	0.1	0.0	71.8	0.3	0.3	0.2	72.8	1.4	72.7	1.3	-0.1	72.2	0.8	-0.7	-0.5	72.3	0.9	-0.5	-0.4	0.1
694 Mission (N. Montgomery-Second)	71.6	71.7	0.1	71.7	0.1	0.0	72.1	0.5	0.4	0.4	72.9	1.3	72.8	1.2	-0.1	72.3	0.7	-0.5	-0.4	72.5	0.9	-0.3	-0.2	0.2
703 Mission (Third-N. Montgomery)	71.7	71.8	0.1	72.0	0.2	0.1	72.4	0.6	0.6	0.4	73.2	1.4	73.1	1.4	0.0	72.7	0.9	-0.5	-0.5	72.9	1.1	-0.3	-0.3	0.2
712 Mission (Third-Fourth)	70.8	70.8	0.0	70.9	0.1	0.1	70.9	0.1	0.1	0.1	71.5	0.6	71.6	0.7	0.1	71.6	0.8	0.1	0.0	71.5	0.7	0.0	-0.1	-0.1
721 Mission (Fourth-Fifth)	72.0	72.0	0.0	72.0	0.0	0.0	72.0	0.1	0.1	0.1	72.6	0.7	72.4	0.4	-0.3	72.4	0.4	-0.3	0.0	72.3	0.3	-0.3	-0.1	-0.1
730 Mission (Sixth-Fifth)	71.7	71.9	0.3	71.9	0.2	0.0	71.9	0.2	0.0	0.0	72.5	0.8	72.4	0.7	-0.1	72.3	0.6	-0.2	-0.1	72.0	0.3	-0.5	-0.4	-0.3
739 Mission (Sixth-Seventh)	71.4	71.6	0.1	71.6	0.2	0.1	71.6	0.2	0.0	0.0	72.2	0.8	72.0	0.6	-0.2	72.1	0.6	-0.1	0.1	71.8	0.4	-0.4	-0.2	-0.2
748 Mission (Seventh-Eighth)	71.1	71.2	0.1	71.2	0.2	0.1	71.2	0.1	0.0	-0.1	71.8	0.7	71.6	0.5	-0.2	71.6	0.5	-0.2	0.0	71.3	0.2	-0.5	-0.3	-0.3

Reference Column	Existing - Scenario 1	Existing + Central SoMa Land Uses - Scenario 3		Existing + LU + One-Way Howard/Folsom - Scenario 4			Existing + LU + Two-Way Howard/Folsom - Scenario 5				Cumulative - Scenario 6		Cumulative + Central SoMa Land Uses - Scenario 7			Cumulative + One-Way Howard/Folsom - Scenario 8				Cumulative + Two-Way Howard/Folsom - Scenario 9				
			1 (A)		2 (B)	3		4 [C]	5	6		7 (D)		8 [E]	9 [F]		10 [G]	11 [H]	12		13 [J]	14 [K]	15	16
Segment	Noise (dBA)	Noise (dBA)	Chg. fr. Existing	Noise (dBA)	Chg. fr. Existing	Chg. fr Land Use	Noise (dBA)	Chg. fr. Existing	Chg. fr Land Use	Chg. fr. One-Way	Noise (dBA)	Chg. fr. Existing	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Chg. fr Land Use	Noise (dBA)	Chg. fr. Existing	Chg. fr Cum. (#6)	Chg. fr Land Use	Chg. fr. One-Way
757 Mission (Eighth-Ninth)	71.6	71.7	0.1	71.8	0.2	0.1	71.7	0.1	0.0	-0.1	72.1	0.5	72.1	0.5	-0.1	72.0	0.4	-0.1	-0.1	71.9	0.3	-0.3	-0.2	-0.2
766 Mission (Ninth-Tenth)	70.3	70.5	0.2	70.5	0.2	0.1	70.4	0.1	-0.1	-0.2	70.8	0.5	70.8	0.5	0.0	70.7	0.4	-0.1	-0.1	70.4	0.1	-0.4	-0.4	-0.3
775 Mission (S. Van Ness-Tenth)	70.8	70.9	0.1	71.1	0.3	0.2	70.9	0.1	0.0	-0.2	71.2	0.4	71.3	0.5	0.1	71.1	0.3	-0.1	-0.2	71.0	0.2	-0.2	-0.3	-0.1
784 Howard east of Second	70.7	70.5	-0.2	69.9	-0.8	-0.6	67.8	-2.9	-2.7	-2.1	71.9	1.2	72.0	1.4	0.2	71.6	0.9	-0.3	-0.4	70.3	-0.3	-1.5	-1.7	-1.2
793 Howard (N. Montgomery-Second)	70.1	69.8	-0.3	68.8	-1.3	-0.9	66.9	-3.2	-2.9	-1.9	71.5	1.4	71.7	1.6	0.2	71.3	1.2	-0.2	-0.4	69.4	-0.7	-2.1	-2.3	-1.9
802 Howard (Third-N. Montgomery)	73.4	73.2	-0.2	72.7	-0.6	-0.5	72.2	-1.2	-1.0	-0.5	74.0	0.6	74.0	0.6	0.0	73.6	0.2	-0.4	-0.4	72.7	-0.7	-1.3	-1.3	-0.9
811 Howard (Third-Fourth)	73.4	73.2	-0.2	72.7	-0.7	-0.5	73.1	-0.2	-0.1	0.4	73.9	0.5	74.0	0.6	0.1	73.2	-0.1	-0.7	-0.8	73.7	0.3	-0.2	-0.3	0.4
820 Howard (Fourth-Fifth)	72.5	72.3	-0.3	72.8	0.3	0.6	73.7	1.1	1.4	0.8	73.3	0.7	73.4	0.8	0.1	73.5	0.9	0.2	0.1	74.5	2.0	1.2	1.1	1.1
829 Howard (Sixth-Fifth)	71.7	72.2	0.5	72.7	1.0	0.5	73.9	2.2	1.7	1.2	73.0	1.3	73.4	1.7	0.4	73.3	1.6	0.3	-0.1	74.8	3.1	1.8	1.4	1.5
838 Howard (Sixth-Seventh)	70.6	71.1	0.5	71.3	0.6	0.1	72.7	2.1	1.6	1.5	72.2	1.5	72.8	2.2	0.6	72.3	1.7	0.1	-0.5	74.1	3.5	2.0	1.4	1.8
847 Howard (Seventh-Eighth)	70.7	71.3	0.6	71.3	0.6	0.0	72.9	2.2	1.6	1.6	72.2	1.5	72.7	2.0	0.5	72.4	1.7	0.2	-0.3	74.2	3.5	1.9	1.5	1.8
856 Howard (Eighth-Ninth)	71.0	71.3	0.4	71.3	0.4	0.0	73.3	2.3	1.9	1.9	72.1	1.1	72.6	1.6	0.5	72.3	1.3	0.1	-0.3	74.7	3.7	2.6	2.1	2.4
865 Howard (Ninth-Tenth)	69.6	70.0	0.4	70.1	0.4	0.1	72.1	2.5	2.2	2.1	71.2	1.6	71.8	2.2	0.6	71.7	2.1	0.5	-0.1	73.9	4.3	2.7	2.1	2.2
874 Howard (Tenth-Eleventh)	67.9	68.5	0.6	68.6	0.7	0.1	71.0	3.1	2.5	2.4	69.9	2.0	70.5	2.6	0.6	70.6	2.7	0.7	0.1	72.6	4.7	2.7	2.1	2.1
883 Howard west of Eleventh	66.9	67.0	0.2	67.0	0.2	0.0	72.1	5.2	5.1	5.1	68.3	1.5	68.2	1.3	-0.1	68.3	1.5	0.0	0.1	73.3	6.5	5.0	5.2	5.0
892 Folsom (Embarcadero-Main)	67.5	67.6	0.1	67.7	0.2	0.1	68.3	0.8	0.7	0.6	70.1	2.6	70.3	2.8	0.2	69.8	2.3	-0.3	-0.5	69.6	2.1	-0.6	-0.8	-0.2
901 Folsom (Fremont-Main)	69.2	69.3	0.1	69.3	0.1	0.0	68.1	-1.0	-1.1	-1.1	70.8	1.6	70.8	1.7	0.1	70.5	1.3	-0.3	-0.3	69.7	0.5	-1.1	-1.2	-0.8
910 Folsom (First-Fremont)	68.6	68.9	0.3	68.5	-0.1	-0.4	67.2	-1.3	-1.6	-1.2	70.1	1.5	70.4	1.8	0.3	70.0	1.4	-0.1	-0.4	68.3	-0.3	-1.9	-2.1	-1.8
919 Folsom (Essex-First)	69.0	69.2	0.2	69.0	0.1	-0.1	69.1	0.1	-0.1	0.0	70.7	1.7	70.7	1.7	0.0	70.5	1.5	-0.2	-0.2	69.3	0.3	-1.4	-1.4	-1.2
928 Folsom (Second-Essex)	71.6	71.8	0.2	72.0	0.4	0.2	68.2	-3.4	-3.6	-3.8	73.2	1.6	73.2	1.5	-0.1	73.1	1.4	-0.2	-0.1	69.1	-2.5	-4.2	-4.1	-4.0
937 Folsom (Hawthorne-Second)	71.1	71.0	-0.1	71.2	0.1	0.2	67.6	-3.5	-3.4	-3.6	72.9	1.8	72.8	1.7	-0.1	72.5	1.4	-0.3	-0.3	69.4	-1.6	-3.4	-3.3	-3.1
946 Folsom (Third-Hawthorne)	71.6	71.4	-0.1	71.3	-0.3	-0.1	67.5	-4.1	-4.0	-3.8	72.8	1.2	72.8	1.3	0.0	72.5	1.0	-0.3	-0.3	69.6	-2.0	-3.2	-3.2	-2.9
955 Folsom (Third-Fourth)	72.5	72.5	0.0	72.1	-0.3	-0.3	67.2	-5.3	-5.3	-5.0	73.6	1.1	73.5	1.1	0.0	73.1	0.7	-0.4	-0.4	67.4	-5.1	-6.2	-6.1	-5.7
964 Folsom (Fourth-Fifth)	72.2	72.5	0.3	72.1	0.0	-0.4	68.5	-3.7	-4.0	-3.7	73.6	1.4	73.5	1.4	-0.1	72.9	0.8	-0.7	-0.6	69.2	-2.9	-4.4	-4.3	-3.7
973 Folsom (Sixth-Fifth)	72.2	72.7	0.6	72.1	-0.1	-0.6	68.6	-3.6	-4.1	-3.5	73.6	1.4	73.7	1.6	0.2	73.0	0.8	-0.6	-0.8	70.0	-2.2	-3.6	-3.8	-3.0
982 Folsom (Sixth-Seventh)	72.5	72.8	0.2	71.6	-0.9	-1.2	69.3	-3.2	-3.5	-2.3	73.5	0.9	73.5	1.0	0.0	72.3	-0.3	-1.2	-1.2	70.4	-2.2	-3.1	-3.1	-1.9
991 Folsom (Seventh-Eighth)	72.6	72.7	0.1	72.3	-0.3	-0.4	68.8	-3.8	-3.9	-3.5	73.6	1.0	73.5	0.9	-0.1	72.9	0.3	-0.7	-0.6	69.8	-2.8	-3.7	-3.7	-3.0
1000 Folsom (Eighth-Ninth)	72.1	72.1	0.0	71.6	-0.4	-0.4	69.5	-2.6	-2.5	-2.1	72.9	0.8	72.9	0.8	0.0	72.2	0.1	-0.7	-0.7	70.3	-1.8	-2.6	-2.6	-1.9
1009 Folsom (Ninth-Tenth)	72.2	72.1	0.0	71.7	-0.4	-0.4	69.1	-3.1	-3.1	-2.7	73.2	1.0	73.1	0.9	-0.1	72.5	0.3	-0.7	-0.6	69.9	-2.2	-3.2	-3.1	-2.5
1018 Folsom (Tenth-Eleventh)	71.1	71.2	0.1	70.8	-0.3	-0.4	68.4	-2.8	-2.8	-2.4	72.2	1.0	72.0	0.8	-0.2	71.6	0.4	-0.6	-0.4	69.7	-1.5	-2.5	-2.3	-1.9
1027 Folsom west of Eleventh	71.0	71.1	0.1	70.7	-0.3	-0.4	68.3	-2.7	-2.8	-2.4	72.1	1.0	71.9	0.8	-0.2	71.5	0.4	-0.6	-0.4	69.7	-1.3	-2.3	-2.1	-1.7
1036 Harrison east of Fremont	70.6	70.6	0.0	70.7	0.1	0.1	70.5	-0.1	-0.1	-0.2	71.3	0.7	71.2	0.5	-0.2	71.3	0.7	0.0	0.2	70.9	0.3	-0.5	-0.3	-0.5
1045 Harrison (First-Fremont)	71.0	70.9	-0.1	71.1	0.1	0.2	69.9	-1.0	-0.9	-1.1	71.3	0.4	71.3	0.4	0.0	71.1	0.2	-0.2	-0.2	69.8	-1.2	-1.5	-1.6	-1.3
1054 Harrison (Essex-First)	68.9	69.0	0.1	69.3	0.3	0.3	69.3	0.4	0.3	0.0	70.1	1.1	70.0	1.0	-0.1	70.0	1.1	-0.1	0.0	69.0	0.1	-1.0	-1.0	-1.0
1063 Harrison (Second-Essex)	72.1	72.6	0.5	72.8	0.7	0.2	73.7	1.6	1.1	0.9	73.6	1.5	73.7	1.5	0.1	73.7	1.6	0.1	0.0	73.3	1.1	-0.3	-0.4	-0.4
1072 Harrison (Hawthorne-Second)	70.8	71.4	0.5	71.4	0.5	0.0	71.0	0.1	-0.4	-0.4	72.5	1.7	72.6	1.7	0.0	72.4	1.6	-0.1	-0.1	72.1	1.3	-0.4	-0.4	-0.3
1081 Harrison (Third-Hawthorne)	72.8	73.0	0.3	73.2	0.4	0.1	73.3	0.5	0.3	0.2	73.8	1.1	74.0	1.3	0.2	74.0	1.3	0.2	0.0	74.5	1.7	0.6	0.4	0.4
1090 Harrison (Third-Fourth)	73.1	73.5	0.4	73.9	0.8	0.4	73.7	0.6	0.2	-0.2	73.7	0.5	73.7	0.6	0.0	74.0	0.9	0.4	0.3	74.2	1.1	0.6	0.5	0.2
1099 Harrison (Fourth-Fifth)	71.9	72.4	0.4	71.9	-0.1	-0.5	71.4	-0.6	-1.0	-0.5	72.7	0.7	72.9	1.0	0.2	72.1	0.2	-0.5	-0.8	72.1	0.2	-0.6	-0.8	-0.1
1108 Harrison (Sixth-Fifth)	73.2	74.4	1.2	74.0	0.9	-0.3	73.9	0.7	-0.5	-0.2	74.2	1.0	74.9	1.8	0.8	74.6	1.4	0.4	-0.4	74.1	0.9	-0.1	-0.9	-0.5
1117 Harrison (Sixth-Seventh)	72.6	73.9	1.3	73.5	0.9	-0.4	73.4	0.8	-0.5	-0.1	73.4	0.8	74.5	1.9	1.0	73.6	1.0	0.2	-0.9	73.6	1.0	0.2	-0.9	0.0
1126 Harrison (Seventh-Eighth)	70.7	71.8	1.1	71.8	1.1	-0.1	71.6	0.9	-0.3	-0.2	72.2	1.5	73.2	2.5	1.0	72.0	1.3	-0.3	-1.2	72.2	1.4	-0.1	-1.0	0.2
1135 Harrison (Eighth-Ninth)	72.6	73.1	0.4	72.9	0.3	-0.1	72.6	-0.1	-0.5	-0.4	73.6	0.9	74.3	1.7	0.7	73.7	1.1	0.1	-0.6	73.3	0.7	-0.3	-1.0	-0.4
1144 Harrison (Ninth-Tenth)	70.9	71.5	0.6	71.2	0.3	-0.3	70.6	-0.4	-0.9	-0.7	72.3	1.4	73.0	2.1	0.7	72.6	1.7	0.3	-0.4	71.9	1.0	-0.4	-1.1	-0.7
1153 Harrison west of Tenth	70.6	71.1	0.5	71.0	0.4	-0.1	70.6	0.0	-0.6	-0.4	72.3	1.7	72.4	1.8	0.2	72.4	1.8	0.1	0.0	72.2	1.6	-0.1	-0.2	-0.2
1162 Bryant east of Sterling	66.5	67.8	1.3	67.9	1.4	0.1	68.1	1.6	0.3	0.2	68.9	2.4	69.3	2.8	0.4	69.6	3.0	0.6	0.3	69.7	3.2	0.8	0.4	0.1
1171 Bryant (Sterling-Second)	69.3	69.9	0.6	70.0	0.7	0.1	69.8	0.5	-0.1	-0.2	71.1	1.8	71.4	2.1	0.3	71.6	2.3	0.6	0.3	71.7	2.4	0.6	0.3	0.1
1180 Bryant (Third-Second)	70.1	70.4	0.4	71.8	1.7	1.4	71.8	1.8	1.4	0.0	70.9	0.8	71.2	1.1	0.3	72.4	2.4	1.6	1.2	72.1	2.1	1.3	1.0	-0.3
1189 Bryant (Third-Fourth)	70.4	71.2	0.8	71.7	1.3	0.6	71.8	1.4	0.6	0.1	72.3	1.9	72.7	2.3	0.3	73.1	2.7	0.8	0.4	73.6	3.2	1.2	0.9	0.5
1198 Bryant (Fourth-Fifth)	69.7	70.5	0.8	71.3	1.6	0.8	71.3	1.6	0.7	0.0	70.3	0.6	71.1	1.5	0.8	72.1	2.4	1.8	1.0	72.1	2.5	1.9	1.0	0.0
1207 Bryant (Fifth-Sixth)	70.0	70.8	0.8	70.9	1.0	0.2	70.9	1.0	0.2	0.0	71.1	1.2	71.4	1.5	0.3	72.4	2.5	1.3	1.0	72.2	2.3	1.1	0.8	-0.2
1216 Bryant (Sixth-Seventh)	70.2	71.3	1.1	72.1	1.9	0.8	72.6	2.3	1.2	0.5	71.3	1.1	71.6	1.4	0.4	72.6	2.4	1.4	1.0	72.6	2.4	1.3	0.9	-0.1
1225 Bryant (Seventh-Ninth)	70.7	71.0	0.3	71.0	0.3	0.0	70.9	0.2	-0.1	-0.1	71.1	0.4	71.2	0.5	0.2	71.1	0.5	0.1	-0.1	71.1	0.4	0.1	-0.1	0.0
1234 Bryant (Ninth-Eleventh)	69.7	70.0	0.2	70.0	0.2	0.0	70.0	0.3	0.0	0.0	70.1	0.3	70.1	0.4	0.0	70.0	0.3	0.0	-0.1	70.6	0.8	0.5	0.5	0.5
1243 Brannan east of Second	70.0	70.2	0.1	71.0	1.0	0.9	70.6	0.5	0.4	-0.4	70.0	0.0	70.2	0.2	0.2	70.2	0.2	0.2	0.0	70.7	0.7	0.7	0.5	0.5
1252 Brannan (Second-Third)	71.3	71.6	0.3	71.6	0.4	0.0	71.2	0.0	-0.3	-0.4	71.4	0.1	71.5	0.3	0.1	70.9	-0.3	-0.4	-0.6	71.1	-0.1	-0.2	-0.4	0.2
1261 Brannan (Third-Fourth)	71.8	72.4	0.6	71.2	-0.6	-1.2	70.9	-0.8	-1.5	-0.2	71.7	-0.1	72.2	0.4	0.5	70.9	-0.9	-0.9	-1.3	71.3	-0.5	-0.4	-0.9	0.4
1270 Brannan (Fourth-Fifth)	72.0	72.6	0.6	72.8	0.8	0.2	72.3	0.3	-0.3	-0.6	73.1	1.1	73.5	1.5	0.4	73.4	1.4	0.3	-0.1	73.8	1.8	0.7	0.3	0.4
1279 Brannan (Fifth-Sixth)	73.4	74.5	1.1	73.7	0.3	-0.8	73.5	0.2	-0.9	-0.2	75.2	1.8	75.7	2.4	0.5	73.1	-0.3	-2.1	-2.7	73.3	-0.1	-1.9	-2.4	0.2
1288 Brannan west of Sixth	71.1	72.2	1.1	71.6	0.5	-0.6	71.6	0.5	-0.7	-0.1	72.6	1.5	73.5	2.4	0.9	72.4	1.3	-0.2	-1.1	72.4	1.3	-0.2	-1.1	0.0
1297 Townsend east of Second	67.0	66.6	-0.4	67.6	0.6	1.0	66.9	0.0	0.4	-0.7	67.4	0.5	67.4	0.4	-0.1	67.8	0.8	0.3	0.4	67.1	0.1	-0.3	-0.3	-0.6
1306 Townsend (Second-Third)	69.0	68.8	-0.2	69.7	0.6	0.8	70.2	1.1	1.3	0.5	70.5	1.4	70.7	1.7	0.2	71.6	2.5	1.1	0.9	71.4	2.4	0.9	0.7	-0.2
1315 Townsend (Third-Fourth)	70.3	70.2	-0.1	70.9	0.6	0.7	71.4	1.2	1.2	0.6	69.9	-0.4	70.3	0.0	0.5	71.1	0.8	1.3	0.8	70.8	0.6	1.0	0.5	-0.3
1324 Townsend (Fourth-Fifth)	69.4	69.8	0.3	71.4	1.9	1.6	71.1	1.6	1.3	-0.3	70.7	1.2	71.3	1.8	0.6	72.3	2.8	1.6	1.0	71.8	2.3	1.1	0.5	-0.5
1333 Townsend west of Fifth	69.6	70.5	0.9	70.8	1.2	0.3	71.0	1.4	0.4	0.2	71.2	1.6	71.9	2.3	0.7	72.3	2.7	1.0	0.4	72.0	2.4	0.8	0.1	-0.3
Maximum	75.1	75.0	2.5	75.1	2.4	1.6	75.1	5.2	5.1	5.1	75.8	3.1	75.9	3.3	1.6	76.2	3.1	2.0	1.3	75.9	6.5	5.0	5.2	5.0
Second Highest	74.8	74.8	1.8	75.1	2.1	1.4	75.0	3.1	2.5	2.4	75.7	2.8	75.7	2.8	1.0	75.7	3.0	1.8	1.2	75.6	4.7	2.7	2.1	2.4
Third Highest	74.7	74.8	1.4	74.9	1.9	1.3	74.9	2.54	2.2	2.1	75.5	2.6	75.7	2.8	1.0	75.6	2.8	1.6	1.1	75.3	4.3	2.69	2.11	2.22
Fourth Highest	74.5	74.7	1.3	74.9	1.9	1.3	74.8	2.3	1.9	1.9	75.3	2.4	75.5	2.7	0.9	75.5	2.7	1.6	1.0	75.2	3.7	2.57	2.11	2.05
Fifth Highest	74.4	74.6	1.3	74.8	1.8	1.0	74.7	2.3	1.70	1.58	75.2	2.39	75.3	2.69	0.8	75.5	2.67	1.6	1.0	75.2	3.5	2.0	1.5	1.8
Sixth Highest	74.2	74.5	1.2	74.7	1.7	0.9	74.7	2.3	1.6	1.5	75.1	2.2	75.2	2.60	0.8	75.3	2.66	1.4	1.0	75.2	3.5	1.9	1.4	1.8
									1.6								2.6				3.2	1.9		1.8
Number of increases of 3.0 dB or more	21		0		0	0		2	1	1		1		1	0		2	0	0		10	1	1	1
	2384		149		149	149		149	149	149		149		149	149		149	149	149		149	149	149	149
	0.9%		0.0%		0.0%	0.0%		1.3%	0.7%	0.7%		0.7%		0.7%	0.0%		1.3%	0.0%	0.0%		6.7%	0.7%	0.7%	0.7%

APPENDIX E
Shadow Modeling Results

Central SoMa Plan
June 21 Sunrise +1 Hour (6:47 am)

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 7:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 8:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

CA
DP

Central SoMa Plan
June 21 9:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 10:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
June 21 11:00 am

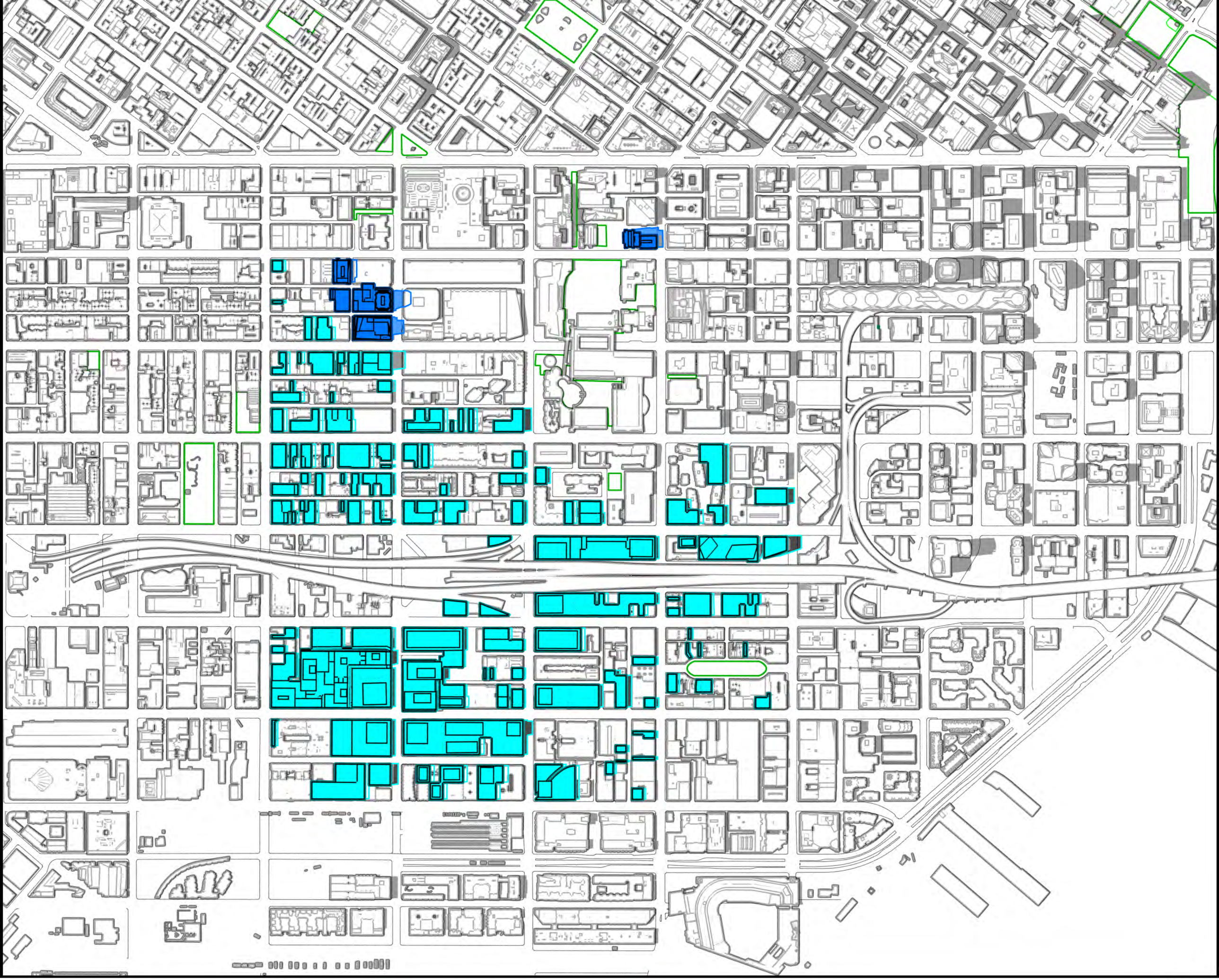
Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 12:00 noon

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 1:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
June 21 2:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 3:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 4:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

CA
DP

Central SoMa Plan
June 21 5:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 6:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

CA DP

Central SoMa Plan
June 21 7:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
June 21 Sunset -1 Hour (7:36 pm)

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 Sunrise +1 Hour (7:57 am)

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 8:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 9:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 10:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

CA DP

Central SoMa Plan
September 20 11:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
September 20 12:00 noon

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 1:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 2:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 3:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

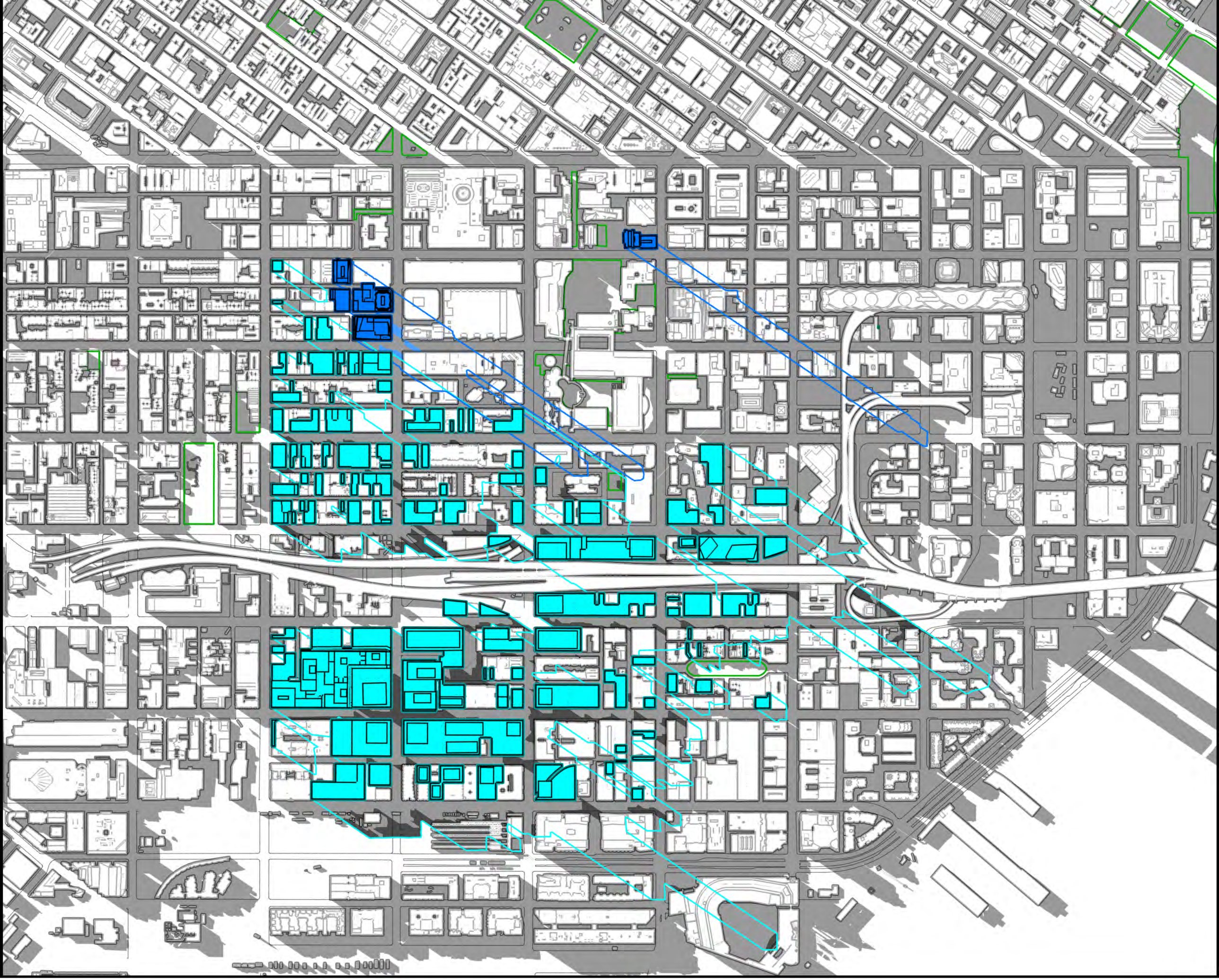
Central SoMa Plan
September 20 4:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

CA DP

Central SoMa Plan
September 20 5:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
September 20 6:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
September 20 Sunset -1 Hour (6:09 pm)

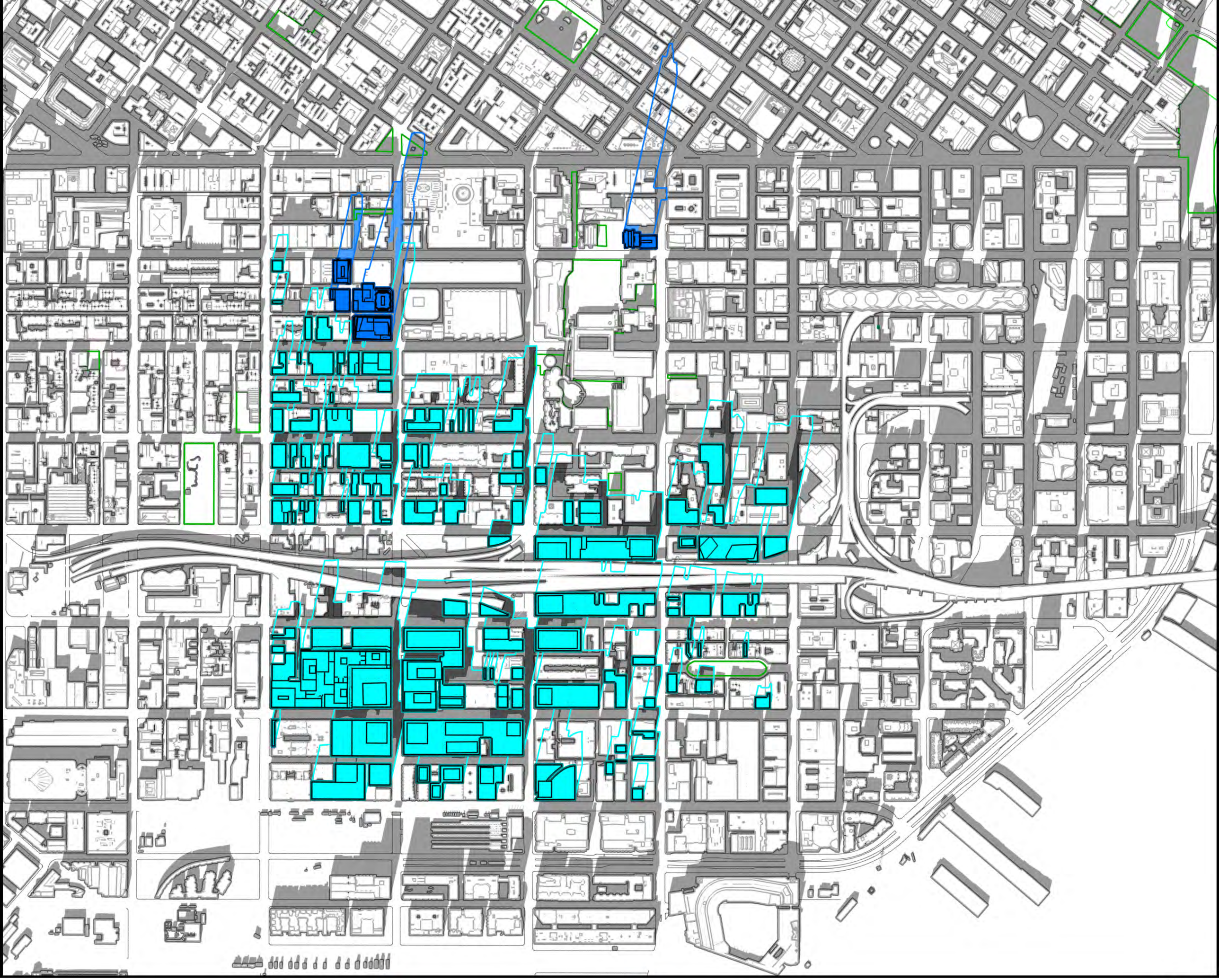
Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
December 20 Sunrise +1 Hour (8:20 am)

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
December 20 9:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



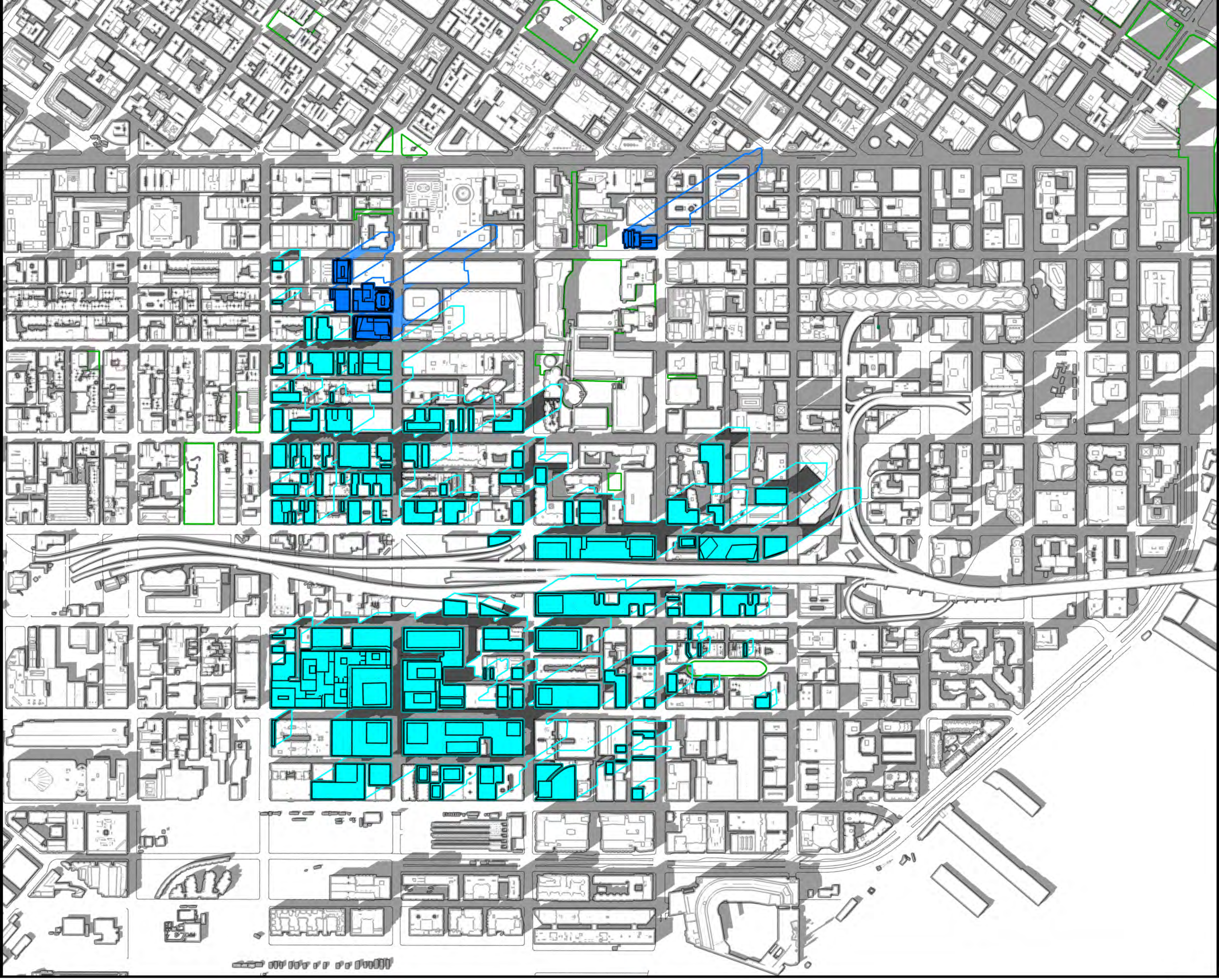
Central SoMa Plan
December 20 10:00 am

Central SoMa Plan
December 20 11:00 am

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

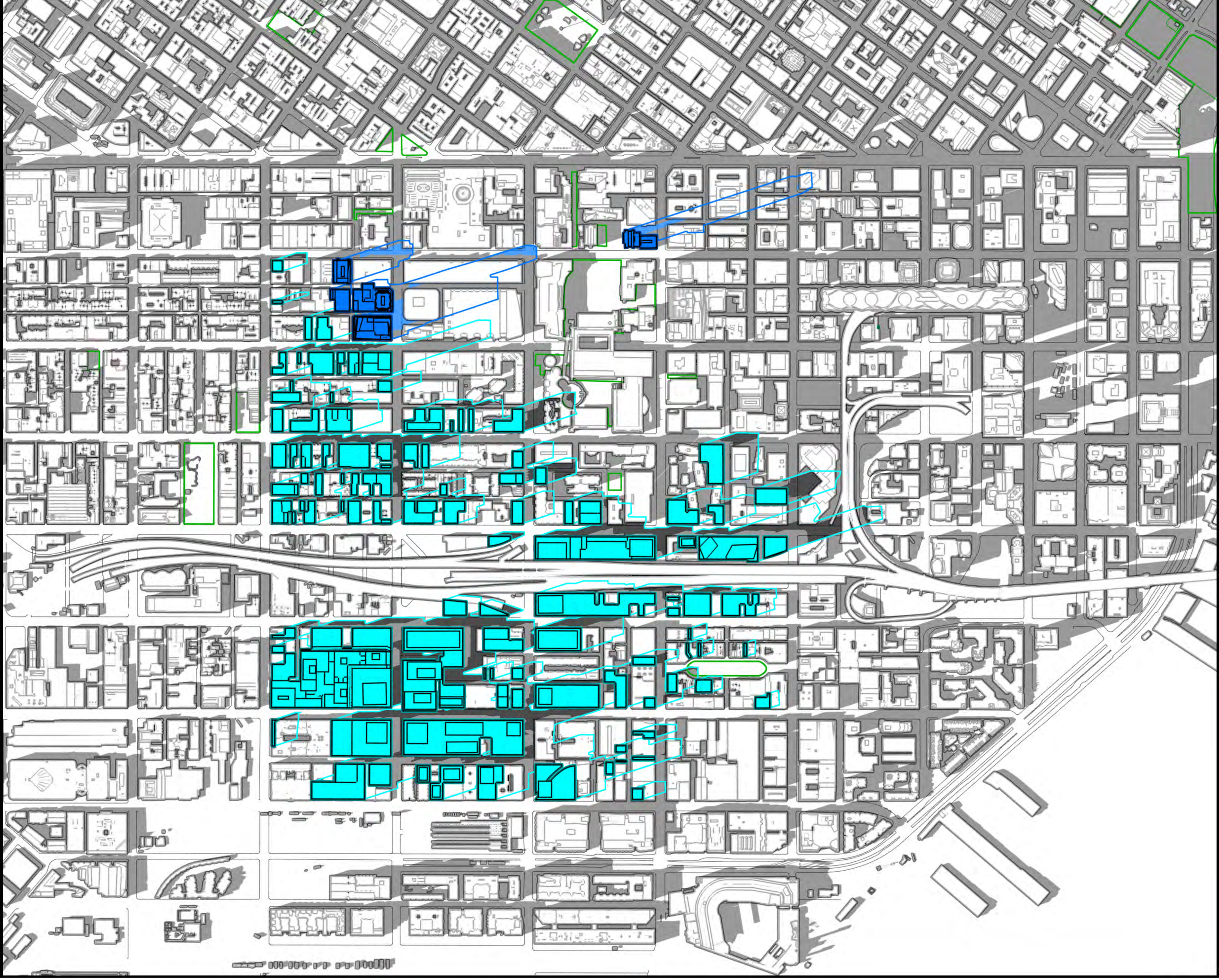
Central SoMa Plan
December 20 12:00 noon

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
December 20 1:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
December 20 2:00 pm

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows



Central SoMa Plan
December 20 3:00 pm

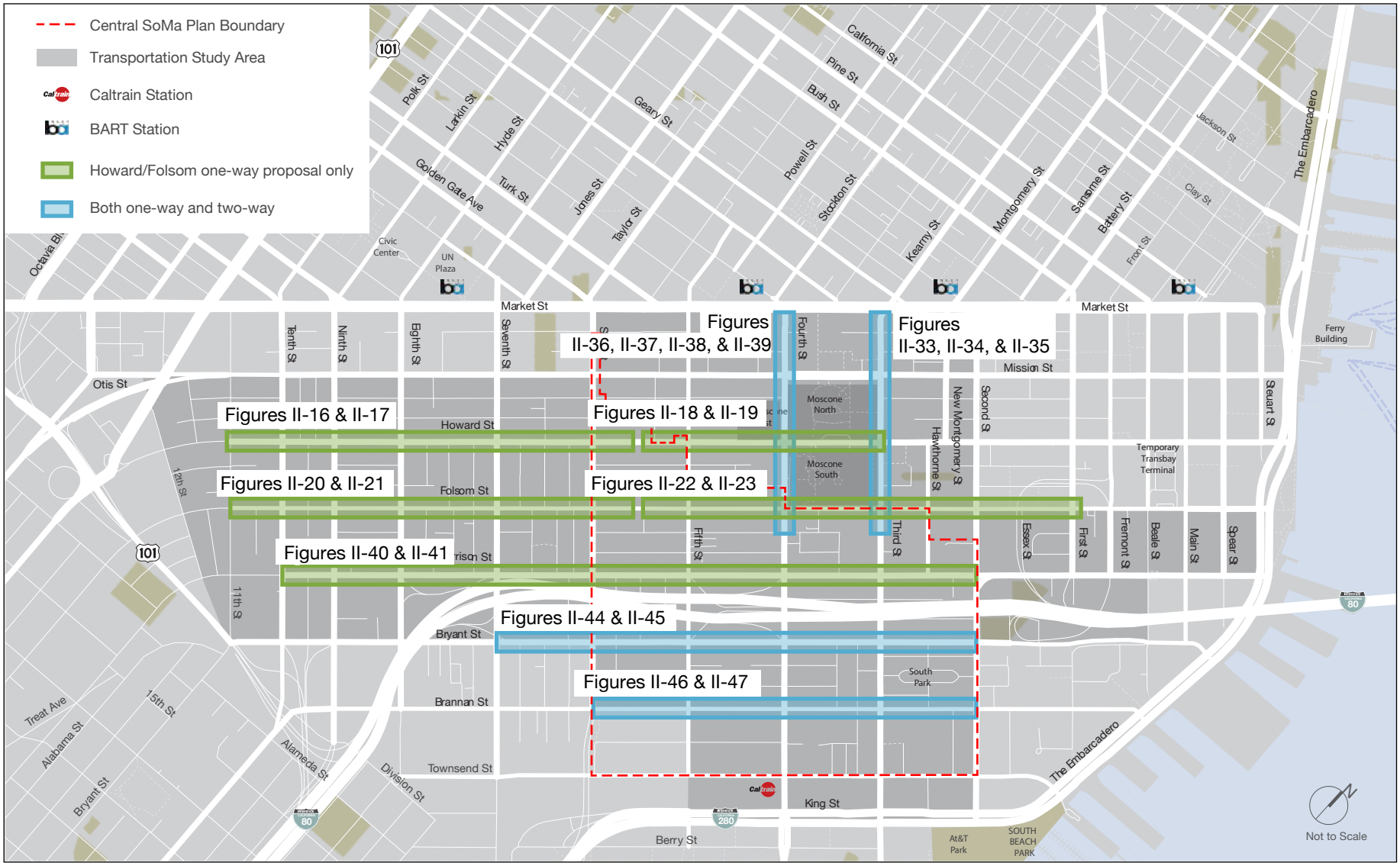
Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

Central SoMa Plan
December 20 Sunset -1 Hour (3:54 pm)

Proposed New Buildings
Proposed New Buildings Net New Shadows
Existing Shadows
Proposed New Buildings 5M & 706 Mission
Proposed New Buildings 5M & 706 Mission Net New Shadows

APPENDIX F

Proposed Street Network Changes Detail Drawings

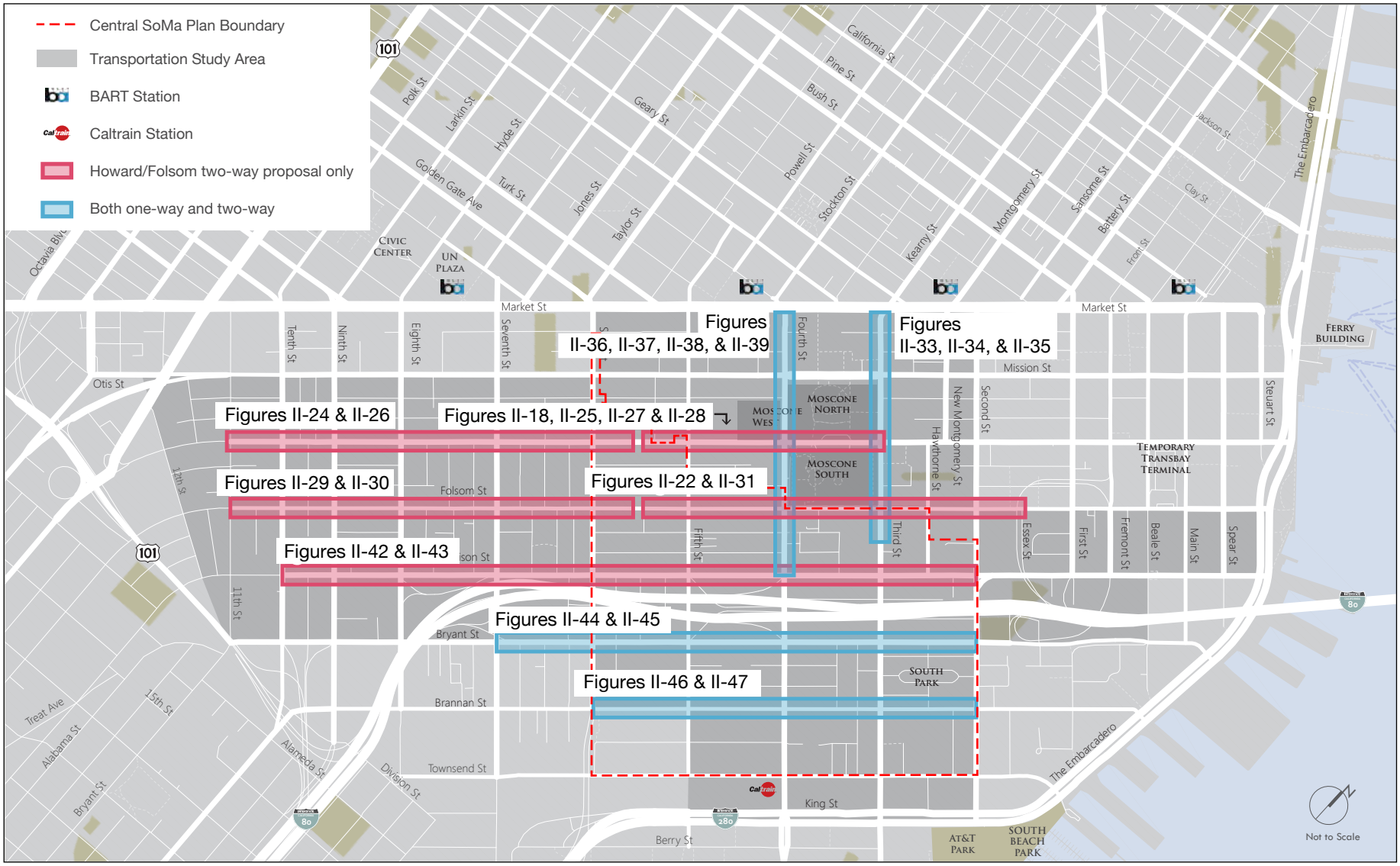


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-1

Howard/Folsom One-Way Description Figure Index

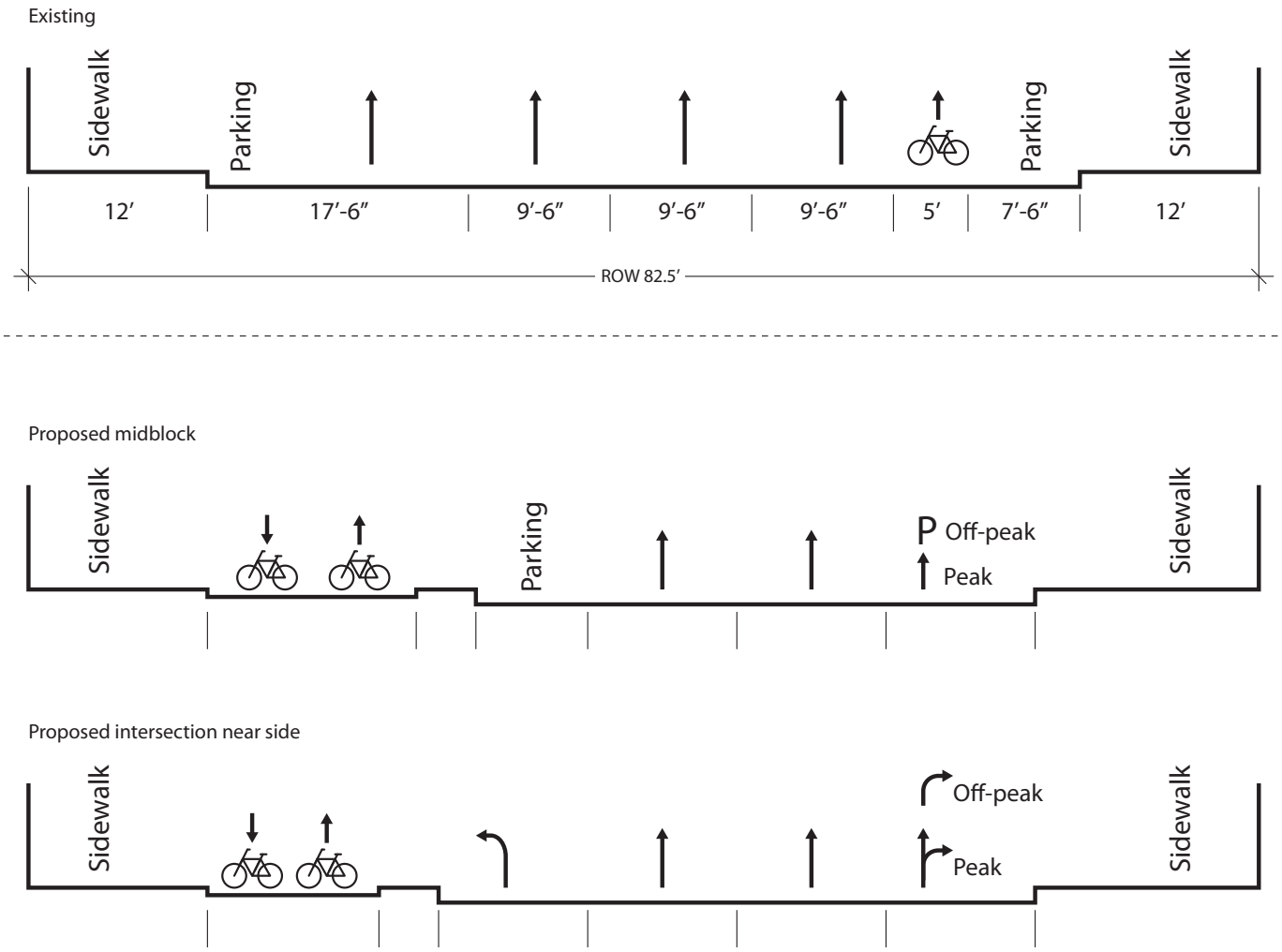


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-2

Howard/Folsom Two-Way Project Description Figure Index



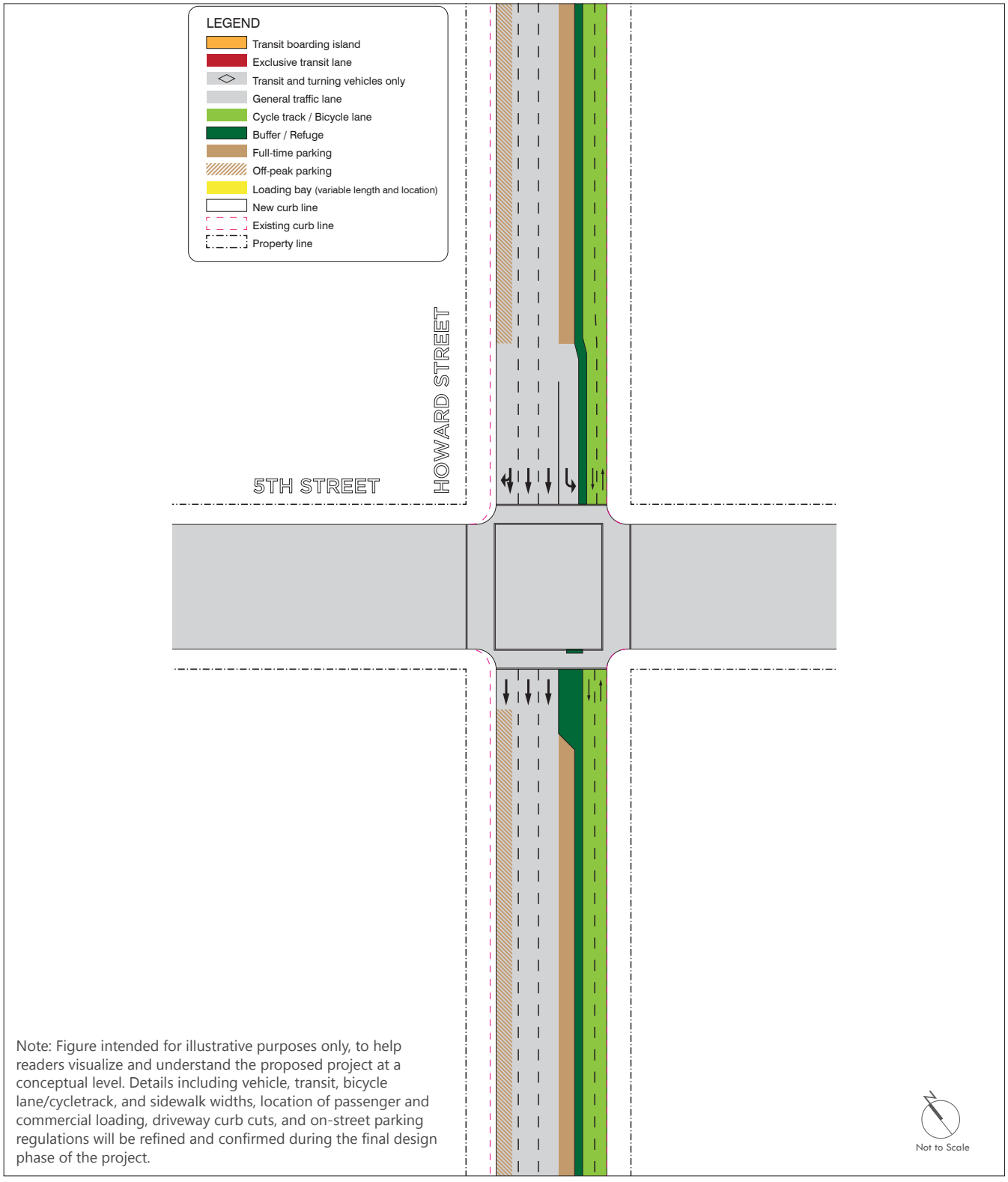
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-3

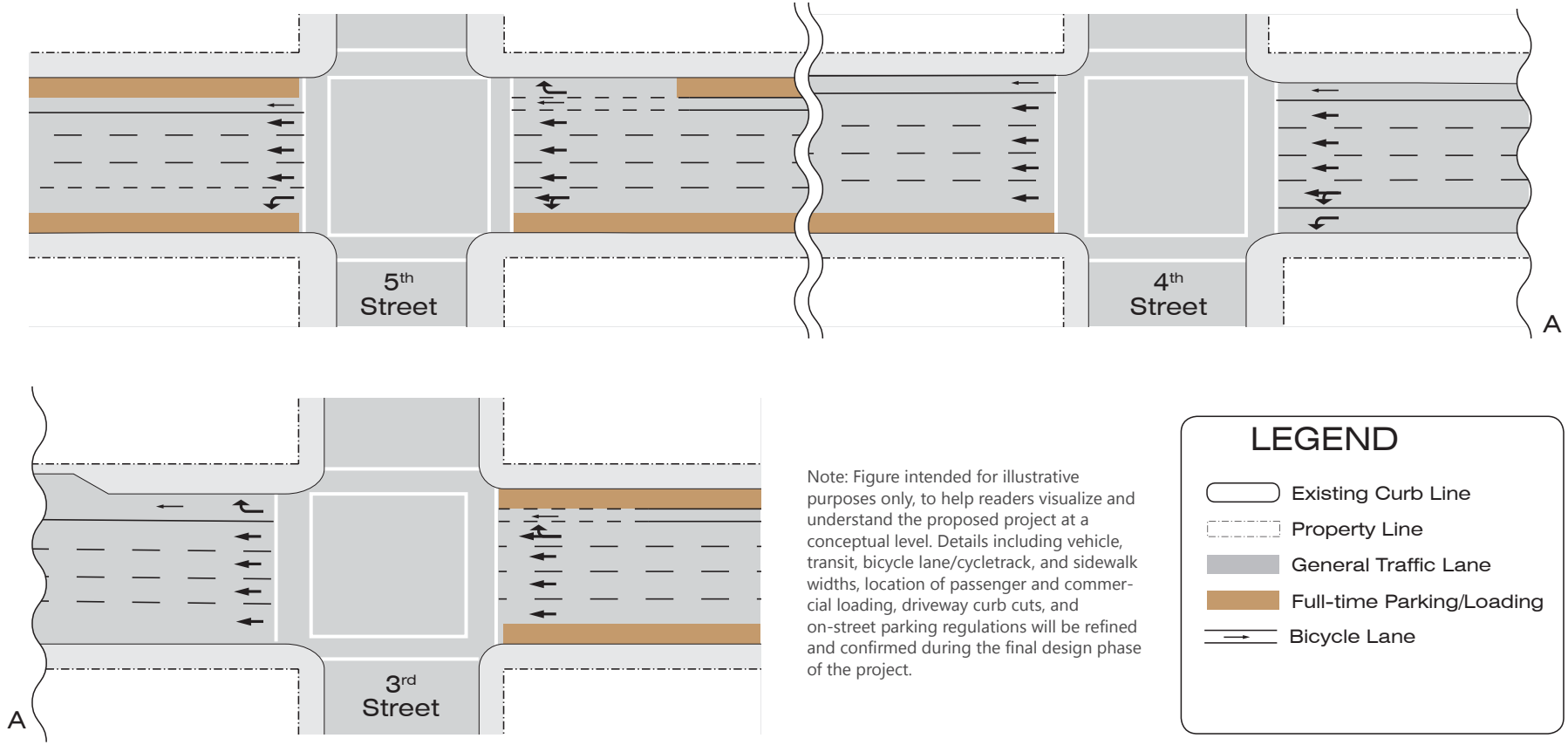
Howard/Folsom One-Way Option: Howard Street
Existing & Proposed Typical Cross Sections



Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-4
Howard/Folsom One-Way Option: Howard Street
West of Fifth Street Proposed Plan View

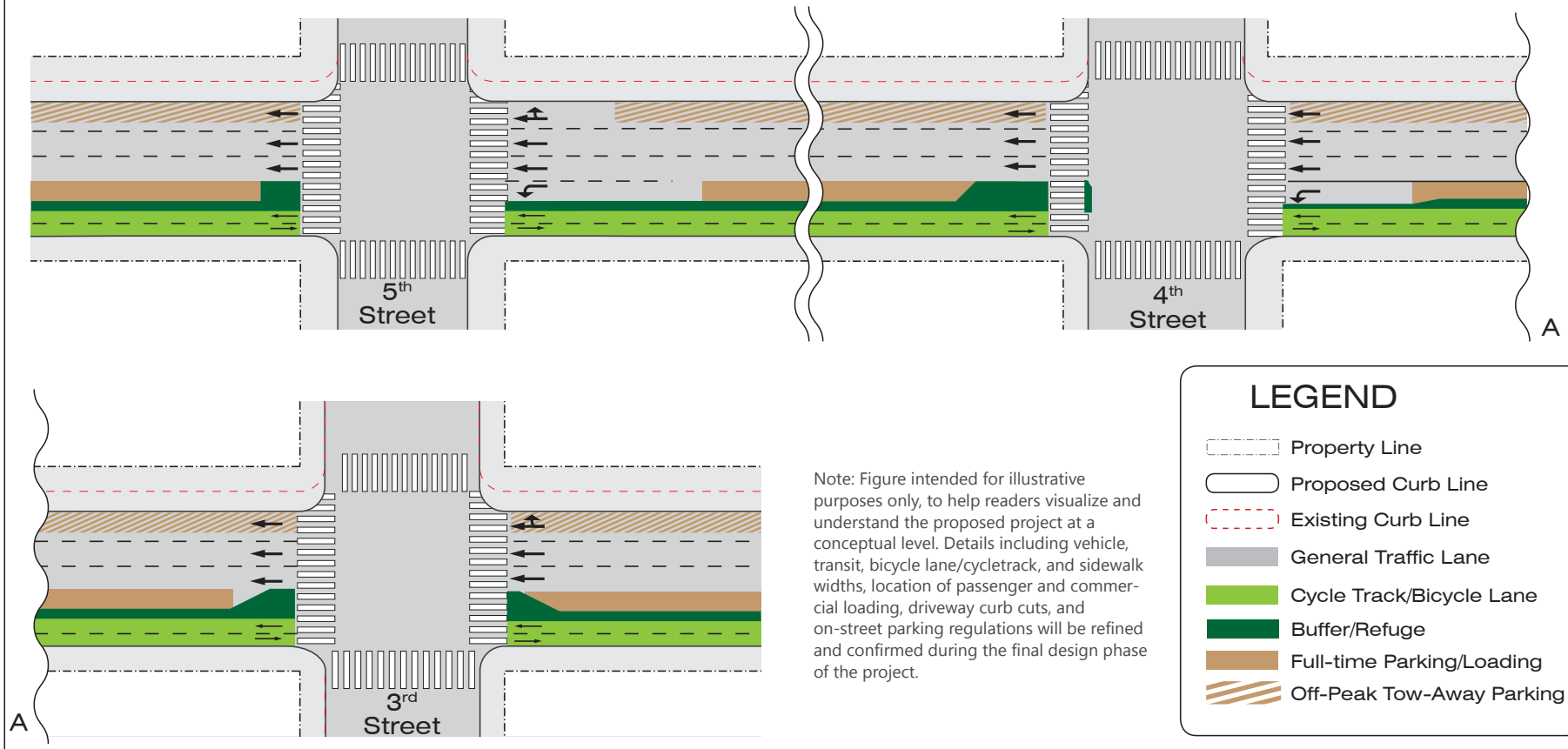


Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-5

Howard Street Between Third Street and Fifth Street Existing Plan View

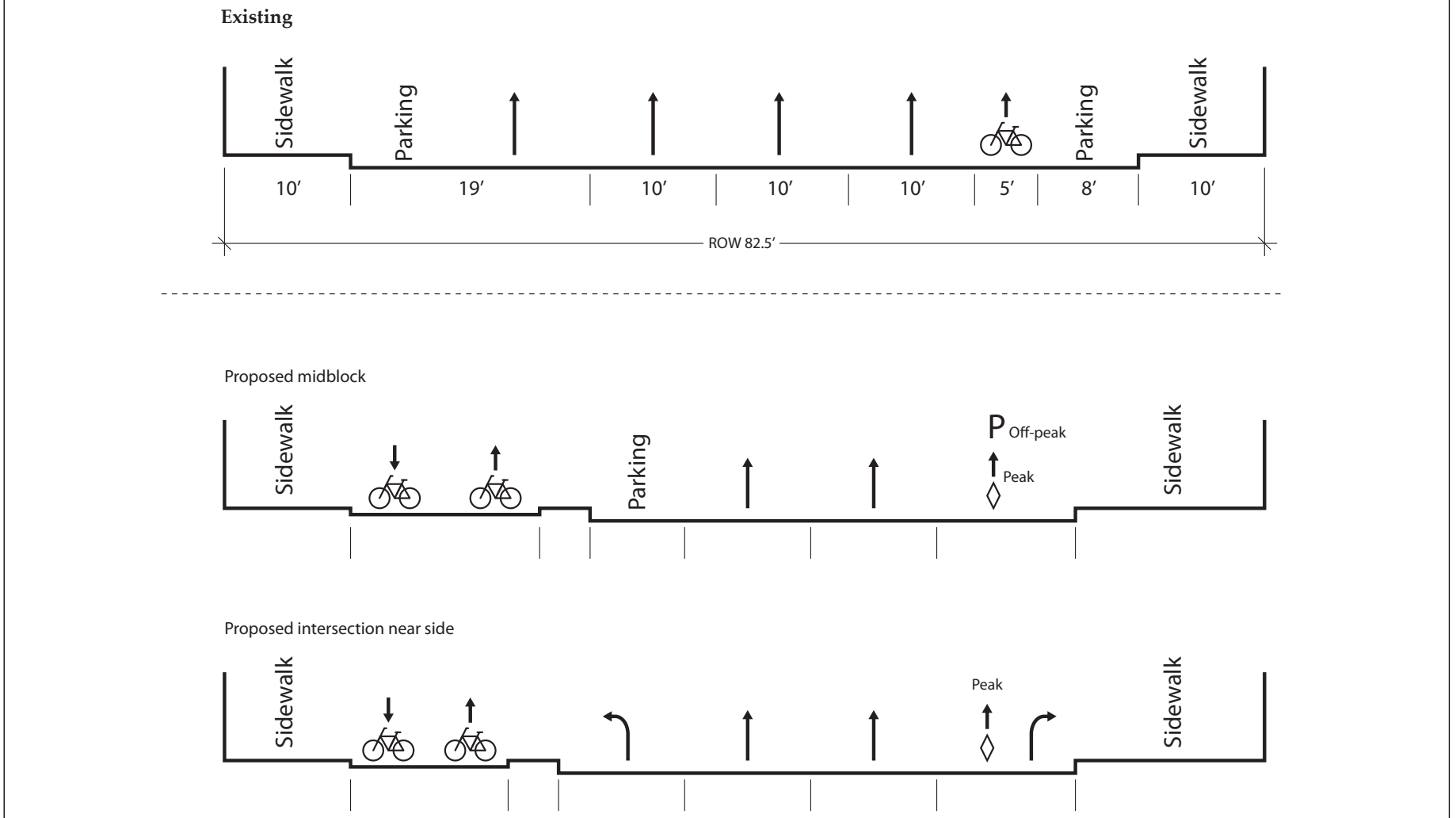


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-6

Howard/Folsom One-Way Option: Howard Street between Third Street and Fifth Street Plan View



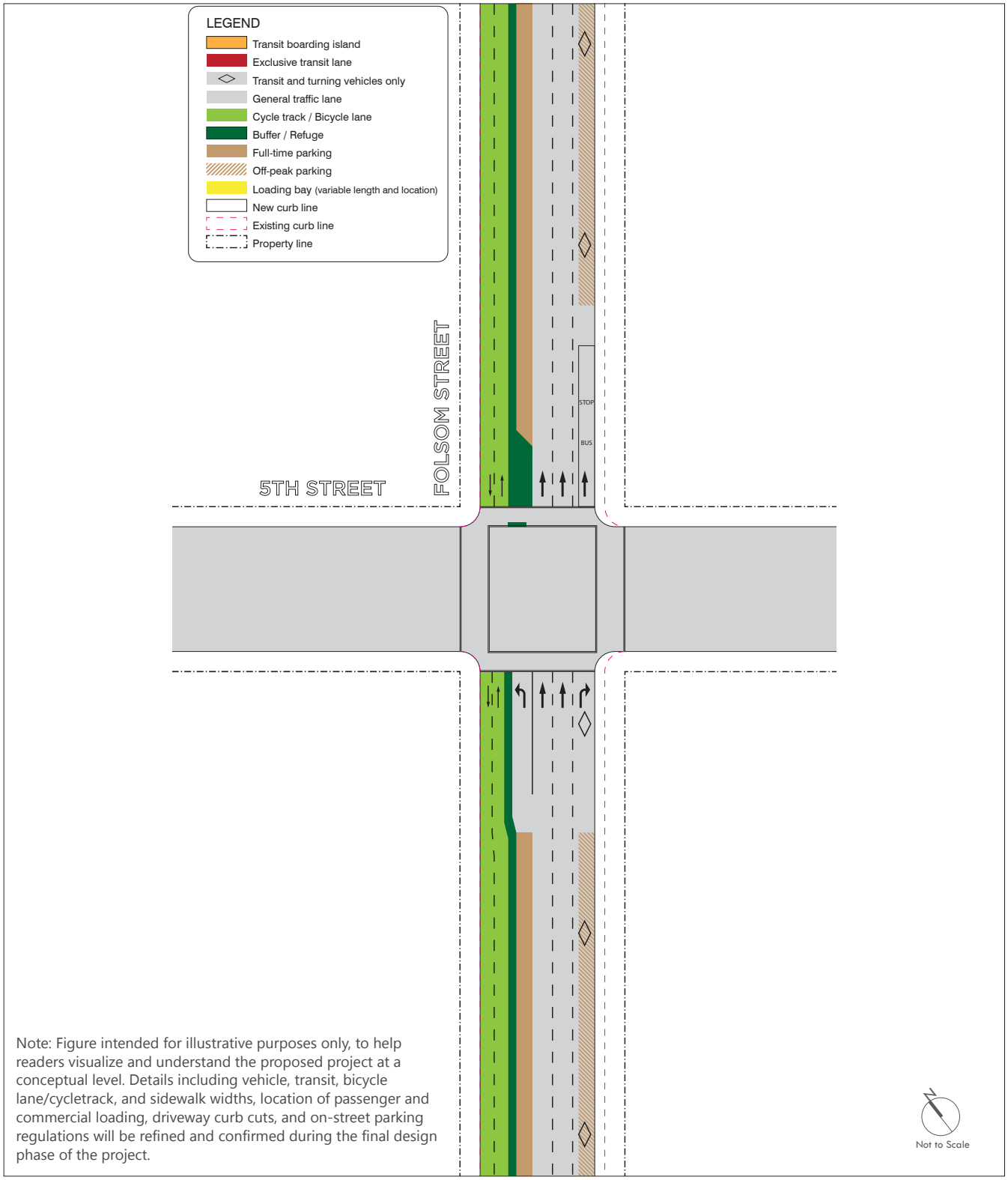
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-7

Howard/Folsom One-Way Option: Folsom Street Existing and Proposed Typical Cross Sections



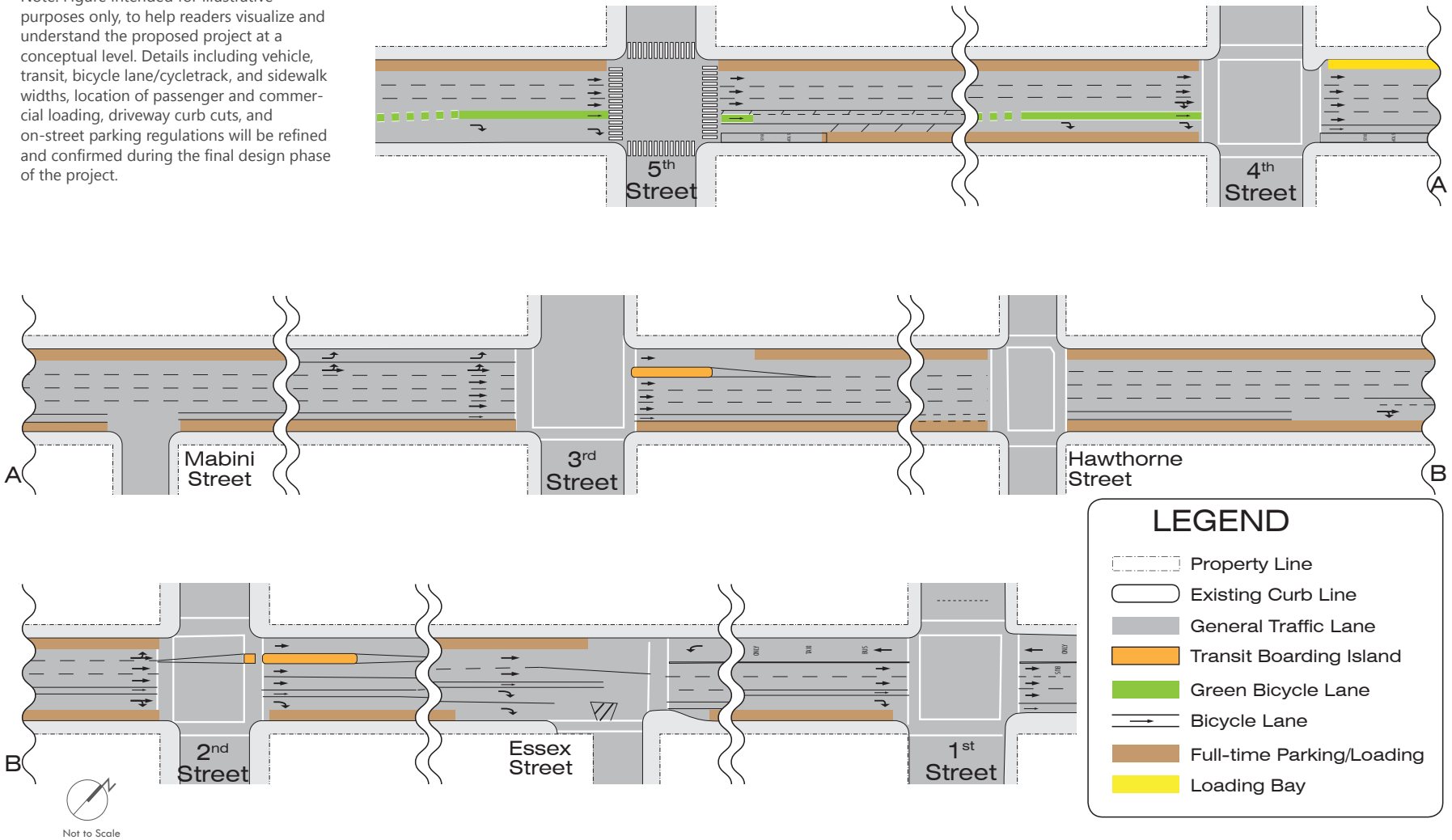
Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-8

Howard/Folsom One-Way Option: Folsom Street West of Fifth Street Proposed Plan View

Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

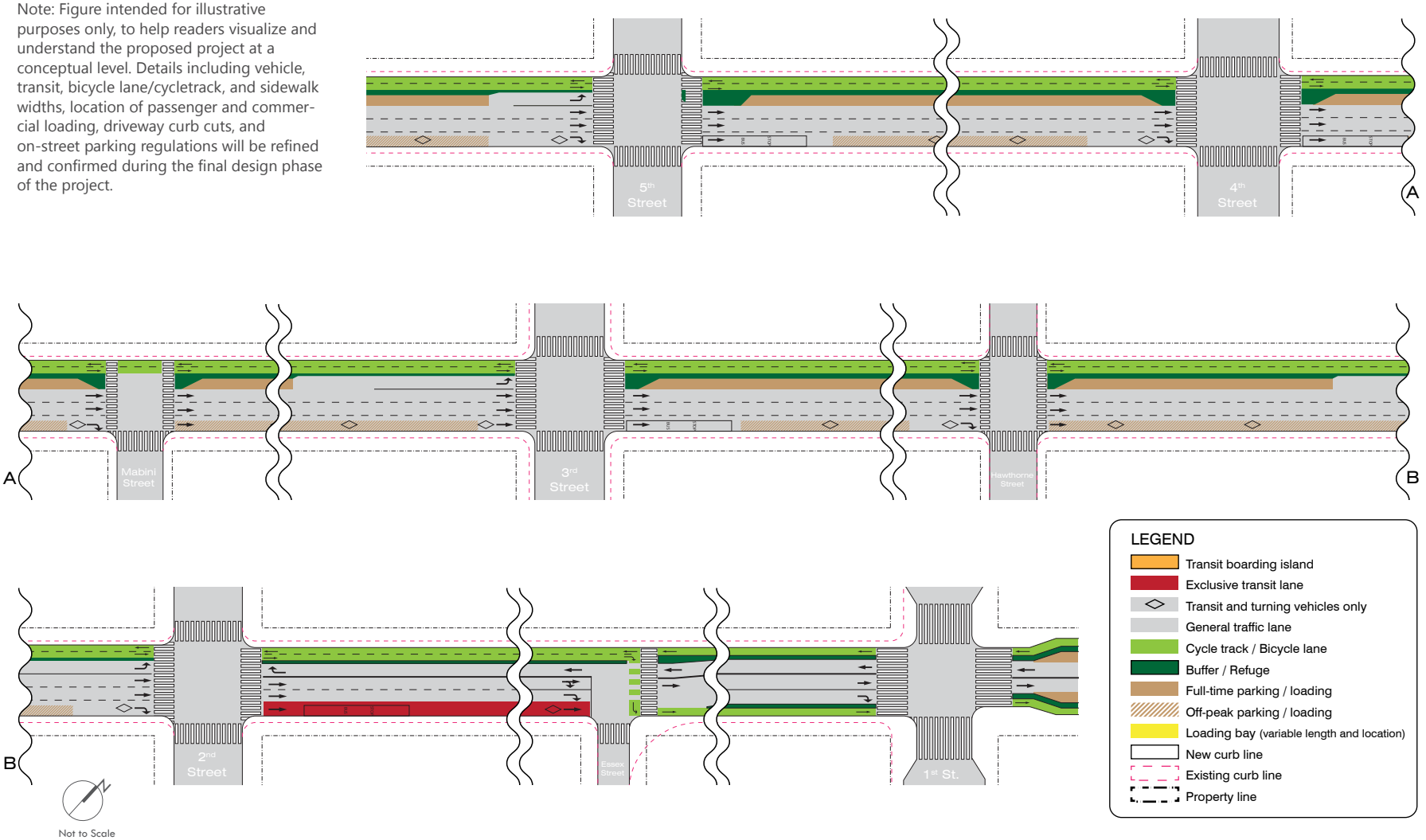


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-9
Folsom Street between Fifth Street and First Street Existing Plan View

Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

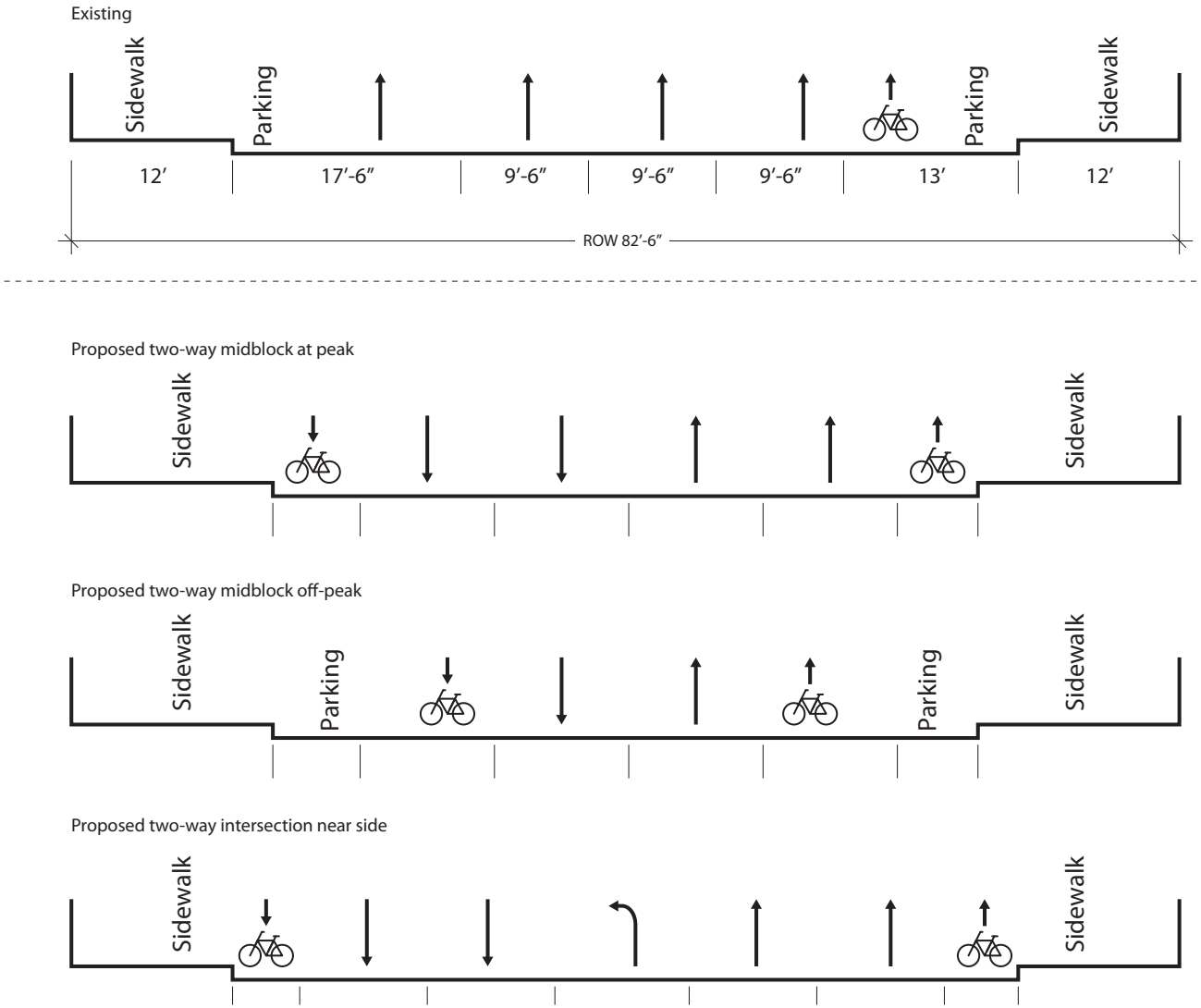


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-10

Howard/Folsom One-Way Option: Folsom Street between Fifth and First Street Proposed Plan View

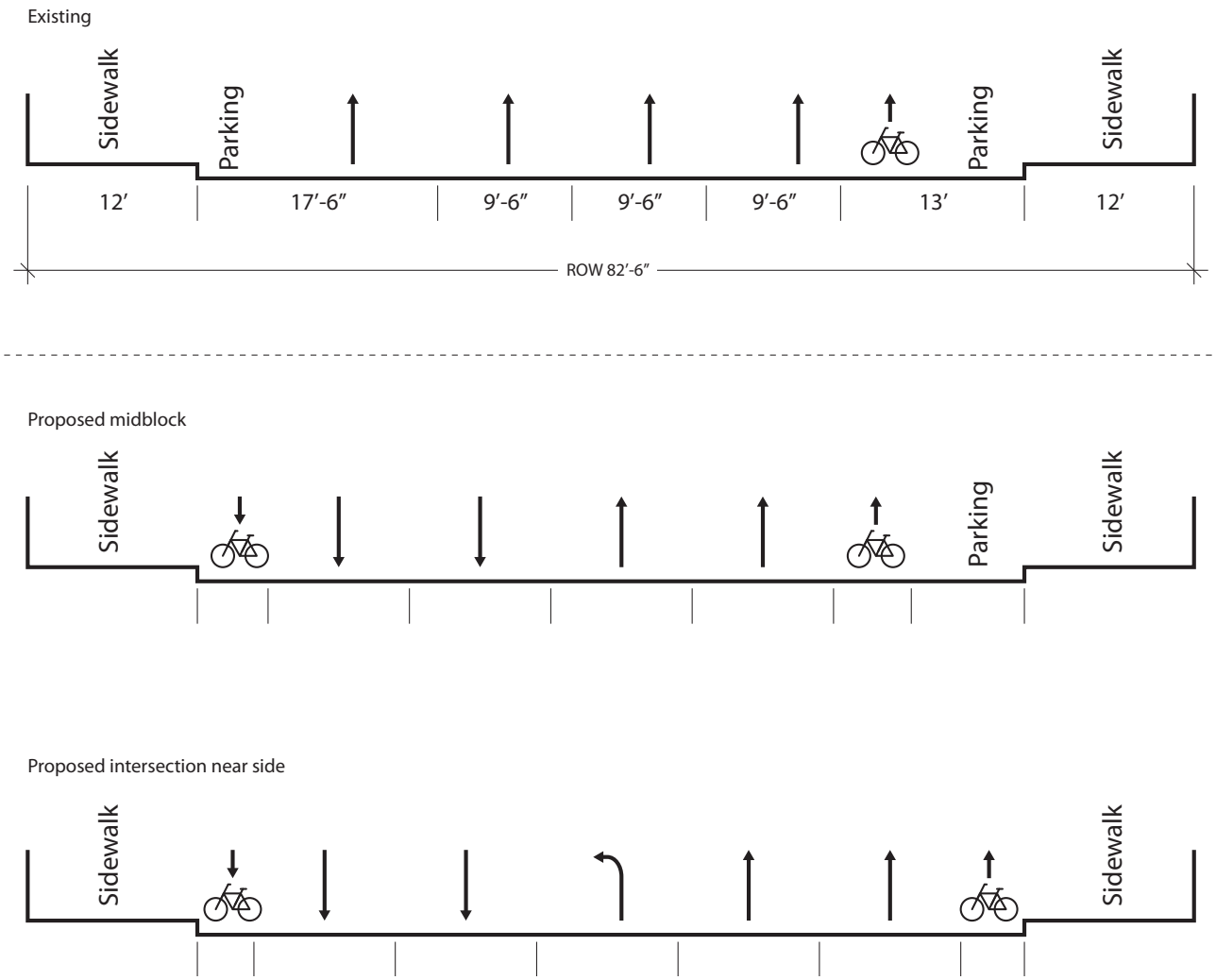


Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Figure F-11

Howard/Folsom Two-Way Option: Howard Street between Sixth and 11th Streets Existing & Proposed Typical Cross Sections



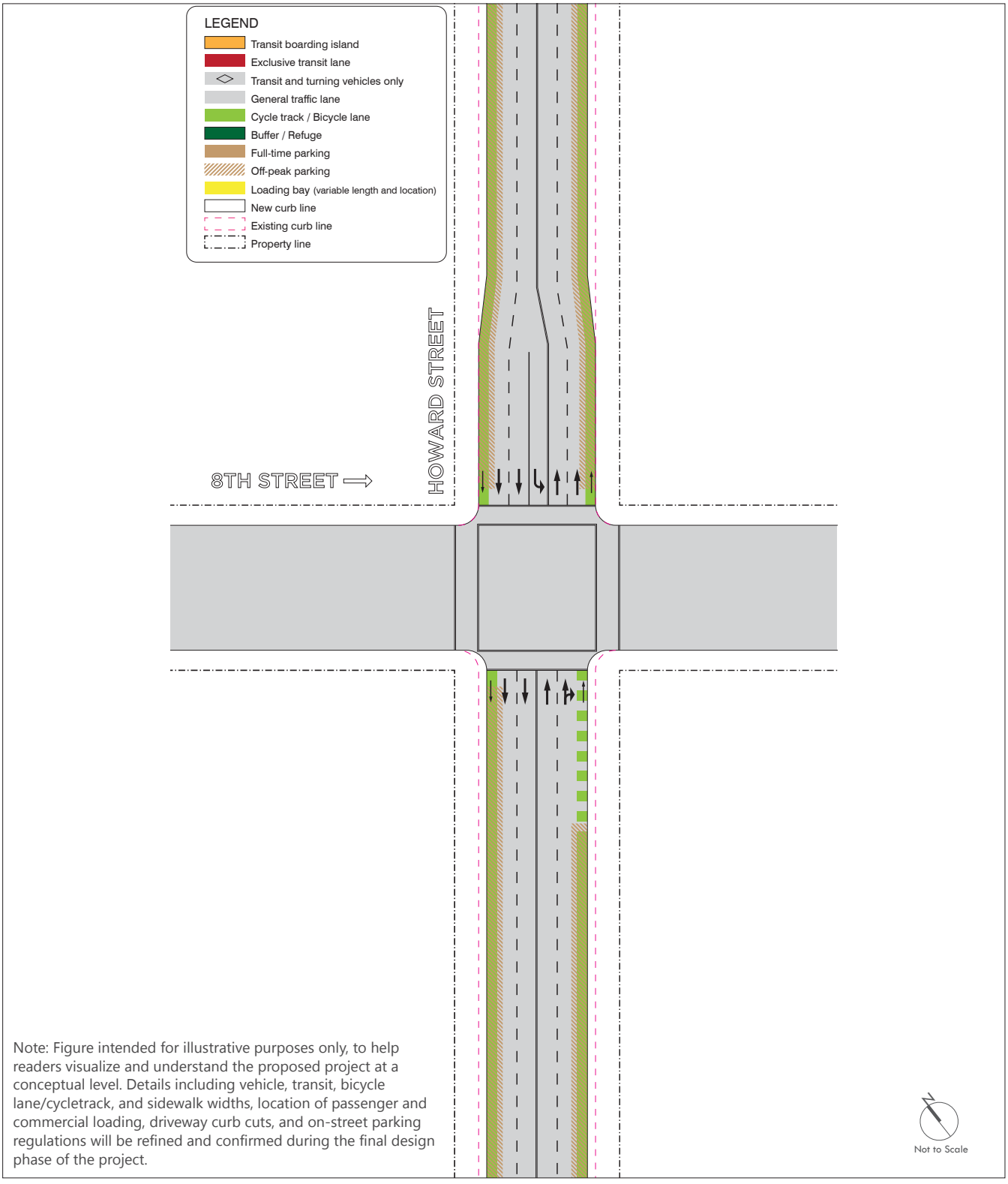
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-12

Howard/Folsom Two-Way Option: Howard Street between Fourth and Sixth Streets Existing & Proposed Typical Cross Sections

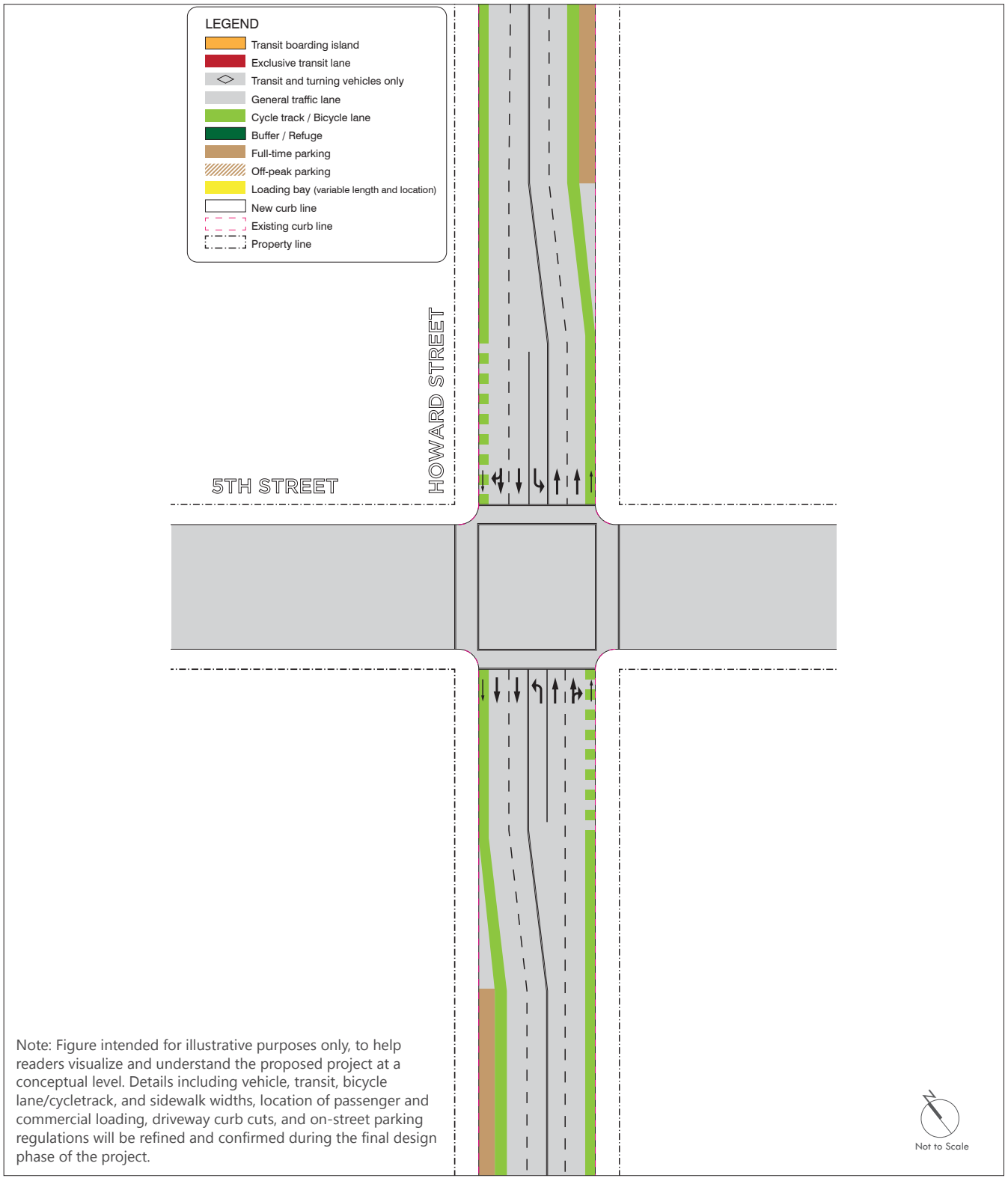


Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-13

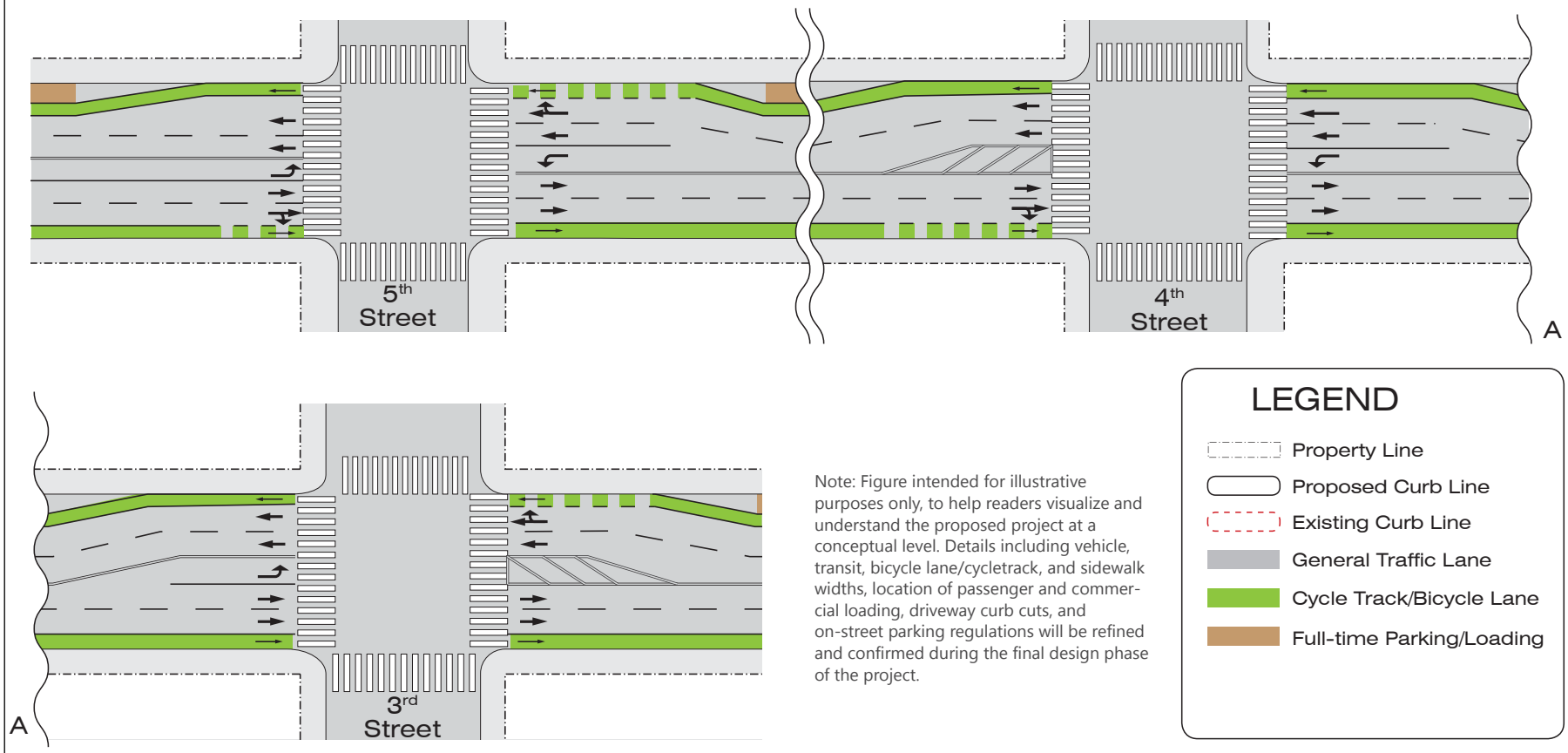
Howard/Folsom Two-Way Option: Howard Street between Sixth and 11th Streets Existing & Proposed Plan View



Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure II-14
Howard/Folsom Two-Way Option: Howard Street between Fourth and Sixth Streets Proposed Plan View

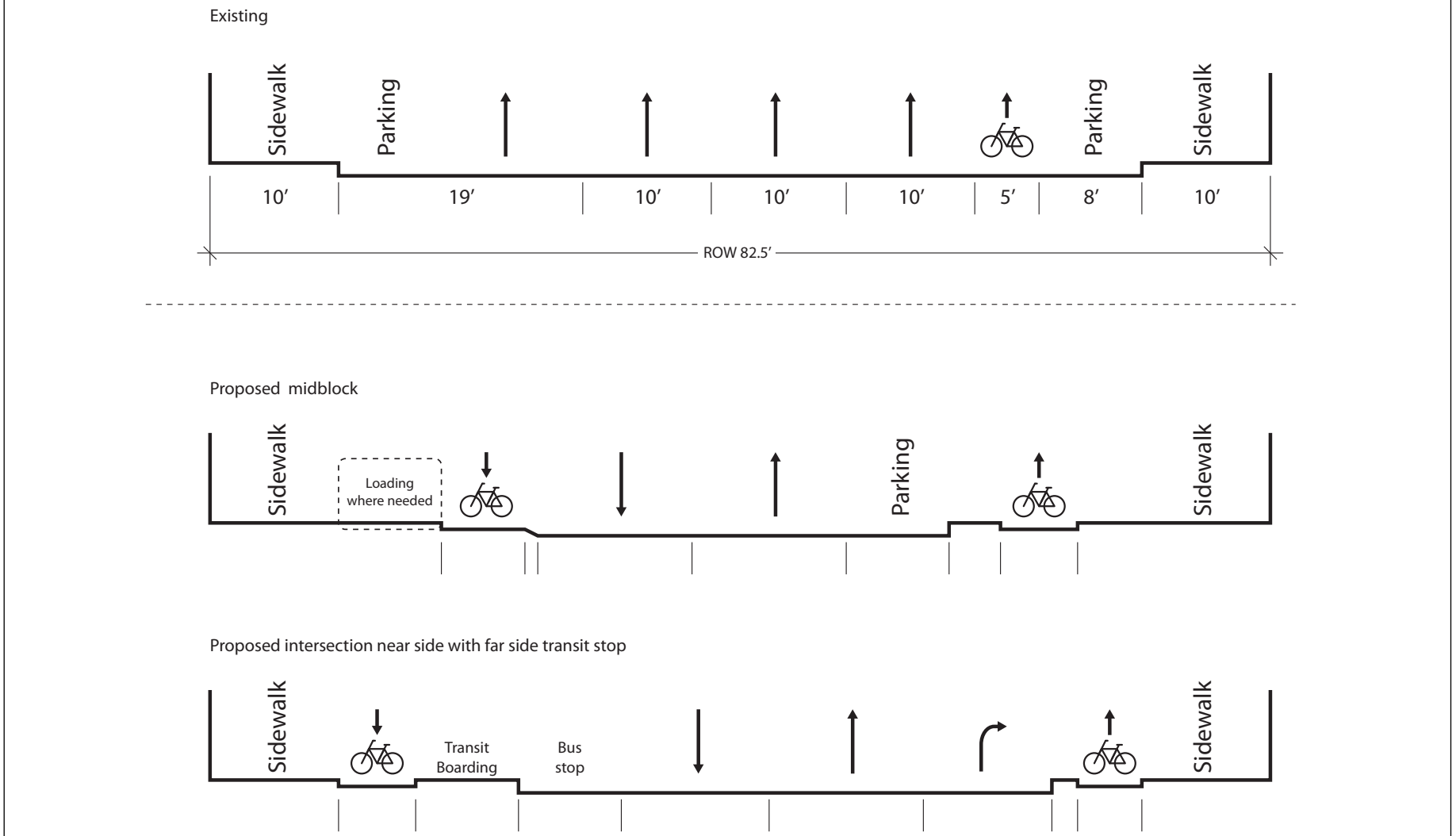


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-15

Howard/Folsom Two-Way Option: Howard Street between Fifth and Third Street Plan View

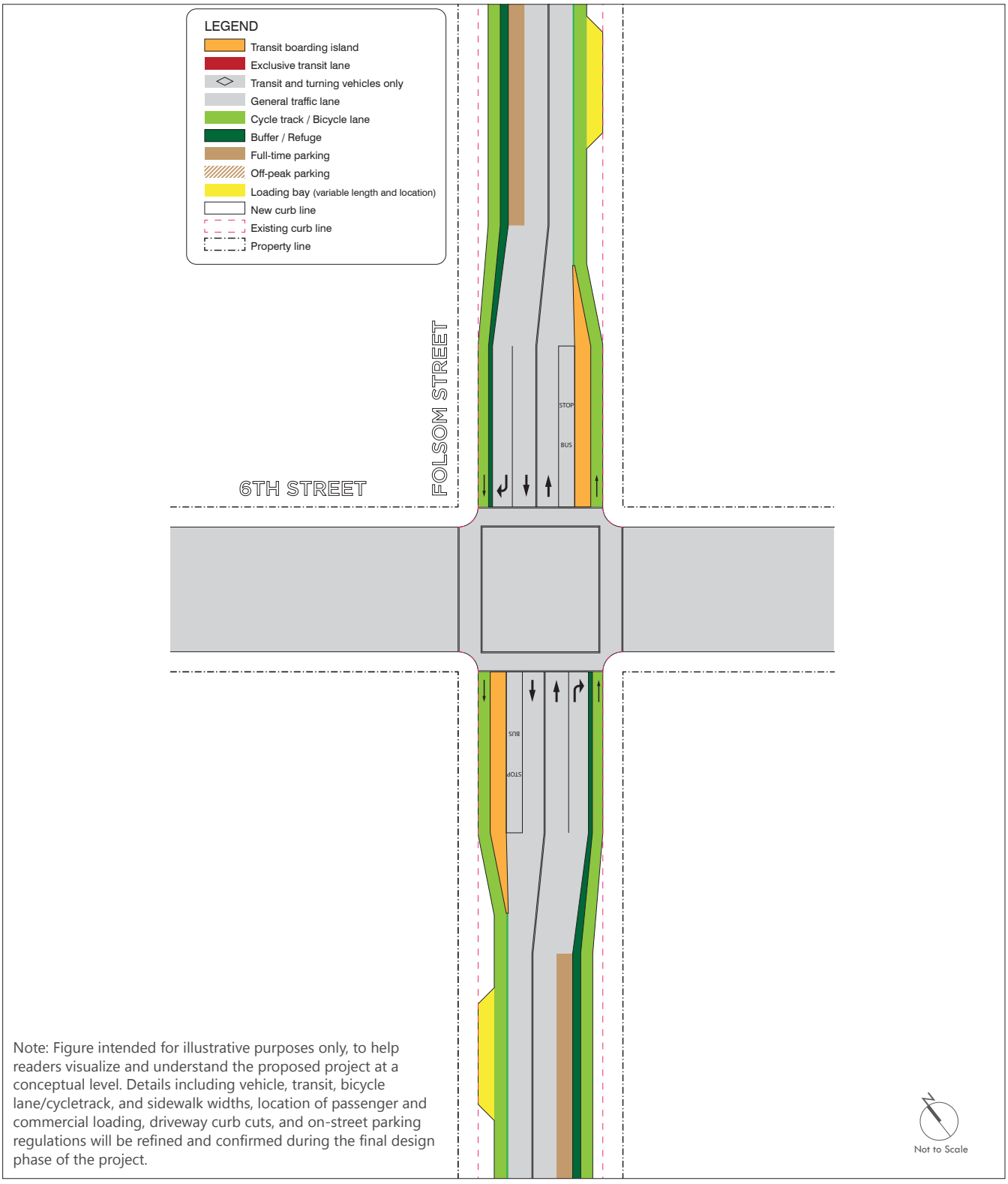


Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Figure F-16

Howard/Folsom Two-Way Option: Folsom Street between 11th and Fourth Streets Existing & Proposed Typical Cross Sections



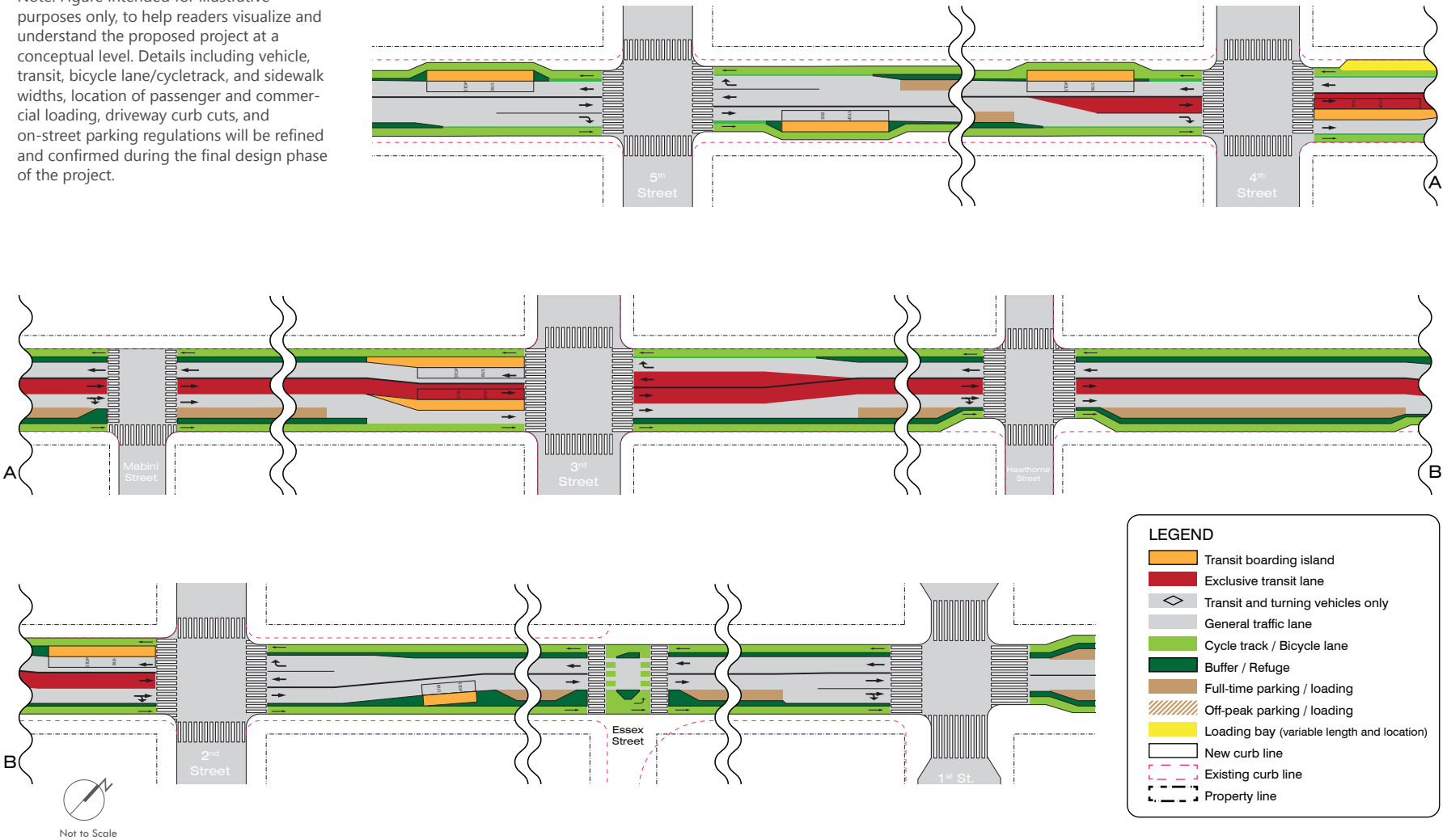
Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-17

Howard/Folsom Two-Way Option: Folsom Street between 11th and Fourth Streets Proposed Plan View

Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

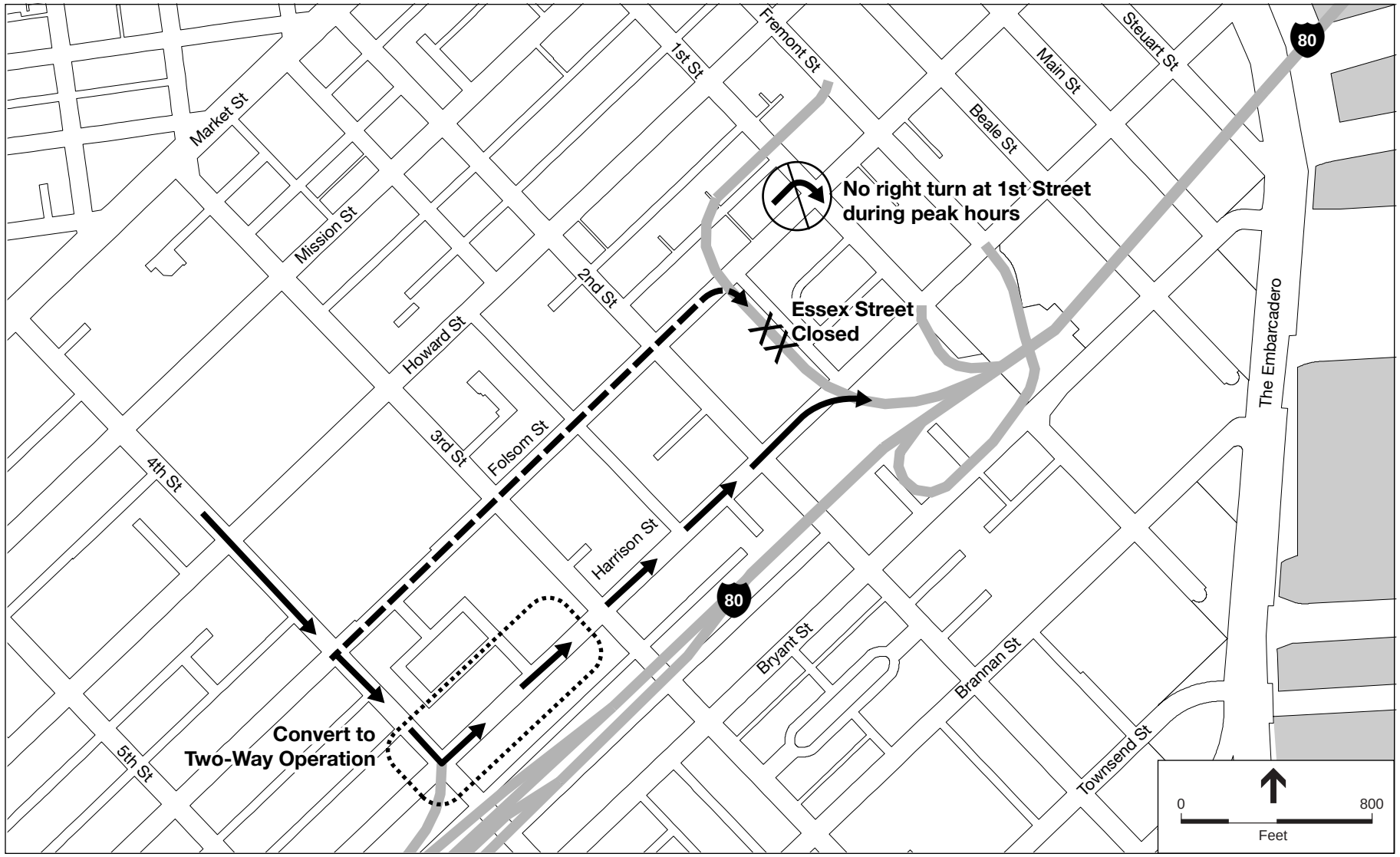


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-18

Howard/Folsom Two-Way Option: Folsom Street between Fifth and First Streets Plan View



Existing Route

Proposed Route

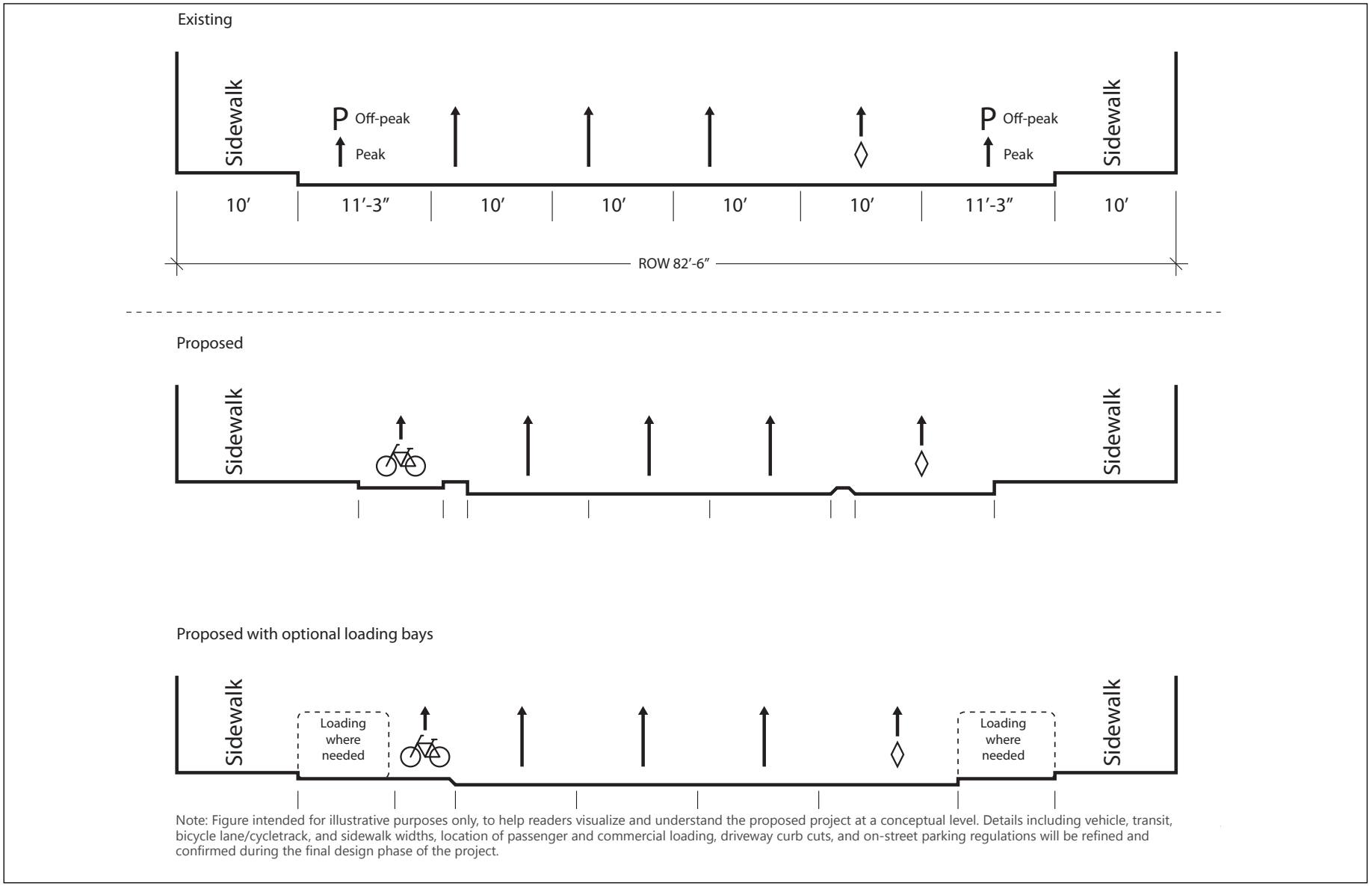
Essex Street closure and two-way Harrison Street between 3rd and 4th
(As part of two-way Howard/Folsom)

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-19

Proposed Essex Street Closure



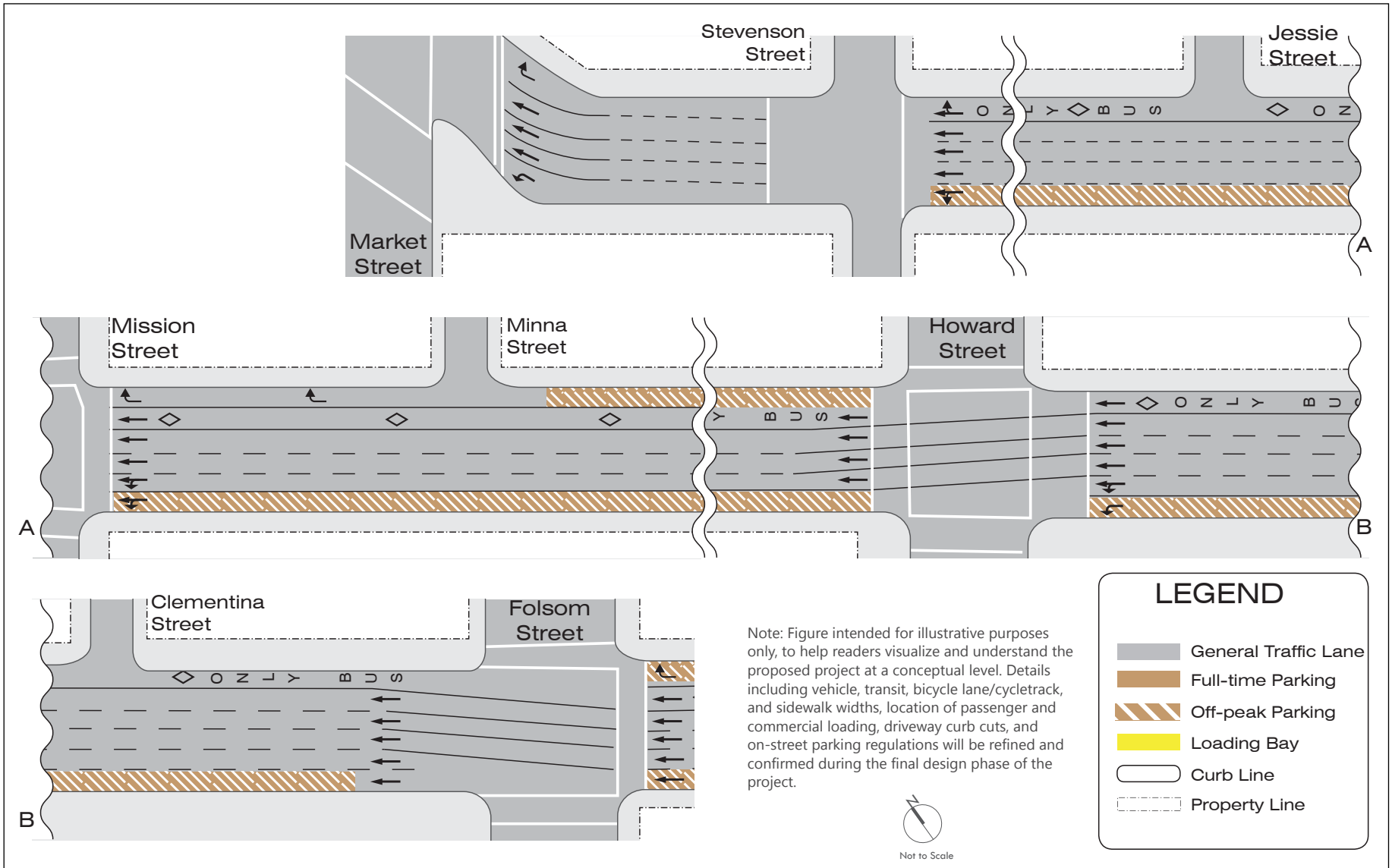
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-20

Third Street Existing and Proposed Typical Cross Sections

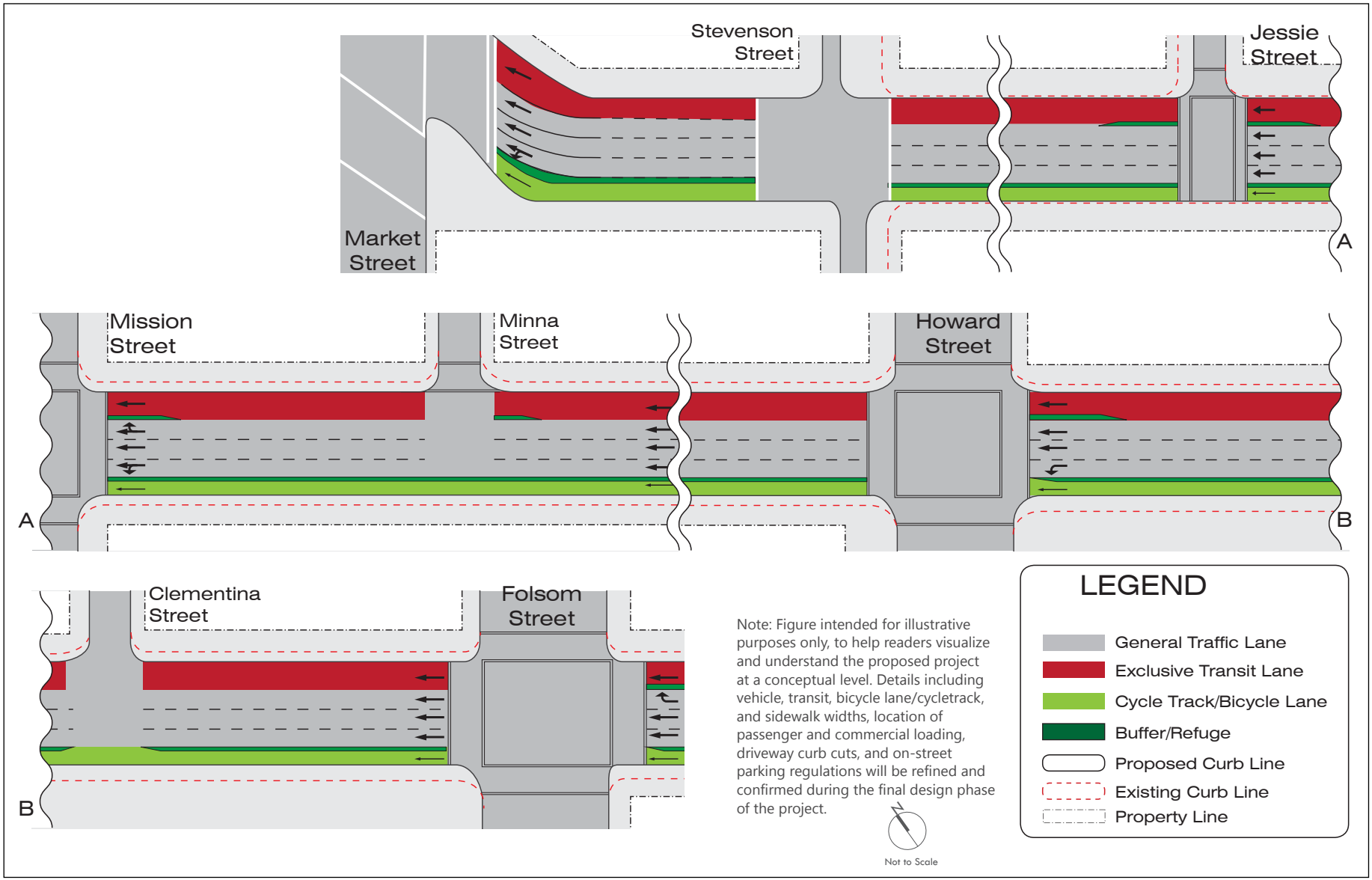


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-21

Third Street between Market Street and Folsom Street Existing Plan View

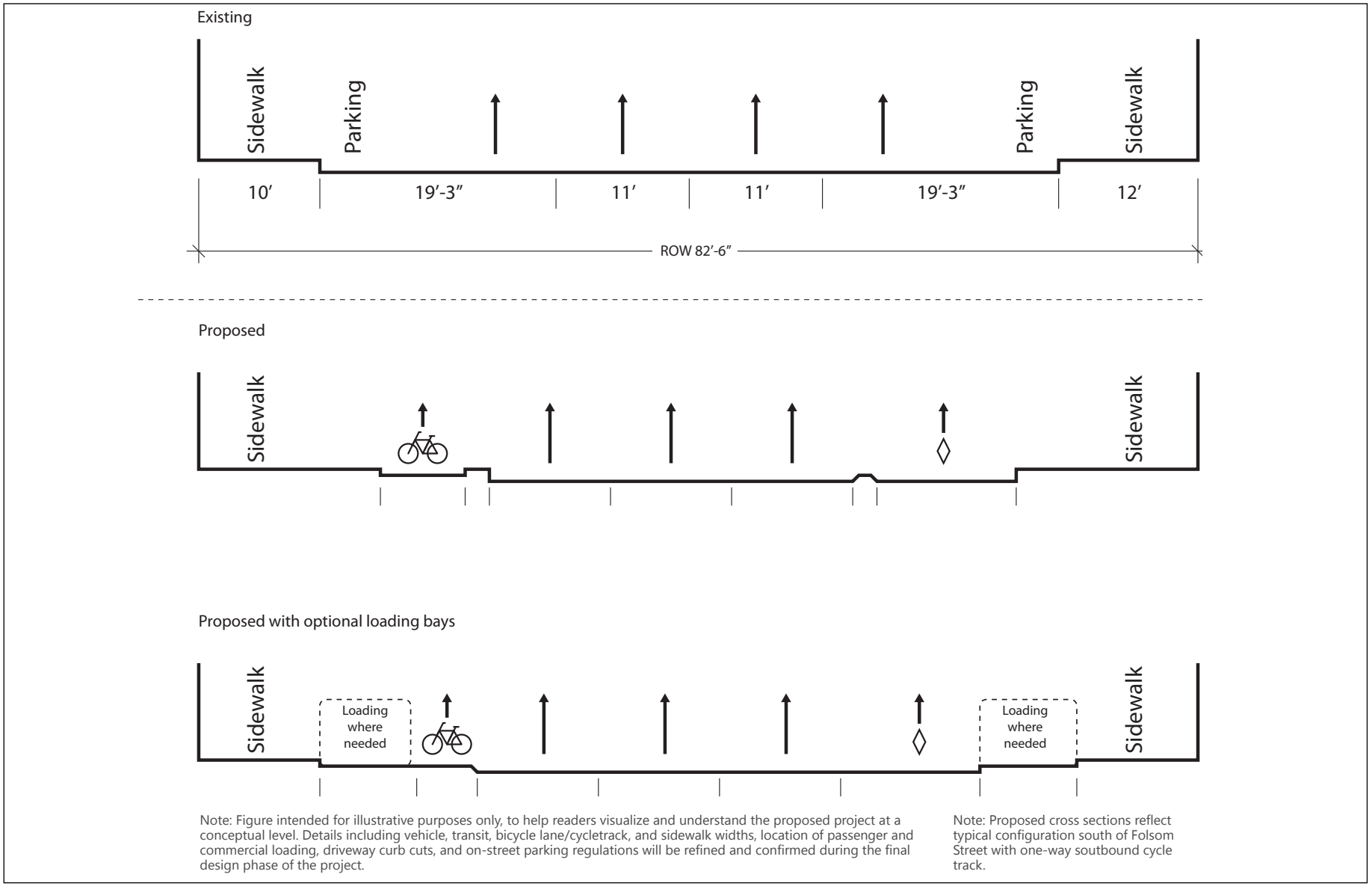


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-22

Third Street between Market Street and Folsom Street Proposed Plan View



Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

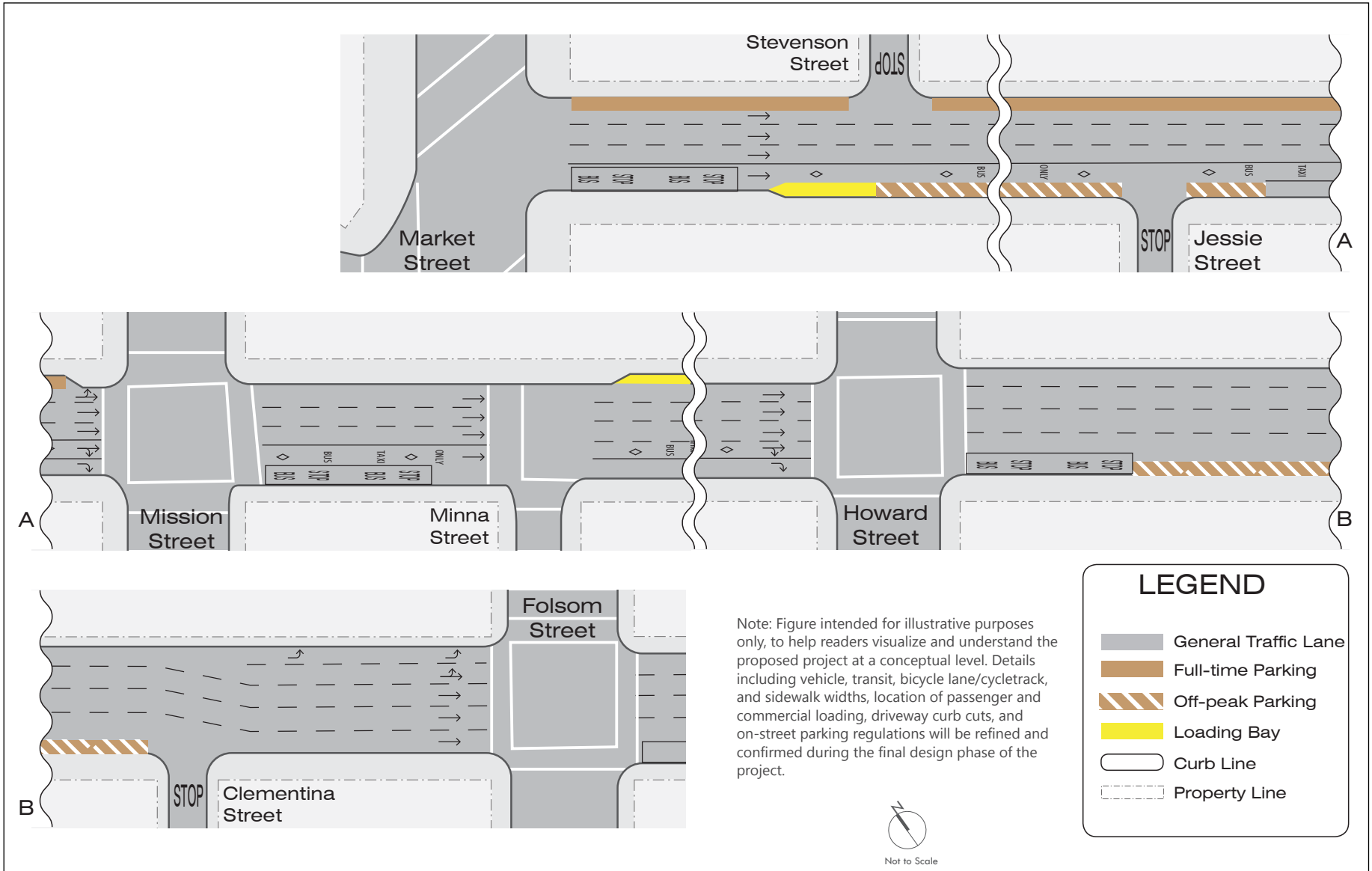
Note: Proposed cross sections reflect typical configuration south of Folsom Street with one-way soutbound cycle track.

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-23

Fourth Street Existing and Proposed Typical Cross Sections

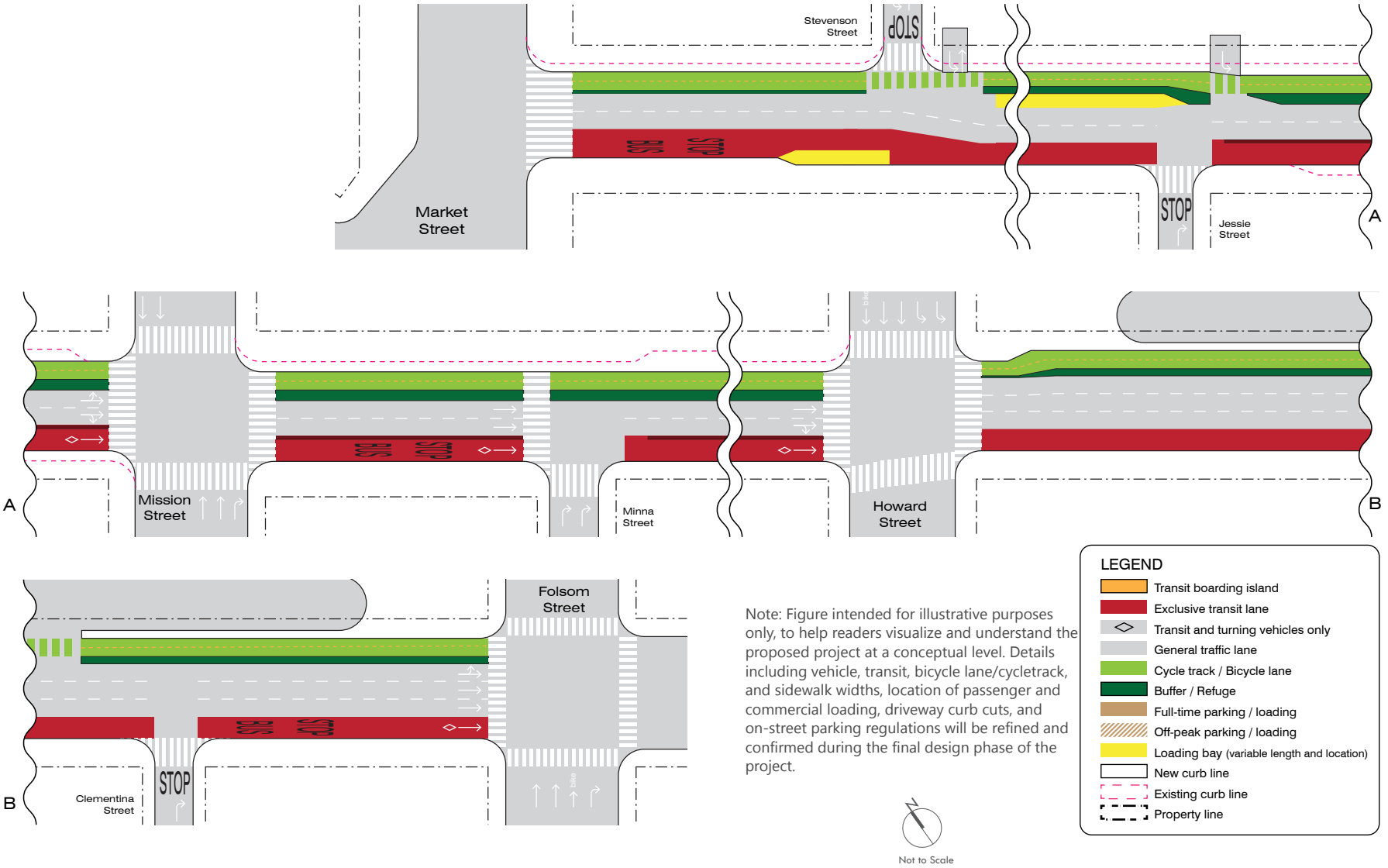


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-24

Fourth Street between Market Street and Folsom Street Existing Plan View

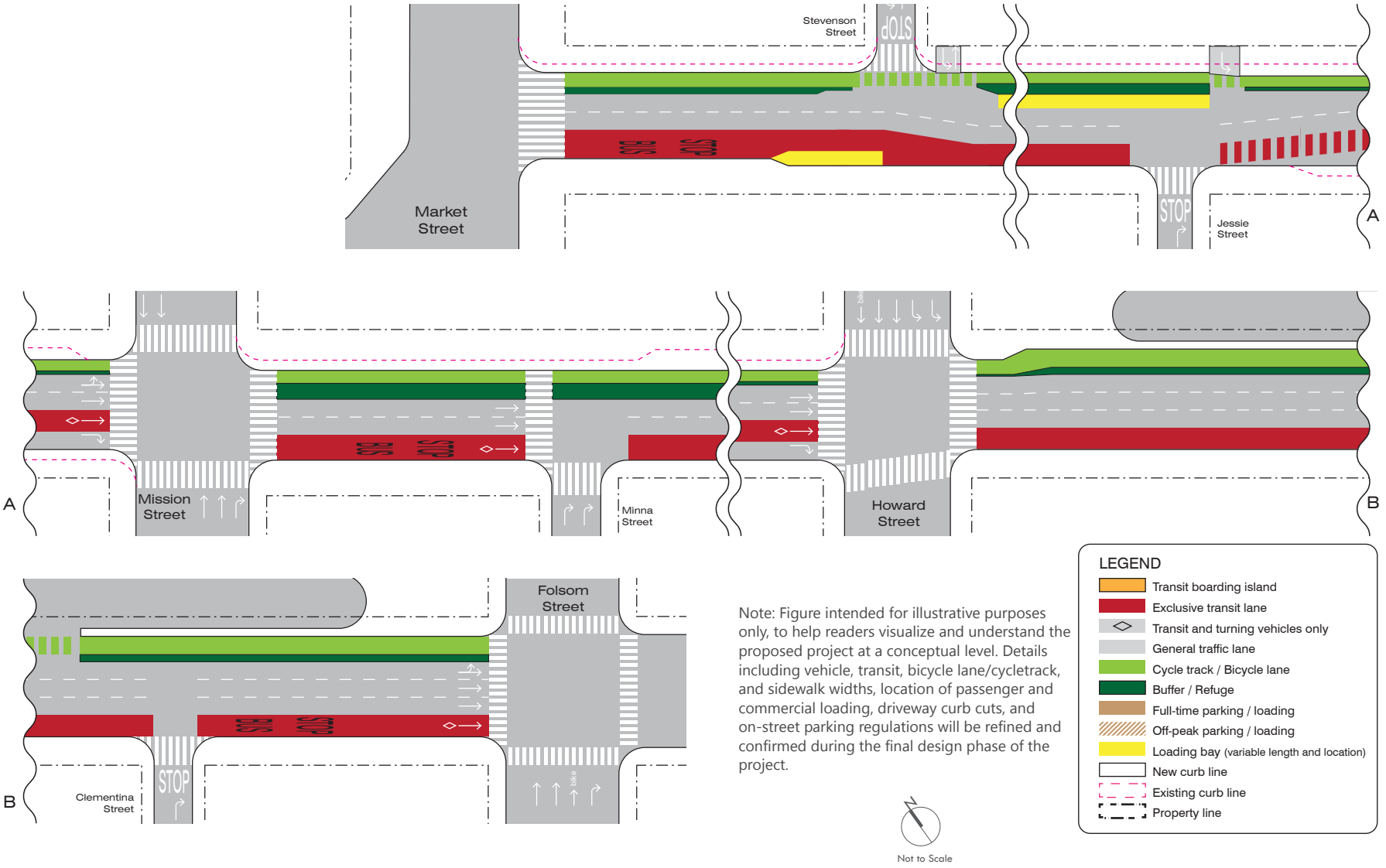


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-25

Fourth Street Protected Suboption: Fourth Street between Market Street and Folsom Street Proposed Plan View

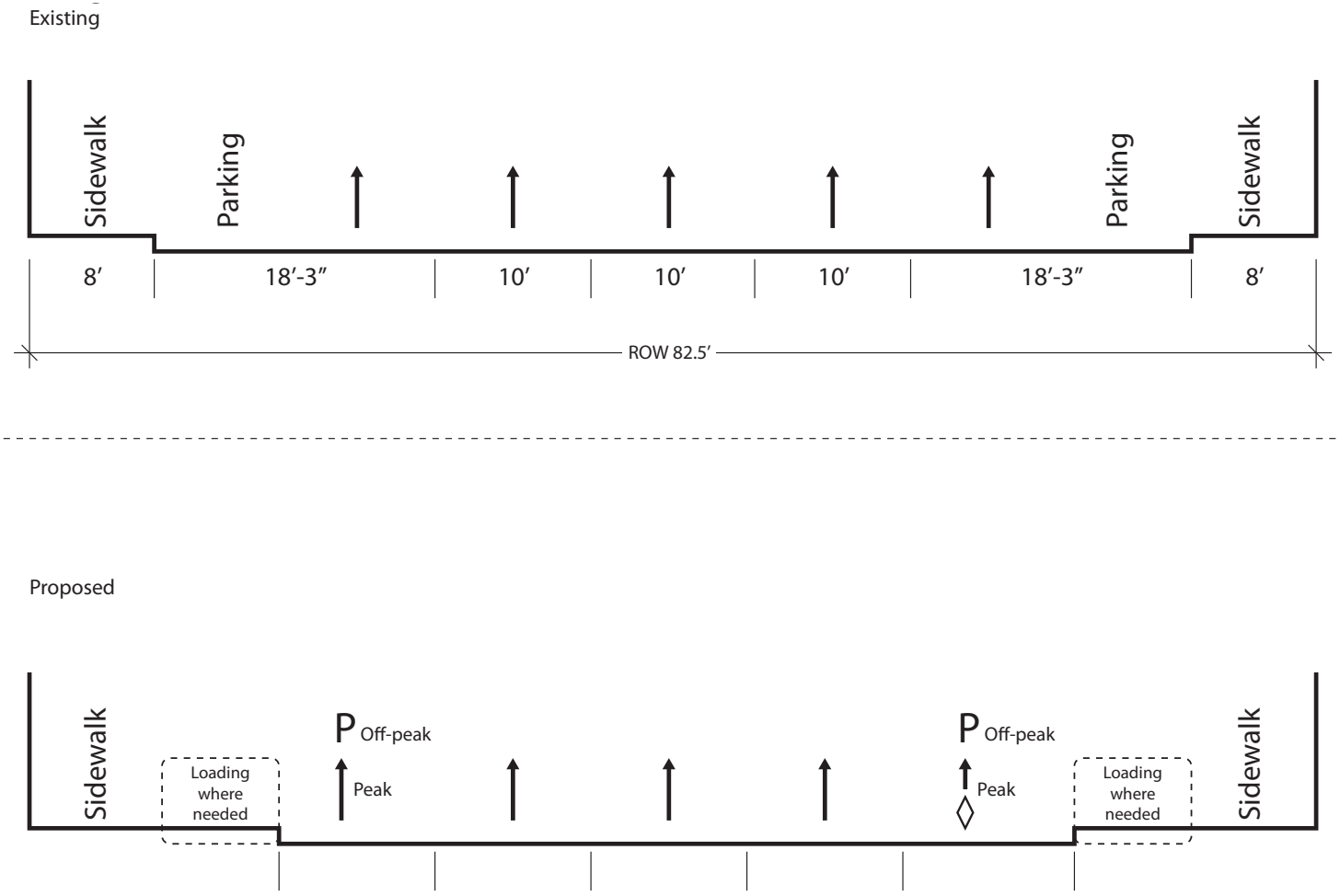


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-26

Fourth Street Right Turn Pockets Suboption: Fourth Street between Market Street and Folsom Street Proposed Plan View



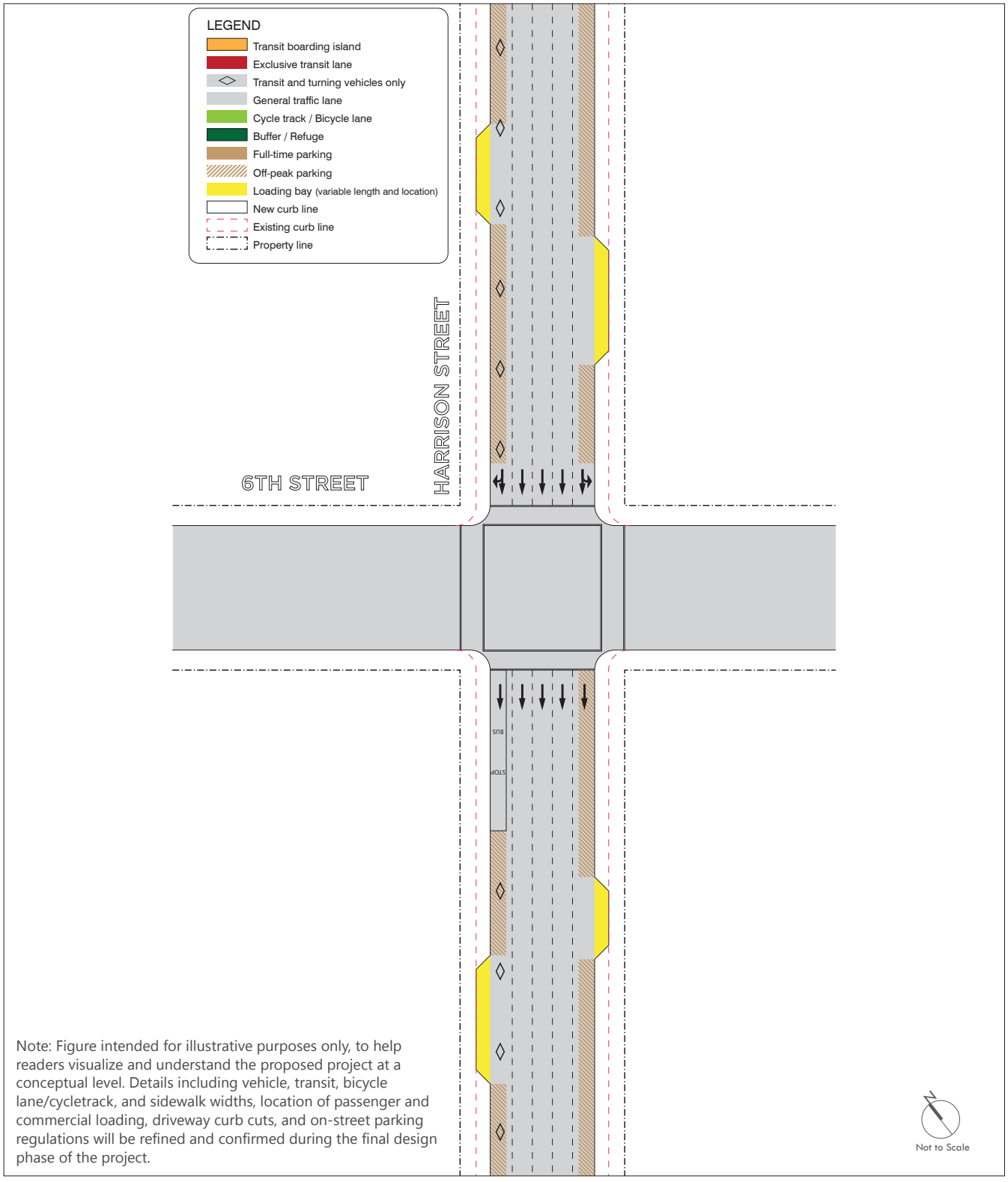
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-27

Howard/Folsom One-Way Option: Harrison Street
Existing & Proposed Typical Cross Sections

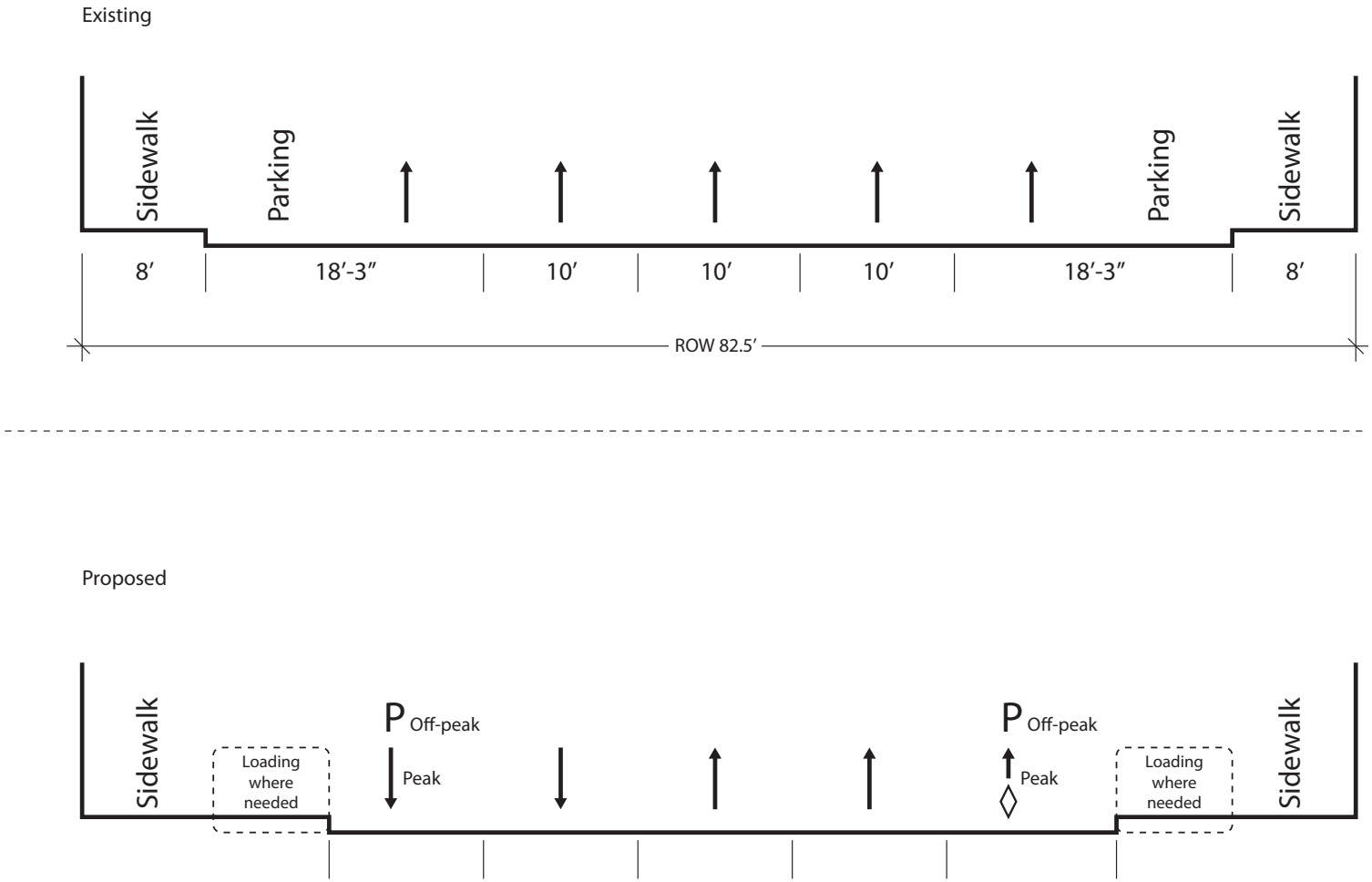


Case No. 2011.1356E: Central SoMa Plan

SOURCE: San Francisco Planning Department

Figure F-28

Howard/Folsom One-Way Option: Harrison Street West of Third Street Proposed Plan View



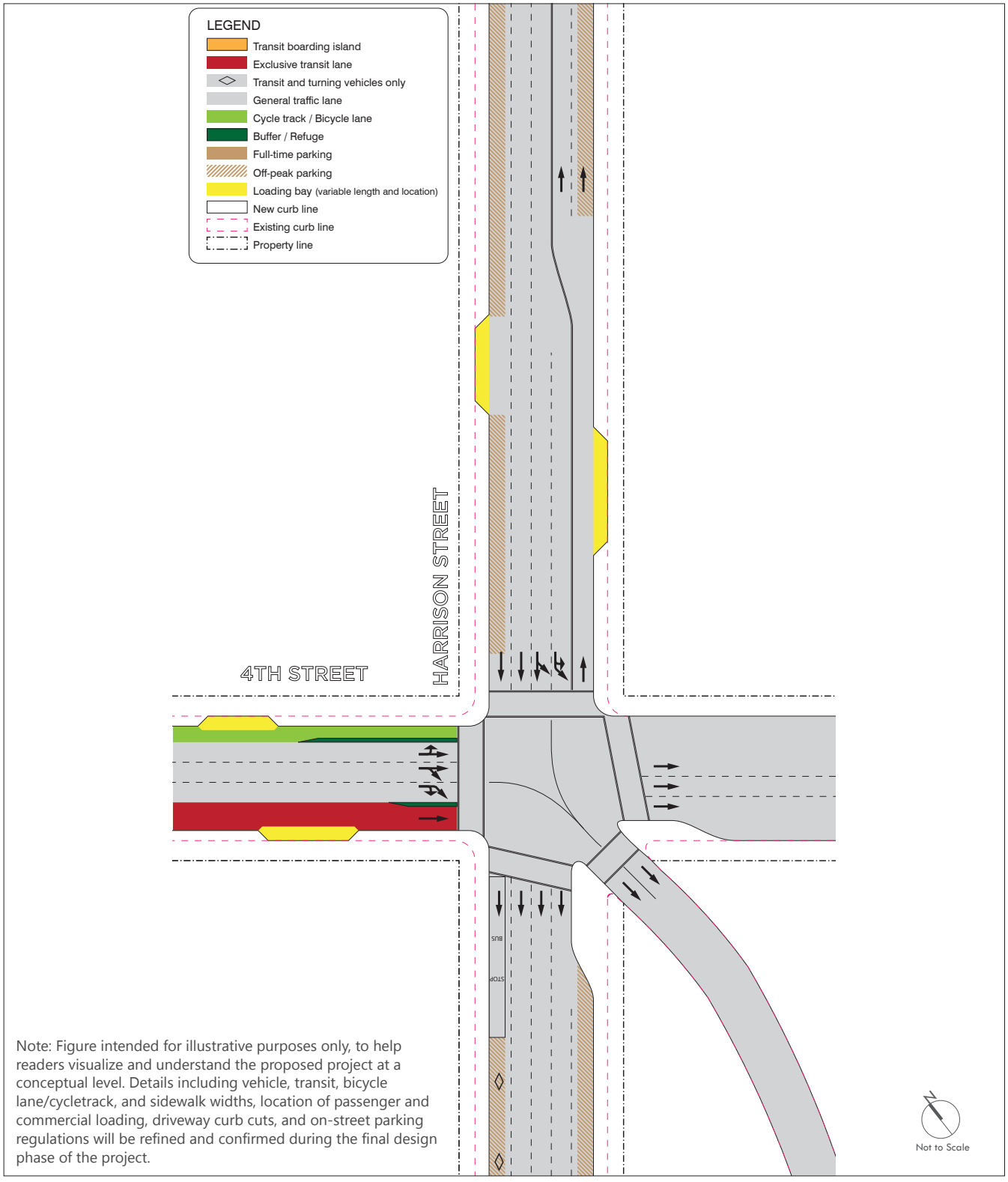
Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-29

Howard/Folsom Two-Way Option: Harrison Street
Existing and Proposed Typical Cross Sections

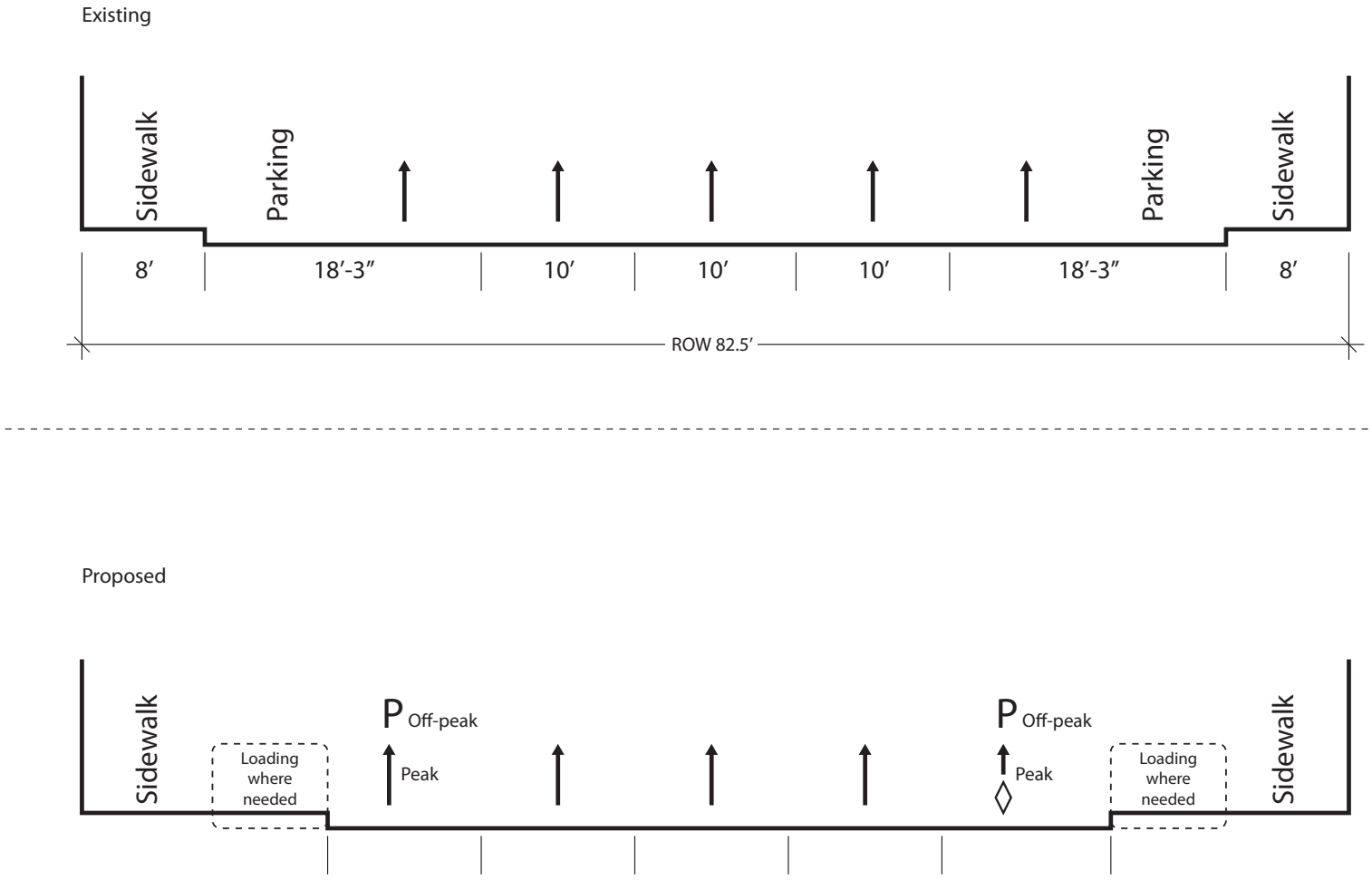


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SOURCE: San Francisco Planning Department

Figure F-30

Howard/Folsom Two-Way Option: Harrison Street West of Fourth Street Proposed Plan View

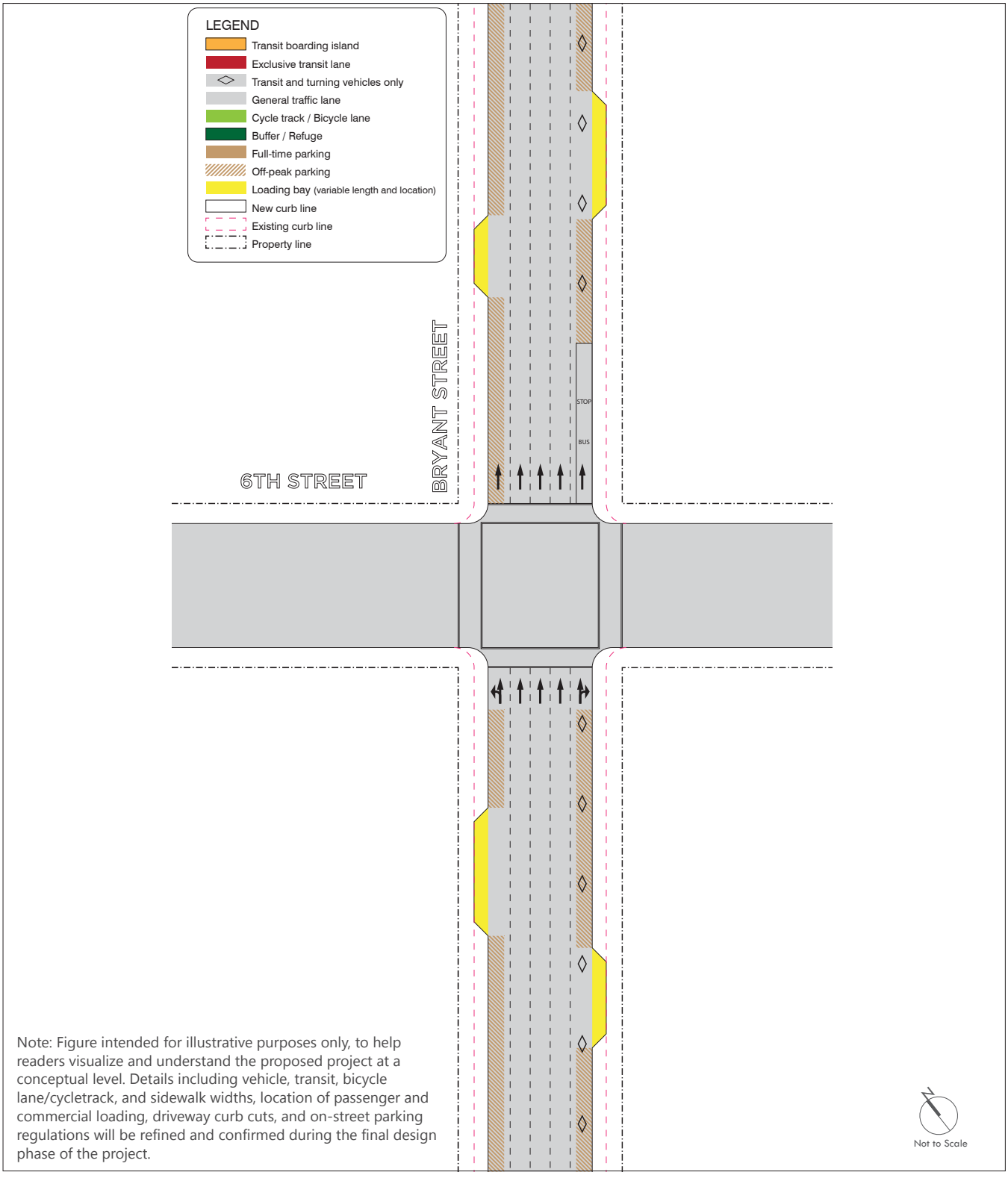


Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, transit, bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Figure F-31

Bryant Street Existing and Proposed Typical Cross Sections

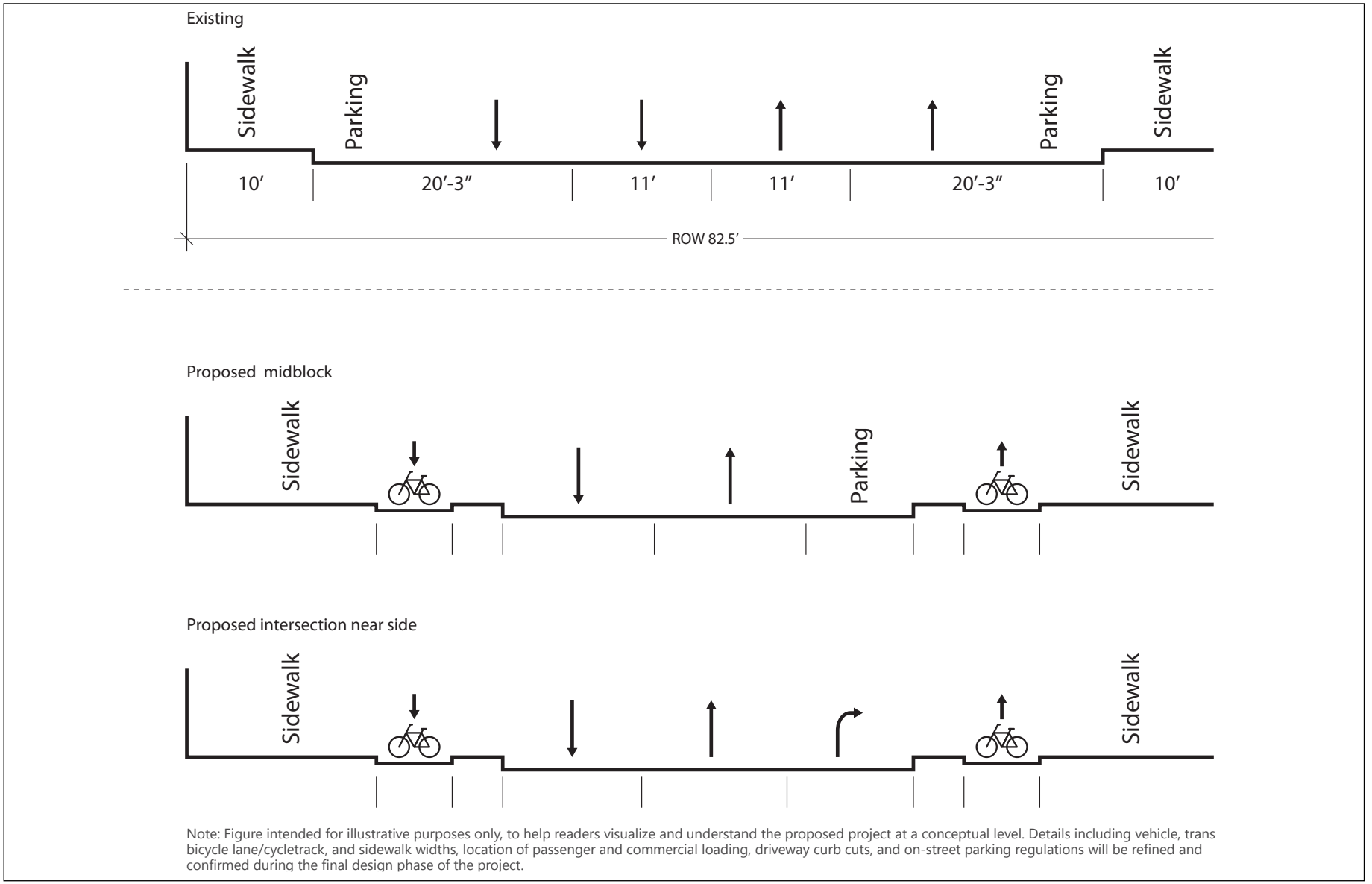


SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-32

Bryant Street Proposed Plan View

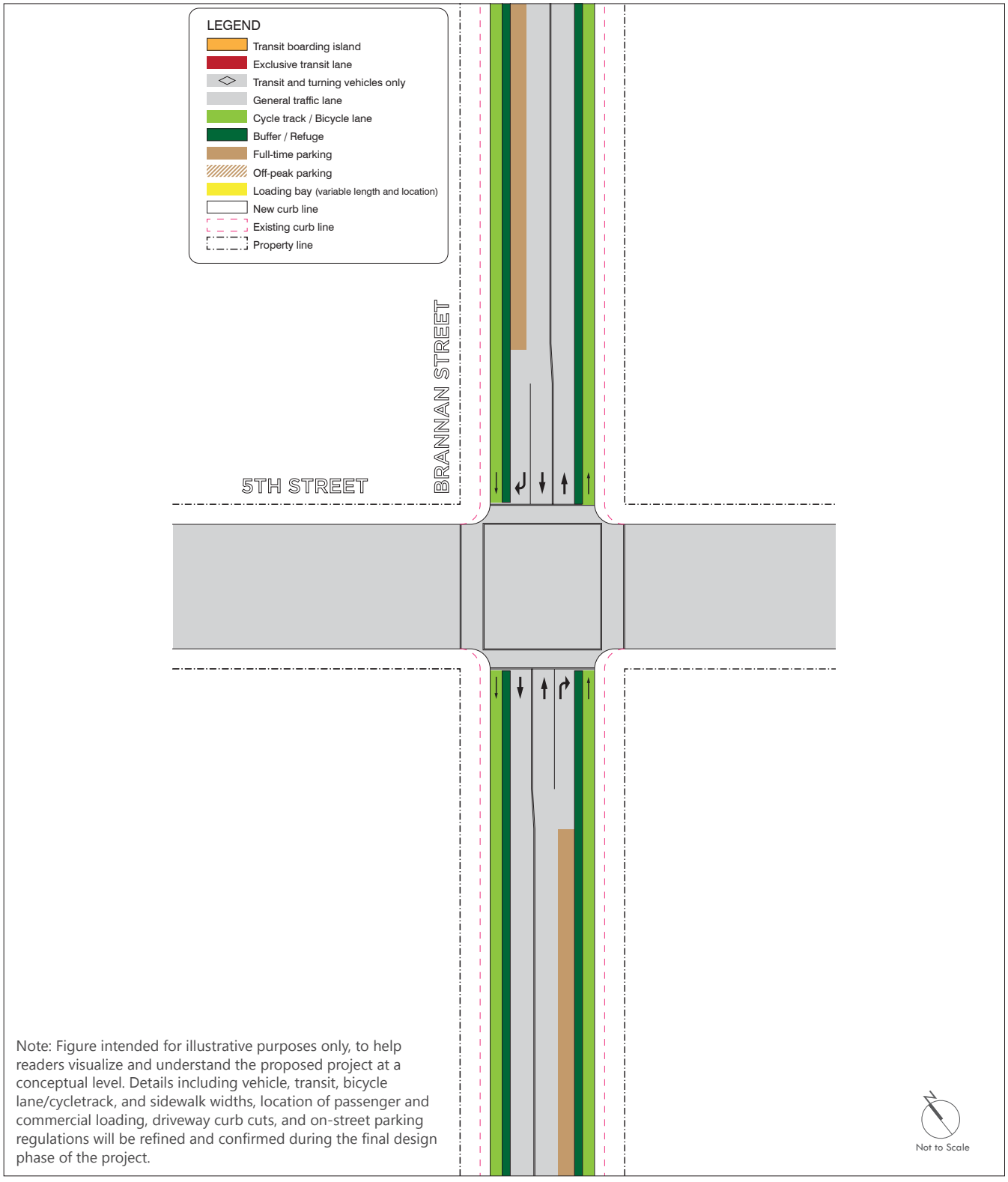


Note: Figure intended for illustrative purposes only, to help readers visualize and understand the proposed project at a conceptual level. Details including vehicle, trans bicycle lane/cycletrack, and sidewalk widths, location of passenger and commercial loading, driveway curb cuts, and on-street parking regulations will be refined and confirmed during the final design phase of the project.

SOURCE: San Francisco Planning Department

Figure F-33

Brannan Street Existing and Proposed Typical Cross Sections



SOURCE: San Francisco Planning Department

Case No. 2011.1356E: Central SoMa Plan

Figure F-34

Brannan Street Proposed Plan View