

DRAFT ENVIRONMENTAL IMPACT REPORT

Transit Center District Plan and Transit Tower

PLANNING DEPARTMENT
CASE NO. **2007.0558E and 2008.0789E**

STATE CLEARINGHOUSE NO. 2008072073

SAN FRANCISCO
PLANNING
DEPARTMENT

	Draft EIR Publication Date:	**SEPTEMBER 28, 2011**
	Draft EIR Public Hearing Date:	**NOVEMBER 3, 2011**
	Draft EIR Public Comment Period:	**SEPTEMBER 28 THROUGH NOVEMBER 14, 2011**

Written comments should be sent to:
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TO: Distribution List for the Transit Center District Plan EIR

FROM: Bill Wycko, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the Transit Center District Plan (Case No. 2007.0558E) and Transit Tower (Case No. 2008.0789)

This is the Draft of the Environmental Impact Report (EIR) for the Transit Center District Plan and Transit Tower. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document entitled "Comments and Responses," which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments, along with copies of the letters received and a transcript of the public hearing. The Comments and Responses document may also specify changes to this Draft EIR. Public agencies and members of the public who testify at the hearing on the Draft EIR will automatically receive a copy of the Comments and Responses document, along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR, together with the Comments and Responses document, will be considered by the Planning Commission in an advertised public meeting, and then certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution. It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Comments and Responses document have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR, in Adobe Acrobat format on a compact disk (CD), to private individuals only if they request them. Therefore, if you would like a copy of the Final EIR, please fill out and mail the postcard provided inside the back cover to the Environmental Planning division of the Planning Department within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy.

Thank you for your interest in this project.

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List of Acronyms and Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
AC Transit	Alameda-Contra Costa Transit District
ADA	Americans with Disabilities Act
ADRP	Archeological Data Recovery Plan
AMP	Archeological Monitoring Plan
ARB	California Air Resources Board
ARDTP	Archeological Research Design and Treatment Plan
ATP	Archeological Testing Plan
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit District
BCDC	San Francisco Bay Conservation and Development Commission
BP	Before Present
C&D	Construction and Demolition
CAP	Clean Air Plan
CDMG	California Division of Mines and Geology (now Ca. Geological Survey)
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CHP	Combined Heat and Power (cogeneration)
CIE	Cultural/Institutional/Educational
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2-eq	Carbon Dioxide-equivalent
dB	Decibel
dBA	A-Weighted Decibel
DBI	San Francisco Department of Building Inspection
DEIR	Draft Environmental Impact Report
DPH	San Francisco Department of Public Health
DPM	Diesel Particulate Matter
DPR	California Department of Parks and Recreation
DPW	San Francisco Department of Public Works
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
ERO	Environmental Review Officer (of the Planning Department)
FAR	Floor Area Ratio
FARR	Final Archeological Resources Report
GW	Gigawatt (1 billion watts)
GWh	Gigawatt-Hour
GFA	Gross Floor Area
GHG	Greenhouse Gas
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HCD	California Department of Housing and Community Development
HEPA Filter	High Efficiency Particulate Air Filter
ISCOTT	Interdepartmental Staff Committee on Traffic and Transportation

KW	Kilowatt (1,000 watts)
KWh	Kilowatt-Hour
Ldn	Day-Night Noise Level
LEED®	Leadership in Energy and Environmental Design
LOS	Level of Service (measure of traffic or other transportation operations)
mgd	Million Gallons per Day
MIPS	Management, Information, and Professional Services
MLD	Most Likely Descendant
mph	Miles per Hour
MTA	San Francisco Municipal Transportation Agency
MTC	Metropolitan Transportation Commission
MRZ	Mineral Resource Zone
MW	Megawatt (1 million watts)
NAAQS	National Ambient Air Quality Standards
NAHC	California Native American Heritage Commission
NEPA	National Environmental Policy Act
NO_2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NOP	Notice of Preparation
NWIC	Northwest Information Center
OHP	State of California Office of Historic Preservation
OPR	Governor's Office of Planning and Research
PDA	Priority Development Area
PDR	Production, Distribution, and Repair
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter 2.5 microns or less in diameter
PM_{10}	Particulate Matter 10 microns or less in diameter
ppb	Parts per Billion
ppm	Parts per Million
pphm	Parts per Hundred Million
POPOS	Privately Owned, Publicly Accessible Open Space
RHNA	Regional Housing Needs Assessment
RHNP	Regional Housing Needs Plan
ROG	Reactive Organic Gases
SAAQS	State Ambient Air Quality Standards
SB	Senate Bill
SCH	State Clearinghouse (in the Governor's Office of Planning and Research)
SD	Special Development (zoning sub-district)
SFCTA	San Francisco County Transportation Authority
SFD	San Francisco City Datum
SFPUC	San Francisco Public Utilities Commission
SFUSD	San Francisco Unified School District
SO_2	Sulfur Dioxide
TACs	Toxic Air Contaminants
TB-DTR	Transbay Downtown Residential
TDM	Transportation Demand Management
TDR	Transferrable Development Rights

TIDF	Transit Impact Development Fee
TJPA	Transbay Joint Powers Authority
v/c ratio	Volume-to-Capacity Ratio
YBC	Yerba Buena Center
µg/m3	Micrograms per Cubic Meter

SUMMARY

A. Project Description

This environmental impact report (EIR) analyzes potential environmental effects associated with the November 2009 draft Transit Center District Plan (draft Plan) project at a program level, and analyzes impacts of the proposed Transit Tower at a project-specific level.

Transit Center District Plan

The Plan area comprises approximately 145 acres in the southern portion of the downtown Financial District, roughly bounded by Market Street, Steuart Street, Folsom Street, and a line to the east of Third Street. The Plan area is surrounded by the Financial District, Rincon Hill, the waterfront, and the Yerba Buena Center area; it is centered on the site of the former Transbay Terminal, which was demolished in 2010, to be replaced by the new Transbay Transit Center now under construction. The Plan area includes Zone 2 of the adopted Transbay Redevelopment Area and a portion of Zone 1 (only for streetscape and roadway modifications consistent with that plan).

Existing Land Use and Height Controls

The principal land use in the Plan area is office, although the Plan area also contains retail and mixed-used developments, as well as a limited number of residential buildings, two hotels, and a limited amount of institutional and light industrial or Production, Distribution, and Repair (PDR) uses. Use districts in the Plan area include Downtown Office (C-3-O), Downtown Office (Special Development) (C-3-O (SD)), Downtown Support (C-3-S), Transbay Downtown Residential (TB-DTR), and Public (P), the last one primarily encompassing the site of the former Transbay Terminal and its ramps. Areas zoned TB-DTR comprise Zone 1 of the Transbay Redevelopment Area.

The C-3-O and C-3-O (SD) districts, which make up the majority of the Plan area, permit office as a principal use and include controls that generally encourage concentrated, high density office development. Residential uses and some related retail and service uses are also permitted. The C-3-O (SD) district permits a lower floor area ratio (FAR) as of right but also permits transferrable development rights (TDR) from other sites to be used to increase FAR. Both districts have a maximum FAR of 18:1.

The Plan area contains a mixture of height and bulk districts, with height limits that range from 30 feet to 550 feet. Consistent with the Downtown Plan's direction to expand the traditional downtown to the "South Financial District" around the site of the former Transbay Terminal, the Plan area's 550-foot height limits are the greatest heights currently permitted anywhere in San Francisco, with the exception of a single parcel on Rincon Hill and a single parcel on Folsom Street in Redevelopment Plan Zone 1.

Proposed Policies and Land Use Controls

The draft Plan proposes to rezone the Plan area (except most P Districts, with the exception of the Transit Tower site, and Redevelopment Plan Zone 1) to C-3-O (SD). The Plan also sets forth policies and land use controls in six major categories: Land Use, Urban Form, Public Realm, Moving About, Historic Preservation, and District Sustainability.

The draft Plan also discusses a variety of financing mechanisms for improvements within the Plan area. These mechanisms would not in themselves result in physical impacts, but the physical changes that could occur with the additional financing, such as implementation of the public realm plan, are addressed throughout this EIR.

Land Use

In advance of drafting the Plan, the Planning Department commissioned a study to evaluate future job and housing growth in San Francisco. The study concluded that, particularly with the implementation of "smart growth" policies that encourage jobs near transit, downtown San Francisco would not meet the future demand for office space under existing zoning. On the other hand, downtown has sufficient capacity for future residential development. Accordingly, one of the major goals of the draft Plan is to ensure a sufficient supply of high-density office space in the downtown core, proximate to the region's best transit service. Thus, the Plan proposes to limit the amount of non-office space in major new construction within a portion of the Plan area, to attain an overall ratio of no less than 70 percent office space in the Plan area, as well as elimination of limits on floor area ratio (FAR) in the C-3-O (SD) use district. The limit on non-commercial development would occur within a sub-district of the Plan area, bounded generally by Market, Main, Second-New Montgomery, and Tehama Streets and Zone 1 of the Redevelopment Plan. The Plan proposes that the existing maximum FAR of 18:1 be eliminated within the Plan area and also proposes a minimum level of development—a FAR of at least 9:1—on sites larger than 15,000 square feet. In addition, the draft Plan seeks to encourage continuous consumer retail uses on key street frontages.

Urban Form: Building Heights and Design

The draft Plan seeks to build upon the Downtown Plan and the Urban Design Element of the *General Plan,* which set forth policies by which Downtown has become "a compact, human-scaled, walkable and dynamic urban center and a dramatic concentrated skyline set against the natural backdrop of the city's hills," according to the draft Plan. The Plan further seeks to create an "elegant skyline … with its apex at the Transit Center, and tapering in all directions" so that the Transit Center becomes "the center of downtown, reinforcing the primacy of public transit in organizing the City's development pattern" (November 2009 Draft Plan, Objectives 2.2 and 2.3).

The greatest proposed height limit is a 1,000-foot height district at a site on the south side of Mission Street between First and Fremont Streets, adjacent to the new Transit Center. The site is the location of the proposed Transit Tower, which the Plan envisions as the City's tallest structure, at 1,000 feet to the height to the highest enclosed space. The Plan also calls for a sculptural element atop the tower, provided it does

not cast "significant" shadows (Draft Plan, Policy 2.2). The current proposed height for the Transit Tower is 920 feet to the roof and 1,070 feet in total, including sculptural element. Other height districts that exceed the current maximum of 550 feet would allow for approximately six very tall buildings nearby whose height—up to a maximum of 850 feet—would be less than that of the Transit Tower.

While the Plan proposes the elimination of maximum limits on floor area ratio, existing tower separation rules would remain and be extended to taller buildings, so that a 1,000-foot building would have to be set back 70 feet from the center of a typical major street. Also, where multiple towers are developed on the same property, setbacks of up to 70 feet would apply to these towers, as well to towers on separate lots. The upper portions of tall towers (generally the top one-third, or "upper tower") would be required to have an average floor plate that is at least 25 percent smaller than, and an average diagonal dimension at least 14 percent less than, that of the "lower tower" (the remainder of the building above the base). This is similar to, although less restrictive than, the volume reduction currently required by the *Planning Code*. The draft Plan also proposes to strengthen the Downtown Plan's controls that call for the base of a tower to be differentiated from the tower above, with the intent of enhancing the pedestrian scale of development, and proposes limiting the width of building lobbies, requiring ground-level changes in building plane, and prohibiting parking and loading access from key streets, also to enhance the pedestrian environment.

Public Realm

The draft Plan would build on the Downtown Streetscape Plan of 1995, as well as the 2006 Streetscape and Open Space Plan for the Transbay Redevelopment Area and the citywide Better Streets Plan, adopted in 2010, to improve the public realm, including its streets, alleys, sidewalks, parks, and plazas. Envisioning a sizable increase in pedestrian activity due to both new development and increased transit service to and from the new Transit Center (including the potential future Caltrain extension and high-speed rail service), the draft Plan emphasizes improving the pedestrian environment by widening and making improvements to sidewalks, including landscaping and street furniture installation; eliminating some on-street parking; adding sidewalk bulb-outs; creating "linear plazas" along Beale, Main, and Spear Streets; restricting curb cuts on some streets; and improving mid-block pedestrian access, including the addition of several signalized mid-block pedestrian crossings. The draft Plan proposes a new public open space at the northeast corner of Howard and Second Streets, which would include a connection to the new 5-acre "City Park" that will be built atop the new Transit Center as part of that project. The draft Plan also proposes public access to view stations in the upper stories of the tallest high-rise building(s) in the Plan area.

Moving About

The draft Plan seeks to manage vehicular traffic and to enhance transit, pedestrian, and bicycle travel, attempting, in particular, to discourage traffic—especially regional traffic that passes through the District to and from the Bay Bridge. Vehicle parking would be further restricted, bicycle parking would be increased, and car sharing would be encouraged. Walking between destinations in the District would be made more feasible and attractive. The draft Plan calls for future analysis and consideration of a cap on

the number of parking spaces in the Plan area (with an interim step to reduce the maximum amount of floor area devoted to non-residential parking from the current 7 percent to 3.5 percent), and study of a potential transit-only zone on Mission Street, in front of the Transit Center and proposed Transit Tower.

The draft Plan would also reconfigure many of the existing rights-of-way throughout the Plan area, including extending the two-way segments of Howard and Folsom Streets east to New Montgomery and Second Streets, respectively; moving transit lanes to the center of Mission Street between First and Third Streets; widening sidewalks; selectively removing traffic lanes and parking and loading from various streets; and adding turn pockets. On Howard Street, casual carpool unloading would be moved from the south to north side. Second Street would be reconfigured consistent with the San Francisco Bicycle Plan. Shaw Alley would be closed to vehicle traffic, Minna Street would change to one-way eastbound between First and Second Streets, and Natoma Street from Second Street east to midway between First and Second Streets would be converted to pedestrian access and emergency vehicles only. A new multi-use pedestrian and bicycle path is proposed between Howard and Folsom Streets, near Essex Street and beneath the ramp that links the Transit Center to the Bay Bridge.

The public realm plan would also add signalized mid-block pedestrian crossings at a number of intersections: New Montgomery/Natoma Streets; Second/Natoma Streets; Howard Street/Oscar Alley; Mission Street / Shaw Alley; First/Minna Streets; First/Natoma Streets; First/Clementina Streets; Fremont Street/Transit Center Bus Plaza; Fremont/Natoma Streets; Beale/Natoma Streets; Beale/Clementina Streets; Main/Natoma Streets; Main/Tehama Streets; and, Main/Clementina Streets. Also proposed, as previously approved under the Transbay Redevelopment Plan, are extensions of Clementina Street (First Street to Spear Street) and Natoma and Tehama Streets (Beale Street to Main Street).

Historic Preservation

The Plan area contains two listed historic districts, the New Montgomery-Second Street Conservation District and the Second and Howard National Register District. The former, identified in Article 11 of the *Planning Code*, extends southward from Market Street, generally encompassing both sides of Second and New Montgomery Streets, as far as Howard Street. The draft Plan would expand and rename the "New Montgomery–Mission–Second Street Conservation District," along both sides of Mission Street between New Montgomery and Third Streets, crossing Third Street to include the Aronson Building on the northwest corner of Third and Mission Streets. The expansion would also extend westward on Natoma Street to Hunt Street. Additionally, the Planning Department proposes additional individual resources for Landmark designation under the *Planning Code* and revision of Article 11 ratings of several buildings. The draft Plan also proposes policies and *Planning Code* revisions concerning transferrable development rights (TDR) that would allow increased flexibility in the application of preservation incentives.

District Sustainability

The draft Plan would implement a number of district-wide policies and controls aimed at supporting and, where possible, exceeding the City's existing environmental, sustainability and climate change objectives. The incorporation of sustainability-related objectives and policies into the draft Plan is

intended to achieve lower impact and higher performance development within the Plan area than would otherwise be achievable through project-by-project application of requirements. In the area of **energy efficiency**, the Plan identifies for future consideration the creation of a shared district-wide energy and heating system by establishing a centralized Combined Heat and Power (cogeneration) system within the Plan boundaries that would capture waste heat from buildings and energy generators. In the area of **green building design**, the draft Plan would encourage low environmental impact and high performance (with regard to energy, water, materials, construction) for all proposed buildings. The draft Plan would require that larger new buildings achieve LEED (Leadership in Energy and Environmental Design) standards in the City's Green Building Ordinance without benefit of credits for location, density, and existing City parking controls. In the area of **water conservation**, one of the goals of the proposed Plan is to capture, treat, and reuse, where feasible, stormwater runoff, while at the same time reducing the use of potable water.

Transit Tower

The Transit Tower is proposed by the Transbay Joint Powers Authority (TJPA) as a 61-story, approximately 1,070-foot-tall office building proposed for approximately the northern third of the block bounded by First, Mission, Fremont, and Howard Streets. The Tower would occupy approximately the northern half of Lot 1 on Block 3720, adjacent to the new Transit Center, on the south side of Mission Street between Fremont and First Streets. The project site is approximately 50,000 square feet in size and was most recently used as the passenger waiting and loading and Muni drop-off/layover area for the old Transbay Terminal, which was demolished beginning in August 2010. The TJPA intends to sell the Transit Tower site to a private entity, which would develop the tower, and use the proceeds from the sale to help fund the Transit Center project.

The Transit Tower would encompass approximately 1.3 million square feet of office space and about 16,500 square feet of retail space and would be built on a roughly square footprint of about 26,000 square feet. The building would have about retail space and a lobby on the ground floor, additional retail space on a portion of the fourth floor (connected by a footbridge to the planned City Park atop the new Transit Center), and 58 floors of office space, along with two mechanical floors. The Tower would have three basement levels beneath the entire footprint of the building as well as the Mission Square open space along Fremont Street, and a partial fourth basement; excavation would be to a depth of approximately 60 feet below grade, and would involve removal of approximately 110,000 cubic yards of soil. The building would have a concrete slab foundation supported by driven piles anticipated to be founded on bedrock more than 200 feet below grade. The tower's structural system is anticipated to employ the concept of "megacolumns," which are very large structural columns that would be supported by large diameter piles approximately 10 feet in diameter, with additional piles driven to support the building's foundation slab.

The Transit Tower is proposed to have concave curved exterior walls on all four sides, which would taper as the building rises, beginning at a height of about 380 feet. The 172-foot horizontal dimension along each side of the ground floor would be reduced to about 138 feet at the building roof (920 feet). Atop the

building would be a lattice-like steel sculptural element 150 feet tall, which would continue the building's tapering shape up to a total height of about 1,070 feet. The horizontal dimension at the top of this element would be approximately 89 feet.

The current design of the Transit Tower would be consistent with the proposed bulk requirements of the draft Plan, which would amend *Planning Code* Section 132.1 to require a 35-foot setback from the center line of the adjacent street—Mission Street, in this case—and a setback increasing to 70 feet from the center line at a height of 1,000 feet. The draft Plan's streetscape and public realm improvements plan would also require that the base of the Transit Tower be set back at least 10 feet from the property line on Mission Street, to permit widening of the street right-of-way to accommodate transit activity on Mission Street.

Up to approximately 302 independently accessible parking spaces would be provided in the basement, and a total parking supply of about 480 vehicles could be provided with valet operations. Based on the preliminary design of the Transit Tower, the area devoted to parking would exceed 7 percent of gross floor area (and the draft Plan's 3.5 percent maximum), which is the maximum amount of floor area that can be devoted to parking in the C-3-O use districts, and the area in excess of 3.5 percent, if the Plan is adopted (7 percent otherwise) would require Conditional Use authorization as a major parking garage, in accordance with Sections 158 and 223(p) of the *Planning Code*. Bicycle parking (approximately 225 spaces, based on proposed *Planning Code* revisions under the draft Plan) would also be provided. Six off-street freight loading spaces would be provided on the first basement level. Access to the parking garage and loading dock would be from a single, two-way ramp on First Street, near the southwest corner of the building. Pedestrian entrances to the tower lobby would be from both the west and east sides of the building; the latter entrance would open onto Mission Square, a public open space that would be developed with the Tower at the southwest corner of Mission and Fremont Streets.

The TJPA is developing plans to substantially decrease the use of potable water for non-potable use at both the Transit Center and the proposed Transit Tower, including potential collection and reuse, following treatment, of greywater. The proposed Transit Tower is designed to receive a LEED (Leadership in Energy and Environmental Design) Gold rating from the U.S. Green Building Council. The TJPA would require the Transit Tower developer to adopt safety and security measures to maximize the protection of the public from injury due to events including earthquake, flood, wind, precipitation, building movement, terrorist attack, sabotage, civil unrest or civil disturbances, accidents, and crime.

Construction of the Transit Tower would require approximately three years.

The Transit Tower site is in a P (Public) use district. The project's office and retail uses would not be permitted in the P zoning district and an amendment to the zoning map (rezoning) to a Downtown Office (C-3-O (SD)) zoning district would be required as part of the project approval; this change is proposed as part of the draft Plan. The Transit Tower project site is also within a 30-X height and bulk district, which limits height to 30 feet but has no bulk limit. Amendment of the height and bulk districts (rezoning) would also be required for the Transit Tower site as part of the project approval, and is proposed as part of the

draft Plan. Because the draft Plan proposes to eliminate the existing FAR restrictions and to rezone the Transit Tower site to C-3-O (SD), no conflict would exist with respect to the building's proposed 26:1 FAR.

Plan Area Applications on File

This EIR also analyzes a Developer-Proposed Scenario for the Transit Center District Plan to reflect several applications that have been submitted to the Planning Department by private project sponsors proposing individual buildings in the area, some of them deviating from Plan parameters with regard to height or other characteristics. This scenario is primarily addressed in Chapter VI, Alternatives.

Approvals Required

Approval and implementation of the Transit Center District Plan and Transit Tower (tower approvals noted explicitly) would require the following actions, with acting bodies shown in italics:

- Amendment of the *General Plan* [various elements and Downtown area plan] to conform to the concepts of the Transit Center District Plan rezoning program (the project), as outlined above. *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 create new height and bulk districts greater than the current maximum of 550 feet; establish building setback and separation of towers requirements for buildings taller than 550 feet; eliminate the 18:1 limit on floor area ratio; adopt additional controls on building bulk, massing, and setbacks and façade articulation; modify controls for the use of transferrable development rights; establish a downtown preservation fund; increase bicycle parking and car-share parking requirements; prohibit off-street parking and loading access from Mission, Second, Ecker and portions of Folsom and Natoma Streets in the Plan area, and permit such access on portions of First, Fremont, and Beale streets only with Conditional Use Authorization; prohibit surface parking in the Plan area; allow for greater horizontal projections that emphasize ground floors; and require transportation demand management programs of all projects 25,000 square feet and larger.

- 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*

- Modification of Absolute Cumulative Limit for new shadow on certain City parks and a Section 295 shadow finding (Transit Tower).[1] *San Francisco Planning Commission and San Francisco Recreation and Park Commission*

- Permit for boilers and generators (Transit Tower). *Bay Area Air Quality Management District*

- General Construction Activity Stormwater Permit (Transit Tower). *Regional Water Quality Control Board*

[1] Other buildings that would cast shadow on Recreation and Park Department properties would also require modification of the Absolute Cumulative Limit for one or more parks. However, those subsequent projects would require their own project-specific CEQA analysis and would be considered for approval—including consideration of shadow limits—separately from the Transit Center District Plan and the Transit Tower.

- Approval of Transit Tower under *Planning Code* Section 309 (Permit Review in C-3 Districts) and Section 321 (Office Development: Annual Limit), as well as approval of a Conditional Use under Sections 304, 158, and 223(p) for a Major Parking Garage, for the portion of the Tower's proposed parking in excess of permitted accessory parking. *San Francisco Planning Commission*

- Execution of a purchase and sale agreement with the developer of the Transit Tower, including design approval of tower and pedestrian connection(s) to City Park. *Transbay Joint Powers Authority*

- Building Permits (Transit Tower). *San Francisco Department of Building Inspection*

- Approval for new water, sewer, and street light utility connections (Transit Tower). *San Francisco Public Utilities Commission*

- Approval of stormwater management system and submittal by project sponsor of a Stormwater Control Plan (Transit Tower). *San Francisco Public Utilities Commission*

- Approval of alterations to street rights-of-way, including, for example, the configuration of travel lanes, sidewalks widths, and addition of crosswalks that are part of the draft Plan's modifications to the public realm. *San Francisco Municipal Transportation Agency, Department of Public Works*

- Approval for any proposed curb or street modifications (Transit Tower). *San Francisco Municipal Transportation Agency; Department of Public Works; Board of Supervisors*

B. Environmental Impacts and Mitigation Measures

This EIR analyzes the potential effects of the draft Transit Center District Plan (November 2009) and Transit Tower project, as identified in the Notice of Preparation of an Environmental Impact Report (NOP), issued July 20, 2008 (Appendix A of this EIR).

This EIR contains detailed analyses of topics including land use, aesthetics, population and housing, cultural (historical and archeological resources), transportation, noise, air quality, wind, and shadow. **Table S-1** presents a summary of the significant adverse environmental effects ("significant impacts" or "significant effects") and mitigation measures identified in the EIR for the draft Plan, along with mitigation measures identified to reduce those impacts to a less-than-significant level, where applicable. **Table S-2** provides the same information for the proposed Transit Tower.

There are several items required by law that would serve to avoid potential significant impacts; they are summarized here for informational purposes. These measures include: no use of mirrored glass on the building to reduce glare, as per City Planning Commission Resolution 9212; limitation of construction-related noise levels, pursuant to the San Francisco Noise Ordinance (Article 29 of the San Francisco Police Code, 1972); *Planning Code* Section 139, Standards for Bird-Safe Buildings; compliance with Section 3424 of the San Francisco Building Code, Work Practices for Lead-Based Paint on Pre-1979 Buildings and Steel Structures; and observance of state and federal OSHA safety requirements related to handling and disposal of other hazardous materials, such as asbestos. Because compliance with existing law would obviate any potential impacts related to the above issues, neither significant impacts nor mitigation measures are identified in connection with these issues.

TABLE S-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
B. Aesthetics			
AE-3: The draft Plan would alter public views of the Plan area from key long-range vantage points.	SU	None available.	SU
C-AE-1: The draft Plan, in combination with the Transit Tower and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not adversely affect scenic resources or substantially increase light and glare.	SU	None available.	SU
D. Cultural and Paleontological Resources			
CP-3: Changes to the zoning controls in the Plan area could result in adverse impacts to historic architectural resources through demolition or substantial alteration.	SU	**M-CP-3a: HABS/HAER Documentation.** Prior to demolition or substantial adverse alteration of historical resource(s), the project sponsor of a development project in the Plan area shall contract with a qualified preservation architect, historic preservation expert, or other qualified individual to fully document the structure(s) to be demolished or altered. Documentation shall be undertaken following consultation with Planning Department preservation staff and the Historic Preservation Commission, and shall at a minimum be performed to HABS Level II documentation standards. According to HABS Standards, Level II documentation consists of the following tasks: • Written data: A brief report documenting the existing conditions and history of the building shall be prepared, focusing on the building's architectural and contextual relationship with the greater Western SoMa neighborhood. • Photographs: Photographs with large-format (4x5-inch) negatives shall be shot of exterior and interior views of all three project site buildings. Historic photos of the buildings, where available, shall be photographically reproduced. All photos shall be printed on archival fiber paper. • Drawings: Existing architectural drawings (elevations and plans) of all three the project site buildings, where available, shall be photographed with large format negatives or photographically reproduced on Mylar. The completed documentation package shall be submitted to local and regional archives, including but not limited to, the San Francisco Public Library History Room, the California Historical Society and the Northwest Information Center at Sonoma State University in Rohnert Park.	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-3 (cont.)		**M-CP-3b: Public Interpretative Displays.** Prior to demolition or substantial adverse alteration of historical resource(s) that are significant due to event(s) that occurred in the building at the development site, the project sponsor of a development project in the Plan area shall develop, in consultation with Planning Department preservation staff, a permanent interpretative program/and or display that would commemorate such event(s). The program/display would be installed at a publicly accessible location, either at or near the project site or in another appropriate location (such as a library or other depository). The content and location of the display shall be presented to the Historic Preservation Commission for review and comment. **M-CP-3c: Relocation of Historical Resources.** Prior to demolition or substantial alteration of historical resource(s), the project sponsor of a development project in the Plan area shall make any historical resources that would otherwise be demolished or substantially altered in an adverse manner available for relocation by qualified parties.	
C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources.	SU	Implement Mitigation Measures M-CP-3a, HABS/HAER Documentation, and M-CP-3b, Public Interpretive Displays, and M-CP-3c, Relocation of Historical Resources.	SU
E. Transportation			
TR-1: Traffic growth related to the draft Plan, including the street changes, would adversely affect local intersection operation, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.	SU	**M-TR-1a: Signal Timing Optimization.** The Municipal Transportation Agency (MTA) could optimize signal timing at the following intersections to reduce impacts on intersection LOS to a less-than-significant level, by either improving conditions to LOS D or better or by avoiding the draft Plan's contribution to increased vehicle delay (mitigated LOS in parentheses): ▪ Stockton / Geary Streets (LOS F, p.m.) ▪ Kearny / Sutter Streets (LOS F, p.m.) ▪ Battery and California Streets (LOS D, a.m. and p.m.) ▪ Embarcadero / Washington Streets (LOS F, p.m.) ▪ Third / Folsom Streets (LOS F, p.m. peak) ▪ Beale / Folsom Streets (LOS F, p.m. peak) ▪ Embarcadero / Folsom Streets (LOS F, a.m. and p.m. peak)	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-1 (cont.)		**M-TR-1b: Taxi Left-Turn Prohibition.** At the intersection of Third / Mission Streets, the Municipal Transportation Agency (MTA) could expand existing prohibitions on peak-hour left turn to include taxis, thereby permitting only buses to make left turns.	SU
		M-TR-1c: Beale / Mission Streets Bulbs and Optimization. At the intersection of Beale and Mission Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the north and south crosswalks to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the less-congested westbound / westbound Mission Street approaches to the southbound Beale Street approach.	SU
		M-TR-1d: Steuart / Howard Streets Restriping. At the intersection of Steuart and Howard Streets, the Municipal Transportation Agency (MTA) could remove two on-street parking spaces on the south side of Howard Street immediately west of the intersection and stripe the eastbound approach as one through lane and one shared through-right lane. The proposed design for eastbound Howard Street after extension of the westbound Howard Street bicycle lane to The Embarcadero calls for one wide curb lane and one parking lane, but a second eastbound travel lane at the intersection could be provided by removing up to two on-street parking spaces.	SU
		M-TR-1e: Beale / Folsom Streets Left-Turn Prohibition and Signal Optimization. At the intersection of Beale and Folsom Streets, the Municipal Transportation Agency (MTA) could prohibit eastbound right turns from Folsom Street in the p.m. peak hour and optimize the signal timing by reallocating green time from the eastbound / westbound Folsom Street approaches to the northbound / southbound Beale Street approaches.	SU
		M-TR-1f: Third / Harrison Streets Restriping. At the intersection of Third and Harrison Streets, the Municipal Transportation Agency (MTA) could convert one of the two eastbound lanes leaving the intersection into an additional westbound through lane by restriping the east (Harrison Street) leg of the intersection. In order to allow sufficient turning radius and clearance for heavy vehicles such as buses and trucks, two on-street parking spaces on the south side of Harrison Street east of the intersection would be removed.	SU
		M-TR-1g: Hawthorne / Harrison Streets Restriping. At the intersection of Hawthorne and Harrison Streets, the Municipal Transportation Agency (MTA) could stripe an additional westbound through lane approaching the intersection by converting one of the two eastbound lanes.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-1 (cont.)		**M-TR-1h: Second / Harrison Streets Turn Prohibition and Optimization.** At the intersection of Second and Harrison Streets, the Municipal Transportation Agency could prohibit eastbound left turns during the p.m. peak hour.	SU
		M-TR-1i: Third / Bryant Streets Bulbs and Optimization. At the intersection of Third and Bryant Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the south crosswalk to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the eastbound Bryant Street approach to the northbound Third Street approach.	SU
		M-TR-1j: Second / Bryant Streets Bulbs and Optimization. At the intersection of Second and Bryant Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the east and west crosswalks to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the northbound / southbound Second Street approaches to the eastbound Bryant Street approach.	SU
		M-TR-1k: Second / Tehama Streets Restriping and Optimization. At the intersection of Second and Tehama Streets, the Municipal Transportation Agency (MTA) could prohibit eastbound and westbound left turns (from Tehama Street) during the a.m. and p.m. peak hours.	SU
		M-TR-1l: Mid-Block Signalized Intersection Improvements. At the signalized intersections proposed in the public realm plan at Second / Natoma Streets; First / Minna Streets; First / Natoma Streets; Fremont / Tehama Streets; and Fremont Street / Transit Center Bus Plaza, the following improvements could improve traffic operations:	SU
		At Second / Natoma Streets, the Municipal Transportation Agency (MTA) could install bulb-outs on the north and south crosswalks to reduce pedestrian crossing distances and times, allowing more green time for through traffic along Second Street. The traffic signal could also be designed to give priority to transit vehicles. However, due to two-way traffic along Second Street and the close proximity of the proposed crossing to the Second / Howard Streets intersection, this measure may not be sufficient to reduce the proposed mid-block crossing's impacts to traffic and transit operations. In addition, while bulb-outs would reduce crossing distance, a sufficiently high volume of pedestrians heading to and from the Transit Center may warrant retaining longer pedestrian phases to ensure adequate crossing times and throughput, so as not to introduce substantial queuing or congestion at the crosswalk or surrounding sidewalk. Accordingly, the feasibility of this measure is uncertain, and this impact is considered **significant and unavoidable**.	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-1 (cont.)		At First / Minna Streets and First / Natoma Streets, reducing impacts would require additional lane capacity on First Street, although that would result in increased pedestrian crossing distances that would require longer pedestrian signal phases. This would also preclude the public realm plan's proposed sidewalk widening on First Street adjacent to the Transit Center. Moreover, additional lanes would not alleviate downstream congestion on First Street leading to the Bay Bridge. Eliminating one or both of the mid-block crossings might result in congested sidewalks on First Street. In addition, traffic signals at these two locations may be necessary for freight and passenger loading-related traffic circulation to and from Minna and Natoma Streets, regardless of whether pedestrian crossings are provided. Accordingly, no feasible mitigation was identified and this impact is considered **significant and unavoidable.**	SU
		At Fremont / Natoma Streets and Fremont Street at the Transit Center Bus Plaza, the signal could be designed with two signal phases instead of three. One phase would be for northbound Fremont Street, and the second, for all five bus bays to exit the Bus Plaza, as well as pedestrians crossing Fremont Street at both Natoma Street and at the Bus Plaza. This would increase traffic capacity on Fremont Street and reduce the potential for queues on Fremont Street and the Bay Bridge. However, the Municipal Transportation Agency has determined that a two-phase signal would create operational and safety concerns for transit and pedestrians. Accordingly, no feasible mitigation was identified and this impact is considered **significant and unavoidable.**	SU
		M-TR-1m: Downtown Traffic Signal Study. As part of a Regional Traffic Signalization and Operations Program project, the Municipal Transportation Agency (MTA) could conduct a study of Downtown-area traffic signal systems, with the aim of recalibrating cycle lengths, offsets, and splits at Downtown-area intersections to optimize traffic flow and minimize unnecessary delays (without impacting other modes of travel).	SU
		Mitigation (indicated in parentheses) could reduce average vehicle delay at the following intersections, but not to a less-than-significant level because further mitigation would require increased lane capacity that would preclude one or more proposed sidewalk improvements under the draft Plan's public realm plan, and because further signal timing optimization would require coordination with other signals that could increase overall vehicle delay. Therefore, impacts at the following intersections would be **significant and unavoidable**: ▪ New Montgomery / Mission Streets (Optimize signal timing) ▪ Third / Howard Streets (Optimize signal timing) ▪ New Montgomery / Howard Streets (Optimize signal timing)	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-1 (cont.)		▪ Fremont / Howard Streets (Prohibit eastbound p.m. peak left turns and optimize signal) ▪ Main / Howard Streets (Prohibit eastbound p.m. peak left turns and optimize signal) ▪ Spear / Howard Streets (Add northbound and southbound left-turn pockets, prohibit eastbound p.m. peak left turns and optimize signal)	
		No mitigation is feasible to reduce impacts at the following intersections to a less-than-significant level because, while increased lane capacity and/or signal timing optimization and, in some cases, installation of corner pedestrian bulbs to allow for less green time for pedestrian crossing could improve level of service for one or more approaches, the applicable mitigation strategy would increase delays for transit vehicles on Market and Mission Streets and also cause increased pedestrian delays or, in some instances, precluding proposed sidewalk or transit improvements under the draft Plan's public realm plan. Therefore, impacts at the following intersections would be **significant and unavoidable**: ▪ Third / Kearny / Market / Geary Streets ▪ Montgomery / Market / New Montgomery Streets ▪ First / Market Streets ▪ Fremont / Market / Front Streets ▪ Beale / Market / Davis / Pine Streets ▪ Second / Mission Streets ▪ First / Mission Streets ▪ Fremont / Mission Streets ▪ Second / Howard Streets ▪ First / Howard Streets ▪ Beale / Howard Streets ▪ Hawthorne / Folsom Streets ▪ Second / Folsom Streets ▪ First / Folsom Streets ▪ Spear / Folsom Streets ▪ Fourth / Harrison Streets / I-80 WB On-Ramp ▪ First / Harrison Streets / I-80 EB On-Ramp	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-1 (cont.)		No mitigation is feasible to reduce impacts at the following intersection to a less-than-significant level because additional lane capacity is unavailable and/or signal timing optimization would not improve level of service to an acceptable level. Therefore, impacts at the following intersection would be **significant and unavoidable**: Essex / Harrison Streets / I-80EB On-Ramp.	SU
		No mitigation is required for the following intersections, which would experience significant impacts only in the absence of the public realm improvements that are part of the draft Plan: Spear / Mission Streets (without the public realm improvements, could be mitigated by changing signal phasing and optimizing signal timing).	
TR-2: Traffic growth related to the draft Plan, including the street changes, would result in a considerable contribution to congested operations at the Fourth/Harrison Streets and First/Harrison Streets freeway on-ramps, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.	SU	None available.	SU
TR-3: Transit ridership related to the draft Plan, including the street changes, would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; and would cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result.	SU	**M-TR-3a: Installation and Operation of Transit-Only and Transit Queue-Jump Lanes.** To reduce or avoid the effects of traffic congestion on Muni service, at such time as the transit-vehicle delay results in the need to add additional vehicle(s) to one or more Muni lines, the Municipal Transportation Agency (MTA) could stripe a portion of the approach lane at applicable intersections to restrict traffic to buses only during the p.m. peak period, thereby allowing Muni vehicles to avoid traffic queues at certain critical intersections and minimizing transit delay. Each queue-jump lane would require the prohibition of parking during the p.m. peak period for the distance of the special lane. For the 41 Union, MTA could install a p.m. peak-hour transit-only lane along Beale Street approaching and leaving the intersection of Beale/Mission Street, for a distance of 150 to 200 feet. Five parking spaces on the west side of Beale Street north of Mission Street could be eliminated when the transit lane is in effect to allow for a right-turn pocket. MTA could also install a p.m. peak-hour queue-jump lane on the eastbound Howard Street approach to the intersection of Beale/Howard Streets, for a distance of 100 feet. If the foregoing were ineffective, MTA could consider re-routing the 41 Union to less-congested streets, if available, or implementing actions such as providing traffic signal priority to Muni buses.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-3 (cont.)		For the 11-Downtown Connector and 12 Folsom Pacific, MTA could install a p.m. peak-hour queue-jump lane on the southbound Second Street approach to the intersection to the intersection of Second/Folsom Streets, for a distance of approximately 150 feet. When the lane is in effect, five on-street parking spaces on the west side of Second Street north of Folsom Street could be eliminated, as well as a portion of the southbound bicycle lane approaching the intersection. If the foregoing were ineffective, MTA could consider re-routing the 11-Downtown Connector and 12 Folsom to less-congested streets, if available, or implementing actions such as providing traffic signal priority to Muni buses. The MTA could also evaluate the effectiveness and feasibility of installing an eastbound transit-only lane along Folsom Street between Second and Third Streets, which would minimize delays incurred at these intersections by transit vehicles. The study would create a monitoring program to determine the implementation extent and schedule, which may include conversion of one eastbound travel lane into a transit-only lane.	
		M-TR-3b: Exclusive Muni Use of Mission Street Boarding Islands. To reduce or avoid conflicts between Muni buses and regional transit service (Golden Gate Transit and SamTrans) using the relocated transit-only center lanes of Mission Street between First and Third Streets, MTA could reserve use of the boarding islands for Muni buses only and provide dedicated curbside bus stops for regional transit operators. Regional transit vehicles would still be allowed to use the transit-only center lanes between stops, but would change lanes to access the curbside bus stops. This configuration would be similar to the existing Muni stop configuration along Market Street, where two different stop patterns are provided, with each route assigned to only one stop pattern.	SU
		M-TR-3c: Transit Improvements on Plan Area Streets. To reduce or avoid the effects of traffic congestion on regional transit service operating on surface streets (primarily Golden Gate Transit and SamTrans), MTA, in coordination with applicable regional operators, could conduct study the effectiveness and feasibility of transit improvements along Mission Street, Howard Street, Folsom Street, First Street, and Fremont Street to reduce delays incurred by transit vehicles when passing through the Plan area. The study would examine a solutions including, but not limited to the following: ▪ Installation of transit-only lanes along Howard Street and Folsom Street, which could serve both Muni buses (e.g., 12 Folsom-Pacific) and Golden Gate Transit buses heading to / from Golden Gate's yard at Eighth and Harrison Streets.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-3 (cont.)		▪ Extension of a transit-only lane on Fremont Street south to Howard Street and installation of transit-actuated queue-jump phasing at the Fremont Street / Mission Street intersection to allow Golden Gate Transit buses to make use of the Fremont Street transit lane (currently only used by Muni vehicles); and ▪ Transit signal priority treatments along Mission, Howard, and Folsom Streets to extend major-street traffic phases or preempt side-street traffic phases to reduce signal delay incurred by SamTrans and Golden Gate Transit vehicles. Golden Gate Transit and SamTrans could consider rerouting their lines onto less-congested streets, if available, in order to improve travel times and reliability. A comprehensive evaluation would need to be conducted before determining candidate alternative streets, considering various operational and service issues such as the cost of any required capital investments, the availability of layover space, and proximity to ridership origins and destinations.	
		M-TR-3d: Increased Funding to Offset Transit Delays. Sponsors of development projects within the Plan area could be subject to a fair share fee that would allow for the purchase of additional transit vehicle(s) to mitigate the impacts on transit travel time. In the case of Muni operations, one additional vehicle would be required. For regional operators, the analysis also determined that on-street delays could require the deployment of additional buses on some Golden Gate Transit and SamTrans routes. Funds for the implementation of this measure are expected to be generated from a delineated portion of the impact fees that would be generated with implementation of the draft Plan, and are projected to be adequate and sufficient to provide for the capital cost to purchase the additional vehicle and facility costs to store and maintain the vehicle.	SU
		M-TR-3e: Increased Funding of Regional Transit. Sponsors of development projects within the Plan area could be subject to one or more fair share fees to assist in service improvements, such as through the purchase of additional transit vehicles and vessels or contributions to operating costs, as necessary to mitigate Plan impacts. These fee(s) could be dedicated to Golden Gate Transit, North Bay ferry operators, AC Transit, BART, and/or additional North Bay and East Bay transit operators. Depending on how the fee(s) were allocated, Caltrain and SamTrans might also benefit, although lesser impacts were identified for these South Bay operators. Funds for the implementation of this measure are expected to be generated from a delineated portion of the impact fees that would be generated with implementation of the draft Plan, and are projected to be adequate and sufficient to provide for the capital cost to purchase the additional vehicle and facility costs to store and maintain the vehicle.	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-4: Pedestrian activity resulting from implementation of the draft Plan would cause the level of service at sidewalks, street corners, and crosswalks to deteriorate.	SU	**M-TR-4a: Widen Crosswalks.** To ensure satisfactory pedestrian level of service at affected crosswalks, the Municipal Transportation Agency, Sustainable Streets Division, could conduct periodic counts of pedestrian conditions (annually, for example) and could widen existing crosswalk widths, generally by 1 to 3 feet, at such times as pedestrian LOS is degraded to unacceptable levels.	SU
TR-5: Development of large projects pursuant to the draft Plan would create potentially hazardous conditions for pedestrians and otherwise interfere with pedestrian accessibility.	SU	**M-TR-5 Garage/Loading Dock Attendant.** If warranted by project-specific conditions, the project sponsor of a development project in the Plan area shall ensure that building management employs attendant(s) for the project's parking garage and/or loading dock, as applicable. The attendant would be stationed as determined by the project-specific analysis, typically at the project's driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with pedestrians on the sidewalk during the a.m. and p.m. peak periods of traffic and pedestrian activity, with extended hours as dictated by traffic and pedestrian conditions and by activity in the project garage and loading dock. (See also Mitigation Measure M-TR-4b, above.) Each project shall also install audible and/or visible warning devices, or comparably effective warning devices as approved by the Planning Department and/or the Sustainable Streets Division of the Municipal Transportation Agency, to alert pedestrians of the outbound vehicles from the parking garage and/or loading dock, as applicable.	SU
TR-6: Implementation of the draft Plan would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	SU	Implement Mitigation Measures M-TR-7 and M-TR-7b.	SU
TR-7: Implementation of the draft Plan would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, and pedestrians.	SU	**M-TR-7a: Loading Dock Management:** To ensure that off-street loading facilities are efficiently used and that trucks longer than can be safely accommodated are not permitted to use a building's loading dock, the project sponsor of a development project in the Plan area shall develop a plan for management of the building's loading dock and shall ensure that tenants in the building are informed of limitations and conditions on loading schedules and truck size. Such a management plan could include strategies such as the use of an attendant to direct and guide trucks (see Mitigation Measure M-TR-5), installing a "Full" sign at the garage/loading dock driveway, limiting activity during peak hours, installation of audible and/or visual warning devices, and other features. Additionally, as part of the project application process, the project sponsor shall consult with the Municipal Transportation Agency concerning the design of loading and parking facilities.	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-7 (cont.)		Typically, a building property manager dictates the maximum size of trucks that can be accommodated by a building's loading dock, and when trucks may access the project site.	
		M-TR-7b: Augmentation of On-Street Loading Space Supply: To ensure the adequacy of the Plan area's supply of on-street spaces, the Municipal Transportation Agency (MTA) could convert existing on-street parking spaces within the Plan Area to commercial loading use. Candidate streets might include the north side of Mission Street between Second Street and First Street, both sides of Howard Street between Third Street and Fremont Street, and both sides of Second Street between Howard Street and Folsom Street. The MTA and Planning Department could also increase the supply of on-street loading "pockets" that would be created as part of the draft Plan's public realm improvements. Increasing the supply of on-street loading spaces would reduce the potential for disruption of traffic and transit circulation in the Plan Area as a result of loading activities. However, the feasibility of increasing the number of on-street loading spaces is unknown. Locations for additional loading pockets have not been identified, and the feasibility of adding spaces is uncertain, as any such spaces would reduce pedestrian circulation area on adjacent sidewalks. Locations adjacent to transit-only lanes would also not be ideal for loading spaces because they may introduce new conflicts between trucks and transit vehicles. Given these considerations, potential locations for additional on-street loading spaces within the Plan area are limited, and it is unlikely that a sufficient amount of spaces could be provided to completely offset the net loss in supply.	SU
TR-9: Plan area construction, including construction of individual projects and ongoing construction of the Transit Center, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.	SU	**M-TR-8: Construction Coordination.** To minimize potential disruptions to transit, traffic, and pedestrian and bicyclists, the project sponsor and/or construction contractor for any individual development project in the Plan area shall develop a Construction Management Plan that could include, but not necessarily be limited to, the following: ▪ Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m. (or other times, if approved by the Municipal Transportation Agency) to minimize disruption of traffic, transit, and pedestrian flow on adjacent streets and sidewalks during the weekday a.m. and p.m. peak periods. ▪ Identify optimal truck routes to and from the site to minimize impacts to traffic, transit, pedestrians, and bicyclists; and, ▪ Encourage construction workers to use transit when commuting to and from the site, reducing the need for parking.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-9 (cont.)		The sponsor shall also coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Muni, AC Transit, Golden Gate Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that would result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.	
F. Noise and Vibration			
NO-1: Implementation of the draft Plan, including the proposed Transit Tower, would not result in a substantial permanent increase in ambient noise or vibration levels, but Plan implementation could result in exposure of persons to noise levels in excess of standards in the *San Francisco General Plan* and could introduce new sensitive uses that would be affected by existing noise levels.	SU	**M-NO-1a: Noise Survey and Measurements for Residential Uses.** For new residential development located along streets with noise levels above 70 dBA Ldn, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise-generating uses within two blocks of the project site, and including at least one 24-hour noise measurement (with average and maximum noise level readings computed every 10 seconds), prior to completion of the environmental review for each subsequent residential project in the Plan area. The analysis shall demonstrate with reasonable certainty that Title 24 standards, where applicable, can be met, and that there are no particular circumstances about the proposed project site that appear to warrant heightened concern about noise levels in the vicinity. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that acceptable interior noise levels consistent with those in the Title 24 standards can be attained. **M-NO-1b: Noise Minimization for Residential Open Space.** To minimize effects on residential development in the Plan area, the Planning Department, through its building permit review process and in conjunction with the noise analysis set forth in Mitigation Measure M-NO-1a, shall require that open space required under the Planning Code for residential uses be protected, to the maximum feasible extent, from existing ambient noise levels that could prove annoying or disruptive to users of the open space. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
F. Noise and Vibration (cont.)			
NO-1 (cont.)		**M-NO-1c: Noise Minimization for Non-Residential Uses.** To reduce potential effects on new non-residential sensitive receptors such as child care centers, schools, libraries, and the like, for new development including such noise-sensitive uses, the Planning Department shall require, as part of its building permit review process, the preparation of an acoustical analysis by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that daytime interior noise levels of 50 dBA, based on the *General Plan* Environmental Protection Element, can be attained. **M-NO-1d: Mechanical Equipment Noise Standard.** The Planning Department shall require that, as part of required the noise survey and study for new residential uses (Mitigation Measure M-NO-1a), all reasonable efforts be made to identify the location of existing rooftop mechanical equipment, the predicted noise generated by that equipment, and the elevation at which the predicted noise level would be of potential concern for new residential uses, as well as the necessary noise insulation for the new residential uses, where applicable. **M-NO-1e: Interior Mechanical Equipment.** The Planning Department shall require, as part of subsequent project-specific review under CEQA, that effects of mechanical equipment noise on adjacent and nearby noise-sensitive uses be evaluated, and that design of commercial buildings that incorporates the maximum feasible reduction of building equipment noise, such as through the use of fully noise-insulated enclosures around rooftop equipment and/or incorporation of mechanical equipment into intermediate building floor(s).	
NO-3: Construction activities in the Plan area could expose persons to temporary increases in vibration levels substantially in excess of ambient levels.	SU	Implement Mitigation Measure M-NO-2a, Noise Control Measures During Pile Driving. Implement Mitigation Measure M-CP-3b, Construction Best Practices for Historical Resources, and Mitigation Measure and M-CP-3c, Construction Monitoring Program for Historical Resources.	SU
C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts.	SU	Implement Mitigation Measure M-NO-2a, Noise Control Measures for Pile Driving, and Mitigation Measure M-NO-2b, General Construction Noise Control Measures. **M-C-NO: Cumulative Construction Noise Control Measures.** In addition to implementation of Mitigation Measure NO-2a and Mitigation Measure NO-2b (as applicable), prior to the time that construction of the proposed project is completed, the project sponsor of a development project in the Plan area shall cooperate with and participate in any City-sponsored construction noise control	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
F. Noise and Vibration (cont.)			
C-NO (cont.)		program for the Transit Center District Plan area or other City-sponsored areawide program developed to reduce potential effects of construction noise in the project vicinity. Elements of such a program could include a community liaison program to inform residents and building occupants of upcoming construction activities, staggering of construction schedules so that particularly noisy phases of work do not overlap at nearby project sites, and, potentially, noise and/or vibration monitoring during construction activities that are anticipated to be particularly disruptive.	
G. Air Quality			
AQ-2: The draft Plan would expose sensitive receptors to substantial concentrations of $PM_{2.5}$ and toxic air contaminants.	SU	**M-AQ-2: Implementation of Risk and Hazard Overlay Zone and Identification of Health Risk Reduction Policies.** To reduce the potential health risk resulting from exposure of new sensitive receptors to health risks from roadways, and stationary sources, and other non-permitted sources $PM_{2.5}$ and TACs, the final Transit Center District Plan shall provide that the entire Plan area shall be included in an overlay zone, as recommended by BAAQMD, that would require analysis of potential site-specific health risks (lifetime cancer risk, chronic and acute hazard index, and $PM_{2.5}$ concentration) for all projects that would include sensitive receptors, and implementation of measures to reduce exposure to such risks that are in excess of the BAAQMD significance thresholds (or any future superseding criteria as established by the Planning Department), as they may be amended from time to time. For purposes of this measure, sensitive receptors are considered to include dwelling units; child-care centers; schools (high school age and below); and inpatient health care facilities, including nursing or retirement homes and similar establishments. Parks and similar spaces are not considered sensitive receptors for purposes of this measure unless it is reasonably shown that a substantial number of persons are likely to spend three hours per day, on a daily basis, at such facilities. Development projects in the Plan area that would include sensitive receptors shall undergo, prior to project approval, a screening-level health risk analysis, consistent with methodology approved by the Planning Department, to determine if cancer risk, hazard index, and/or $PM_{2.5}$ concentration would exceed BAAQMD thresholds or other applicable criteria as determined by the Environmental Review Officer. If one or more thresholds would be exceeded at the site of the subsequent project where sensitive receptors would be located, the project (or portion of the project containing sensitive receptors, in the case of a mixed-use project) shall be equipped with filtration systems with a Minimum Efficiency Reporting Value (MERV) rating of 13 or higher, as necessary to reduce the health risk(s) to the maximum extent feasible. The ventilation system shall be	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality (cont.)			
AQ-2 (cont.)		designed by an engineer certified by the American Society of Heating, Refrigeration and Air-Conditioning Engineers, who shall provide a written report documenting that the system offers the best available technology to minimize outdoor to indoor transmission of air pollution. The project sponsor shall present a plan to ensure ongoing maintenance of ventilation and filtration systems and shall ensure the disclosure to buyers and/or renters regarding the findings of the analysis and inform occupants as to proper use of any installed air filtration.	
AQ-3: The draft Plan would expose existing and future sensitive receptors to substantial levels of $PM_{2.5}$ and toxic air contaminants from new vehicles and equipment.	SU	**M-AQ-3: Siting of Uses that Emit DPM and Other TACs.** To minimize potential exposure of sensitive receptors to diesel particulate matter (DPM), for new development including warehousing and distribution centers, and for new development including commercial, industrial or other uses that would be expected to generate toxic air contaminants (TACs) as part of everyday operations, the Planning Department shall require, prior to the first project approval action, the preparation of an analysis that includes, at a minimum, a site survey to identify residential or other sensitive uses within 1,000 feet of the project site, and dispersion modeling of health risk from all potential stationary and mobile sources of TACs generated by the project. The analysis shall include estimated lifetime cancer risk, and chronic and acute hazard index at the nearest sensitive receptor and at other nearby receptor(s) as determined necessary by the Planning Department. If risks to nearby receptors are found to exceed applicable thresholds, then emissions reduction or other comparable measures would be required prior to project approval to ensure that health risks would not be significant. This measure shall be applicable, at a minimum, to the following uses: backup generators (whether diesel- or propane-fueled); dry cleaners; drive-through restaurants; gas dispensing facilities; auto body shops; metal plating shops; photographic processing shops; textiles; apparel and furniture upholstery; leather and leather products; appliance repair shops; mechanical assembly cleaning; printing shops; hospitals and medical clinics; biotechnology research facilities; warehousing and distribution centers; and any use served by at least 100 trucks per day or 40 refrigerated trucks per day, and any project for which a stationary source is proposed (e.g., a generator). Should the results of this analysis conclude that the project would exceed the BAAQMD significance thresholds, the project sponsor shall be required to identify and implement all feasible mitigation measures to reduce health risks impacts below BAAQMD significance thresholds. If it is determined that identified mitigation measures are not feasible, the project sponsor shall document, to the satisfaction of the Environmental Review Officer, that the project sponsor has complied with this mitigation measure to the extent feasible and why full compliance with the mitigation measure is infeasible.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality (cont.)			
AQ-4: Implementation of the draft Plan would result in construction-period emissions of criteria air pollutants, including ozone precursors, that would contribute to an existing or projected air quality violation or result in a cumulatively considerable increase in criteria pollutants, and could expose sensitive receptors to substantial levels of construction dust.	SU	**M-AQ-4a Construction Vehicle Emissions Minimization:** To reduce construction vehicle emissions, the project sponsor shall incorporate the following into construction specifications: ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. **M-AQ-4b Dust Control Plan:** To reduce construction-related dust emissions, the project sponsor of each development project in the Plan area and each public infrastructure project (such as improvements to the public realm) in the Plan area on a site of one-half acre or less but that would require more than 5,000 cubic yards of excavation lasting four weeks or longer shall incorporate into construction specifications the requirement for development and implementation of a site-specific Dust Control Plan as set forth in Article 22B of the *San Francisco Health Code*. The Dust Control Plan shall require the project sponsor to: submit a map to the Director of Public Health showing all sensitive receptors within 1,000 feet of the site; wet down areas of soil at least three times per day; provide an analysis of wind direction and install upwind and downwind particulate dust monitors; record particulate monitoring results; hire an independent, third party to conduct inspections and keep a record of those inspections; establish shut-down conditions based on wind, soil migration, etc.; establish a hotline for surrounding community members who may be potentially affected by project-related dust; limit the area subject to construction activities at any one time; install dust curtains and windbreaks on the property lines, as necessary; limit the amount of soil in hauling trucks to the size of the truck bed and secure soils with a tarpaulin; enforce a 15 mph speed limit for vehicles entering and exiting construction areas; sweep affected streets with water sweepers at the end of the day; install and utilize wheel washers to clean truck tires; terminate construction activities when winds exceed 25 miles per hour; apply soil stabilizers to inactive areas; and sweep adjacent streets to reduce particulate emissions. The project sponsor would be required to designate an individual to monitor compliance with dust control requirements.	SU for criteria pollutants; LTS for construction dust
AQ-5: Implementation of the draft Plan could expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.	SU	**M-AQ-5 Construction Vehicle Emissions Evaluation and Minimization:** To reduce the potential health risk resulting from project construction activities, the project sponsor of each development project in the Plan area shall undertake a project-specific health risk analysis, as appropriate and determined by the Environmental Planning Division of the Planning Department, for diesel-powered and other applicable construction equipment, using the methodology recommended by the BAAQMD and/or the Planning Department. If the health	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality (cont.)			
AQ-5 (cont.)		risk analysis determines that construction emissions would exceed health risk significance threshold(s) identified by BAAQMD and/or the Planning Department, the project sponsor shall include in contract specifications a requirement for the following BAAQMD-recommended measures: ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes; ▪ The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOx reduction and 45 percent PM reduction compared to the most recent project-modeled fleet-wide average. Acceptable options for reducing emissions include, as the primary option, use of Interim Tier 4 equipment where such equipment is available and feasible for use, use of Tier 2/Tier 3 equipment retrofitted with CARB Level 3 Verified Diesel Emissions Control System (VDECS, which includes diesel particulate filters), the use of other late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available; ▪ All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM, including Tier 3 or alternative fuel engines where such equipment is available and feasible for use; ▪ All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and ▪ The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available.	
C-AQ: The draft Plan and the proposed Transit Tower would contribute considerably to cumulative air quality impacts.	SU	Implement Mitigation Measures M-AQ-2, M-AQ-3, M-AQ-4a, M-AQ-4b, M-AQ-5, and M-AQ-7	SU
J. Shadow			
SH-1: The draft Plan would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	None available.	SU

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
J. Shadow (cont.)			
C-SH: The draft Plan, including the proposed Transit Tower, would contribute to cumulative new shadow that would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	None available.	SU

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources			
CP-1: Development projects in the Plan area could cause a substantial adverse change in the significance of archeological resources.	LSM	**M-CP-1: Subsequent Archeological Testing Program.** When a project is to be developed within the Transit Center District Plan Area, it will be subject to preliminary archeological review by the Planning Department archeologist. This in-house review will assess whether there are gaps in the necessary background information needed to make an informed archaeological sensitivity assessment. This assessment will be based upon the information presented in the Transit Center District Plan Archeological Research Design and Treatment Plan (Far Western Anthropological Research Group, Inc., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February 2010), as well as any more recent investigations that may be relevant. If data gaps are identified, then additional investigations, such as historic archival research or geoarchaeological coring, may be required to provide sufficiently detailed information to make an archaeological sensitivity assessment. If the project site is considered to be archaeologically sensitive and based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-1 (cont.)		in accordance with this measure and with the requirements of the Transit Center District Plan archeological research design and treatment plan at the direction of the ERO. In instances of inconsistency between the requirement of the project archaeological research design and treatment plan and of this archaeological mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) (c). *Archeological Testing Program*. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either: A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.	

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-1 (cont.)		*Archeological Monitoring Program*. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented, the archeological consultant shall prepare an archeological monitoring plan (AMP): ▪ The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context; ▪ Archeological monitoring shall conform to the requirements of the final AMP reviewed and approved by the ERO; ▪ The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource; ▪ The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; ▪ The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; ▪ If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a	

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-1 (cont.)		reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO. Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO. *Archeological Data Recovery Program*. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical. The scope of the ADRP shall include the following elements: ▪ Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations. ▪ Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures. ▪ Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies. ▪ Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. ▪ Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. ▪ Final Report. Description of proposed report format and distribution of results.	

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-1 (cont.)		▪ Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. *Human Remains and Associated or Unassociated Funerary Objects.* The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. *Final Archeological Resources Report.* The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.	

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-5. Construction activity in the Plan area could result in damage to historic architectural resources.	LSM	**M-CP-5a. Construction Best Practices for Historical Resources.** The project sponsor of a development project in the Plan area shall incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings, including, but not necessarily limited to, staging of equipment and materials as far as possible from historic buildings to avoid direct impact damage; using techniques in demolition (of the parking lot), excavation, shoring, and construction that create the minimum feasible vibration; maintaining a buffer zone when possible between heavy equipment and historical resource(s) within 125 feet, as identified by the Planning Department; appropriately shoring excavation sidewalls to prevent movement of adjacent structures; design and installation of the new foundation to minimize uplift of adjacent soils; ensuring adequate drainage from adjacent sites; covering the roof of adjacent structures to avoid damage from falling objects; and ensuring appropriate security to minimize risks of vandalism and fire. **M-CP-5b. Construction Monitoring Program for Historical Resources.** The project sponsor shall undertake a monitoring program to minimize damage to adjacent historic buildings and to ensure that any such damage is documented and repaired. The monitoring program would include the following components. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a historic architect or qualified historic preservation professional to undertake a preconstruction survey of historical resource(s) identified by the Planning Department within 125 feet of planned construction to document and photograph the buildings' existing conditions. Based on the construction and condition of the resource(s), the consultant shall also establish a maximum vibration level that shall not be exceeded at each building, based on existing condition, character-defining features, soils conditions, and anticipated construction practices (a common standard is 0.2 inches per second, peak particle velocity). To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels at each structure and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard. Should vibration levels be observed in excess of the standard, construction shall be halted and alternative techniques put in practice, to the extent feasible. The consultant shall conduct regular periodic inspections of each building during ground-disturbing activity on the project site. Should damage to either building occur, the building(s) shall be remediated to its preconstruction condition at the conclusion of ground-disturbing activity on the site.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
F. Noise and Vibration			
NO-2: Construction activities in the Plan area could expose persons to temporary increases in noise levels substantially in excess of ambient levels.	LSM	**M-NO-2a: Noise Control Measures During Pile Driving.** For individual projects that require pile driving, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. These attenuation measures shall include as many of the following control strategies, and any other effective strategies, as feasible: ▪ The project sponsor of a development project in the Plan area shall require the construction contractor to erect temporary plywood noise barriers along the boundaries of the project site to shield potential sensitive receptors and reduce noise levels; ▪ The project sponsor of a development project in the Plan area shall require the construction contractor to implement "quiet" pile-driving technology (such as pre-drilling of piles, sonic pile drivers, and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; ▪ The project sponsor of a development project in the Plan area shall require the construction contractor to monitor the effectiveness of noise attenuation measures by taking noise measurements; and ▪ The project sponsor of a development project in the Plan area shall require that the construction contractor limit pile driving activity to result in the least disturbance to neighboring uses. **M-NO-2b:General Construction Noise Control Measures.** To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project sponsor of a development project in the Plan area shall undertake the following: ▪ The project sponsor of a development project in the Plan area shall require the general contractor to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible). ▪ The project sponsor of a development project in the Plan area shall require the general contractor to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as five dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
F. Noise and Vibration (cont.)			
NO-2 (cont.)		▪ The project sponsor of a development project in the Plan area shall require the general contractor to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA. ▪ The project sponsor of a development project in the Plan area shall include noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible. ▪ Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor of a development project in the Plan area shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include (1) a procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of neighboring residents and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.	
I. Wind			
WI-2: Implementation of the draft Plan would not cause large increases in pedestrian wind speeds or wind speeds in publicly accesssible open spaces over a substantial portion of the Plan area.	LSM	**M-WI-2: Tower Design to Minimize Pedestrian Wind Speeds:** As part of the design development for buildings on Parcel F and at the 524 Howard Street, 50 First Street, 181 Fremont Street and Golden Gate University sites, the project sponsor(s) shall consider the potential effect of these buildings on pedestrian-level winds and on winds in the City Park atop the Transit Center. If wind-tunnel testing identifies adverse impacts, the project sponsor(s) shall conduct additional	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
I. Wind (cont.)			
WI-2 (cont.)		mitigation testing to resolve impacts to the maximum degree possible and to the satisfaction of Planning Department staff. Design features could include, but not be limited to, setting a tower atop a podium, which can interfere with "downwash" of winds from higher elevations toward the ground; the use of setbacks on tower facades, particularly those facades facing into prevailing winds, which can have similar results; using chamfered and/or rounded corners to minimize the acceleration of upper-level winds as they round corners; façade articulation; and avoiding the placement of large, unbroken facades into prevailing winds.	
C-WI: Implementation of the draft Plan and the proposed Transit Tower, along with cumulative development, would neither cause large increases in ground-level wind speeds over a substantial portion of the Plan area, nor result in a new exceedance of the wind hazard criterion.	LSM	Implement Mitigation Measure M-WI-2.	LTS
N. Biological Resources			
BI-1: Development under the draft Plan has the potential to adversely impact 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 Game or U.S. Fish and Wildlife Service.	LSM	**M-BI-1a: Pre-Construction Bird Surveys.** Conditions of approval for building permits issued for construction within the Plan area shall include a requirement for pre-construction breeding bird surveys when trees or vegetation would be removed or buildings demolished as part of an individual project. Pre-construction nesting bird surveys shall be conducted by a qualified biologist between February 1st and August 15th if vegetation (trees or shrubs) removal or building demolition is scheduled to take place during that period. If special-status bird species are found to be nesting in or near any work area or, for compliance with federal and state law concerning migratory birds, if birds protected under the federal Migratory Bird Treaty Act or the *California Fish and Game Code* are found to be nesting in or near any work area, an appropriate no-work buffer zone (e.g., 100 feet for songbirds) shall be designated by the biologist. Depending on the species involved, input from the California Department of Fish and Game (CDFG) and/or the U.S. Fish and Wildlife Service (USFWS) Division of Migratory Bird Management may be warranted. As recommended by the biologist, no activities shall be conducted within the no-work buffer zone that could disrupt bird breeding. Outside of the breeding season (August 16 – January 31), or after young birds have fledged, as determined by the biologist, work activities may proceed. Birds that establish nests during the construction period are considered habituated to such activity and no buffer shall be required, except as needed to avoid direct destruction of the nest, which would still be prohibited.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
N. Biological Resources			
BI-1 (cont.)		**M-BI-1b: 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, the bat biologist 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.	
Q. Hazards and Hazardous Materials			
HZ-2: Excavation in the Transit Center District Plan area would require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release to the environment during construction.	LSM	**M-HZ-2a: Site Assessment and Corrective Action for Sites Located Bayward of Historic Tide Line.** For any project located bayward of the historic high tide line the project sponsor shall initiate compliance with, and ensure that the project fully complies with, Article 22A of the San Francisco Health Code. In accordance with this article, a site history report shall be prepared, and if appropriate, a soil investigation, soil analysis report, site mitigation plan, and certification report shall also be prepared. If the presence of hazardous materials is indicated, a site health and safety plan shall also be required. The soil analysis report is submitted to DPH. If required on the basis of the soil analysis report, a site mitigation plan shall be prepared to 1) assess potential environmental and health and safety risks; 2) recommend cleanup levels and mitigation measures, if any are necessary, that would be protective of workers and visitors to the property; 3) recommend measures to mitigate the risks identified; 4) identify appropriate waste disposal and handling requirements; and 5) present criteria for on-site reuse of soil. The recommended measures would be completed during construction. Upon completion, a certification report shall be prepared documenting that all mitigation measures recommended in the site mitigation report have been completed and that completion of the mitigation measures has been verified through follow-up soil sampling and analysis, if required. If the approved site mitigation plan includes leaving hazardous materials in soil or the groundwater with containment measures such as landscaping or a cap to prevent exposure to hazardous materials, the project sponsor shall ensure the preparation of a risk management plan, health and safety plan, and possibly a cap maintenance plan in accordance with DPH requirements. These plans shall specify how unsafe exposure to hazardous materials left in place would be prevented, as well as safe procedures for handling hazardous materials should site disturbance be required. DPH could require a deed notice, for example,	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
Q. Hazards and Hazardous Materials (cont.)			
HZ-2 (cont.)		prohibiting or limiting certain future land uses, and the requirements of these plans and the deed restriction would transfer to the new property owners in the event that the property was sold.	
		M-HZ-2b: Site Assessment and Corrective Action for Projects Landward of the Historic High Tide Line. For any project that is not located bayward of the historic high tide line, the project sponsor shall ensure that a site-specific Phase I environmental site assessment is prepared prior to development. The site assessment shall include visual inspection of the property; review of historical documents; and review of environmental databases to assess the potential for contamination from sources such as underground storage tanks, current and historical site operations, and migration from off-site sources. The project sponsor shall ensure that the Phase I assessment and any related documentation is provided to the Planning Department's Environmental Planning (EP) division and, if required by EP, to DPH for review and consideration of potential corrective action. Where the Phase I site assessment indicates evidence of site contamination, additional data shall be gathered during a Phase II investigation, including sampling and laboratory analysis of the soil and groundwater for the suspected chemicals to identify the nature and extent of contamination. If the level(s) of chemical(s) would create an unacceptable risk to human health or the environment, appropriate cleanup levels for each chemical, based on current and planned land use, shall be determined in accordance with accepted procedures adopted by the lead regulatory agency providing oversight (e.g., the DTSC, the RWQCB, or DPH). At sites where there are ecological receptors such as sensitive plant or animal species that could be exposed, cleanup levels shall be determined according to the accepted ecological risk assessment methodology of the lead agency, and shall be protective of ecological receptors known to be present at the site. If agreed-upon cleanup levels were exceeded, a remedial action plan or similar plan for remediation shall be prepared and submitted review and approval by the appropriate regulatory agency. The plan shall include proposed methods to remove or treat identified chemicals to the approved cleanup levels or containment measures to prevent exposure to chemicals left in place at concentrations greater than cleanup levels. Upon determination that a site remediation has been successfully completed, the regulatory agency shall issue a closure letter to the responsible party. For sites that are cleaned to levels that do not allow unrestricted land use, or where containment measures were used to prevent exposure to hazardous materials,	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
Q. Hazards and Hazardous Materials (cont.)			
HZ-2 (cont.)		the DTSC may require a limitation on the future use of the property. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners. A risk management plan, health and safety plan, and possibly a cap maintenance plan could be required. These plans would specify procedures for preventing unsafe exposure to hazardous materials left in place and safe procedures for handling hazardous materials should site disturbance be required. The requirements of these plans and the land use restriction shall transfer to the new property owners in the event that the property is sold.	
		M-HZ-2c: Site Assessment and Corrective Action for All Sites. If potential exposure to vapors is suspected, a screening evaluation shall be conducted in accordance with guidance developed by the DTSC to estimate worst case risks to building occupants from vapor intrusion using site specific data and conservative assumptions specified in the guidance. If an unacceptable risk were indicated by this conservative analysis, then additional site data shall be collected and a site specific vapor intrusion evaluation, including fate and transport modeling, shall be required to more accurately evaluate site risks. Should the site specific evaluation identify substantial risks, then additional measures shall be required to reduce risks to acceptable levels. These measures could include remediation of site soil and/or groundwater to remove vapor sources, or, should this be infeasible, use of engineering controls such as a passive or active vent system and a membrane system to control vapor intrusion. Where engineering controls are used, a deed restriction shall be required, and shall include a description of the potential cause of vapors, a prohibition against construction without removal or treatment of contamination to approved risk-based levels, monitoring of the engineering controls to prevent vapor intrusion until risk-based cleanup levels have been met, and notification requirements to utility workers or contractors who may have contact with contaminated soil and groundwater while installing utilities or undertaking construction activities. The screening level and site-specific evaluations shall be conducted under the oversight of DPH and methods for compliance shall be specified in the site mitigation plan prepared in accordance with this measure, and subject to review and approval by the DPH. The deed restriction, if required, shall be recorded at the San Francisco Office of the Assessor-Recorder after approval by the DPH and DTSC.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
Q. Hazards and Hazardous Materials (cont.)			
HZ-3: Demolition and renovation of buildings in the Transit Center District Plan area could potentially expose workers and the public to hazardous building materials including asbestos-containing materials, lead-based paint, PCBs, DEHP, and mercury, or result in a release of these materials to the environment during construction.	LSM	**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.	LTS

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
A. Land Use			
LU-1: Implementation of the draft Plan would not physically divide an existing community.	LTS	None required.	LTS
LU-2: The draft Plan would not substantially alter the existing character of the Plan area.	LTS	None required.	LTS
C-LU: The draft Plan, including the Transit Tower, along with other cumulative development, would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	None required.	LTS
B. Aesthetics			
AE-1: The draft Plan would alter the height and bulk limits within the Plan area, allowing for a number of high-rise buildings to be constructed over time. This would alter the visual character of the Plan area but would not adversely affect scenic resources.	LTS	None required.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
B. Aesthetics (cont.)			
AE-2: The draft Plan would alter the public views of the Plan area from short-range and mid-range vantage points as well as alter views into the surrounding neighborhoods from within the Plan area.	LTS	None required.	LTS
AE-4: The draft Plan would result in increased light and glare in the Plan area.	LTS	None required.	LTS
C. Population and Housing, Business Activity and Employment			
PH-1: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would induce growth in population and employment, but the associated physical impact would not be substantial.	LTS	None required.	LTS
PH-2: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would not displace a large number of people, involving either housing or employment.	LTS	None required.	LTS
PH-3: Neither the draft Plan nor the proposed Transit Tower would create substantial demand for additional housing beyond projected increases in housing supply in San Francisco, or substantially reduce the housing supply.	LTS	None required.	LTS
C-PH: The draft Plan and proposed Transit Tower would not contribute considerably to a substantial growth in population or employment, to displacement of a large number of people, or to substantial demand for additional housing in San Francisco, nor would they reduce the housing supply.	LTS	None required.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources			
CP-4: Changes to the height and bulk limits in the Plan area could result in indirect impacts to historic architectural resources.	LTS	None required.	LTS
E. Transportation			
TR-8: Implementation of the draft Plan would not result in inadequate emergency access.	LTS	None required.	LTS
G. Air Quality			
AQ-1: The draft Plan would not conflict with or obstruct implementation of the *2010 Clean Air Plan* or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.	LTS	None required.	LTS
H. Greenhouse Gas Emissions			
GG-1: Implementation of the proposed Plan would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment, nor would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	None required.	LTS
K. Recreation and Public Space			
RE-1: The implementation of the draft Plan would result in an increased use of existing neighborhood parks and recreational facilities, but not to a degree that would lead to or accelerate their physical deterioration or require construction of new facilities.	LTS	None required.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
L. Utilities and Service Systems			
UT-1: The draft Plan and Transit Tower would not require or result in the construction or substantial new water treatment facilities, and SFPUC would have sufficient water supply available from existing entitlements.	LTS	None required.	LTS
UT-2: The draft Plan and Transit Tower would increase sanitary wastewater flows, but it would not require or result in the construction or substantial new wastewater treatment or stormwater facilities, or exceed the wastewater treatment requirements of the Regional Water Quality Control Board.	LTS	None required.	LTS
UT-3: The draft Plan and Transit Tower would increase demand for electricity and natural gas, but not to an extent that would result in a significant impact.	LTS	None required.	LTS
UT-4: The draft Plan and Transit Tower would be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by projects constructed pursuant to the plan. Individual building owners and tenants would comply with federal, state, and local statutes and regulations related to solid waste.	LTS	None required.	LTS
C-UT: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of utilities and service systems.	LTS	None required.	LTS
M. Public Services			
PS-1: The draft Plan and Transit Tower would not result in the need for new or physically altered police protection facilities.	LTS	None required.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
M. Public Services (cont.)			
PS-2: The draft Plan and Transit Tower would not result in the need for new or physically altered fire protection facilities, but may delay emergency medical response.	LTS	None required.	LTS
PS-3: The draft Plan and Transit Tower would not result in the need for new or physically altered school facilities.	LTS	None required.	LTS
C-PS: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of public services.	LTS	None required.	LTS
N. Biological Resources			
BI-2: Implementation of the draft Plan could interfere substantially with the movement of native resident wildlife species and with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	**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 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;	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
N. Biological Resources (cont.)			
BI-2 (cont.)		- 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.	
C-BI: Implementation of the Transit Center District Plan and the Transit Tower project would not make a considerable contribution to adverse effects on biological resources.	LTS	None required.	LTS
O. Geology, Soils, and Seismicity			
GE-1: The proposed Transit Center District Plan 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.	LTS	None required.	LTS
GE-2: The proposed Transit Center District Plan would not result in substantial erosion or loss of top soil.	LTS	None required.	LTS
GE-3: Development sites within the proposed Transit Center District Plan area would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LTS	None required.	LTS
GE-4: The proposed Transit Center District Plan would not be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.	LTS	None required.	LTS
GE-8: The draft Plan would not result in development located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.	LTS	None required.	LTS

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TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
O. Geology, Soils, and Seismicity (cont.)			
C-GE: The proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to geology and soils.	LTS	None required.	LTS
P. Hydrology and Water Quality			
HY-1: The proposed Transit Center District Plan would not violate water quality standards or otherwise substantially degrade water quality.	LTS	None required.	LTS
HY-2: The proposed Transit Center District Plan 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.	LTS	None required.	LTS
HY-3: The proposed Transit Center District Plan would implement stormwater control measures that would reduce the quantity and rate of stormwater runoff to the combined sewer system, decreasing the potential for erosion or flooding.	LTS	None required.	LTS
HY-4: The proposed Transit Center District Plan 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.	LTS	None required.	LTS
HY-5: The proposed Transit Center District Plan would not expose people, housing, or structures, to substantial risk of loss due to flooding.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
P. Hydrology and Water Quality (cont.)			
HY-6: The proposed Transit Center District Plan would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	LTS	None required.	LTS
C-HY: The proposed Transit Center District Plan and Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to hydrology and water quality.	LTS	None required.	LTS
Q. Hazards and Hazardous Materials			
HZ-1: Implementation of the Transit Center District Plan would not create a significant hazard through routine transport, use, or disposal of hazardous materials.	LTS	None required.	LTS
HZ-4: Implementation of the Transit Center District Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	None required.	LTS
HZ-5: Implementation of the Transit Center District Plan would not expose people or structures to a significant risk of loss, injury or death involving fires.	LTS	None required.	LTS
C-HZ: Implementation of the Transit Center District Plan and construction of the proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to hazards and hazardous materials.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-1 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT CENTER DISTRICT PLAN

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
R. Mineral and Energy Resources			
ME-1: Neither the Transit Center District Plan nor the development of the Transit Tower would encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	None required.	LTS
S. Agricultural and Forest Resources			
AG-1: Neither the Transit Center District Plan nor the development of the Transit Tower would convert farmland to non-agricultural use or conflict with existing agricultural zoning or a Williamson Act contract, conflict with zoning for forest land, result in the loss of forest land to non-forest use, or involve any other changes that would convert farmland to non-agricultural use or convert forest land into non-forest use. (No Impact)	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources			
C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources.	SU	Implement Mitigation Measures M-CP-3a, HABS/HAER Documentation, and M-CP-3b, Public Interpretive Displays, and M-CP-3c, Relocation of Historical Resources.	SU
E. Transportation			
TR-10: Traffic generated by the proposed Transit Tower would incrementally increase average vehicle delay, but would not degrade level of service at local intersections.	SU	No mitigation is feasible to reduce impacts to a less-than-significant level at any of the four intersections that would be adversely affected by the proposed project. At First and Mission Streets, the Municipal Transportation Agency (MTA) could potentially optimize signal timing, which might reduce impacts to LOS E (and better than under existing conditions). However, this measure would require evaluation by the MTA Agency with respect to signal progression and pedestrian timing requirements. Therefore, the feasibility of the mitigation measure is uncertain and the impact would be significant and unavoidable. At First and Howard Streets, signal optimization would not improve conditions to better than LOS F. At Fremont and Howard Streets, the MTA Municipal Transportation Agency could potentially stripe an additional westbound through lane along Howard Street by reducing the number of eastbound travel lanes from two to one. However, this measure would require detailed evaluation by the MTA Agency with respect to intersection geometry and other factors. Therefore, the feasibility of the mitigation measure is uncertain and the impact would be significant and unavoidable. At First and Folsom Streets, the MTA Municipal Transportation Agency could potentially stripe an exclusive southbound left-turn pocket at the intersection by removing approximately four on-street parking spaces on the east side of First Street, and convert the current shared through-left lane into a through lane. However, this measure would require detailed evaluation by the MTA Agency with respect to intersection geometry and other factors.	SU
TR-12: The proposed Transit Tower would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas.	SU	**M-TR-12: Widen North Crosswalk at Fremont / Mission Streets:** To ensure adequate pedestrian level of service under Existing plus Project and Cumulative Conditions, the Municipal Transportation Agency could widen the north crosswalk at Fremont and Mission Street by approximately 5 feet.	SU

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-14: The proposed project would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and could create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles and pedestrians.	SU	**M-TR-14a: Loading Dock Management.** To ensure adequate off-street loading capacity is provided, the project sponsor shall implement active management of the Transit Tower loading dock, including, but not necessarily limited to, the following: ▪ Establish a Loading Demand Management Plan. All loading activities would be coordinated through an on-site manager, to ensure that loading docks are available when scheduled trucks arrive. Unscheduled deliveries (which would have to park on the street, likely illegally) would be prohibited access to the building freight elevators; ▪ During periods when the building's loading dock is fully utilized, the coordinator would direct trucks to return when there is available capacity at the loading dock. Alternatively, a sign could be provided at or near the driveway to the alert truck drivers that the dock is full; and, ▪ Educate the building's office and retail tenants on the capacity of the loading dock and the loading coordinator's role, and encourage off-peak deliveries or use of smaller van-type vehicles that could be accommodated in standard parking spaces within the building garage.	SU
		M-TR-14b: Garage/Loading Dock Driveway Operations. To ensure that operation of the driveway serving the project's off-street parking garage and off-street loading dock does not result in queues of vehicles that could adversely affect traffic, transit, pedestrians, and bicycles on First Street, the project sponsor shall undertake measures including, but not necessarily limited to, the following: ▪ Redesign the internal layout of the loading dock to allow for easier entrance / exit maneuvers for all provided loading spaces (e.g., limited need for additional reversing movements). This would be evaluated using a truck-turning template assessment to ensure that vehicles of all sizes could adequately access each space; ▪ Restrict the use of the loading dock to trucks 35 feet in length or shorter; ▪ Install a "GARAGE FULL" sign at the garage driveway to alert drivers that the on-site garage is at capacity; ▪ Between the hours of 6:00 a.m. to 10:00 p.m., station a parking garage attendant at the driveway on First Street to direct vehicles entering and exiting the garage to avoid any safety issues with pedestrians in the sidewalk, prevent delays or disruption to traffic and transit operations along First Street, and minimize conflicts between vehicles entering the garage and vehicles exiting the garage;	SU

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-14 (cont.)		▪ Install visible warning devices at the driveway opening to alert pedestrians of approaching vehicles; ▪ Limit hours of operation of the loading dock to avoid peak pedestrian and traffic times. No trucks would be permitted to enter or exit the loading dock between the hours of 7:00 a.m. to 9:00 a.m., 12:00 p.m. to 1:00 p.m., and 4:00 p.m. to 6:00 p.m. on weekdays; ▪ Redesign the garage driveway with the inbound direction (entering the garage) on the north side of the driveway and the outbound direction (exiting the garage) on the south side of the driveway, which would eliminate conflicts between vehicles entering and exiting the garage; ▪ Signalize the driveway intersection at First Street, so that the driveway would function as the east leg of the First Street / Minna Street signalized intersection. Vehicles exiting the driveway would receive a solid red signal during the green signal for southbound First Street. Signage and striping within the driveway would direct exiting vehicles to stop and wait within the driveway during the red signal phase and not block the sidewalk, and indicate that left turns on red exiting the driveway would be prohibited. When southbound First Street has a red signal (and eastbound Minna Street has a green signal), vehicles exiting the driveway would have a flashing red signal, indicating that they are permitted to exit but must yield to pedestrians on the First Street sidewalk (similar to a typical driveway) as well as pedestrians crossing First Street at Minna Street (similar to a typical signalized intersection). These measures would provide exiting vehicles with a designated phase for egress movements, separate from the First Street phase, which would ensure that they do not block the sidewalk while exiting. Vehicles entering the driveway would proceed along with southbound First Street traffic and would also have to yield to pedestrians on the First Street sidewalk (like at a typical driveway), and left turns on red into the driveway would be prohibited, as indicated by signage. Pedestrians movements on the First Street sidewalk would not be signalized, and vehicles entering and exiting the driveway would have to yield to these pedestrians at all times (similar to a typical driveway); ▪ Ensure that vehicular queues do not stretch back to the First Street sidewalk or travel lane at any time; and ▪ As part of the Planning Department project approval process (e.g., Section 309 of the *Planning Code*), the Transit Tower project sponsor shall consult with SFMTA on the design of the parking garage and access to ensure that it is functional and well-integrated with street operations across all modes.	

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
T**R-16:** Project construction, along with construction of the Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.	SU	**M-TR-16a: Construction Coordination.** To minimize potential disruptions to transit, traffic, and pedestrian and bicyclists, the project sponsor and/or construction contractor shall develop a Construction Management Plan that could include, but not necessarily be limited to, the following: ▪ Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m. (or other times, if approved by the Municipal Transportation Agency) to minimize disruption of traffic, transit, and pedestrian flow on adjacent streets and sidewalks during the weekday a.m. and p.m. peak periods. ▪ Identify optimal truck routes to and from the site to minimize impacts to traffic, transit, pedestrians, and bicyclists; and, ▪ Encourage construction workers to use transit when commuting to and from the site, reducing the need for parking. The project sponsor shall also coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Muni, AC Transit, Golden Gate Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that will result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.	SU
F. Noise and Vibration			
C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts.	SU	Implement Mitigation Measure M-NO-2a, Noise Control Measures for Pile Driving, and Mitigation Measure M-NO-2b, General Construction Noise Control Measures. **M-C-NO: Cumulative Construction Noise Control Measures.** In addition to implementation of Mitigation Measure NO-2a and Mitigation Measure NO-2b (as applicable), prior to the time that construction of the proposed project is completed, the project sponsor of a development project in the Plan area shall cooperate with and participate in any City-sponsored construction noise control program for the Transit Center District Plan area or other City-sponsored areawide program developed to reduce potential effects of construction noise in the project vicinity. Elements of such a program could include a community liaison program to inform residents and building occupants of upcoming construction activities, staggering of construction schedules so that particularly noisy phases of work do not overlap at nearby project sites, and, potentially, noise and/or vibration monitoring during construction activities that are anticipated to be particularly disruptive.	SU

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality			
AQ-7: Construction of the Transit Tower would expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.	SU	**M-AQ-7 Construction Vehicle Emissions Minimization:** To reduce the potential health risk resulting from project construction activities, the project sponsor shall include in contract specifications a requirement for the following BAAQMD-recommended measures: ▪ Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to two minutes; ▪ All off-road construction equipment shall be equipped with Tier 3 (Tier 2 if greater than 750 horsepower) diesel engines or better. The following types of equipment are identified as candidates for retrofitting with CARB-certified Level 3 verified diesel emission controls (Level 3 Verified Diesel Emissions Control Devices, or VDECS, which are capable of reducing DPM emissions by 85 percent or more), due to their expected operating modes (i.e., fairly constant use at high revolution per minute): - Excavators - Backhoes - Rubber-Tired Dozers - Concrete Boom Pumps - Concrete Trailer Pumps - Concrete Placing Booms - Soil Mix Drill Rigs - Soldier Pile Rigs - Shoring Drill Rigs; ▪ The project construction contractor shall not use diesel generators for construction purposes where feasible alternative sources of power are available. All diesel generators used for project construction shall meet Tier 4 emissions standards. The equipment listed above may or may not be used for the project. To the extent that the above-listed (or reasonably comparable) equipment is used for project construction, those equipment types shall meet DPM emission standards equivalent to Tier 3 (Tier 2 if greater than 750 horsepower) engines with Level 3 VDECS, if feasible. For the purposes of this mitigation measure, “feasibility” refers to the availability of newer equipment in the contractor’s or a subcontractor’s fleet that meets these standards, or the availability of older equipment in the contractor’s or a subcontractor’s fleet that can be feasibly modified to incorporate Level 3 VDECS. It should be noted that for specialty equipment types (e.g. drill rigs, shoring rigs and concrete pumps) it may not be feasible for construction contractors to modify their current, older equipment to	SU

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant Unavoidable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality (cont.)			
AQ-7 (cont.)		accommodate the particulate filters, or for them to provide newer models with these filters pre-installed. Therefore, this mitigation measure may be infeasible. Should it be determined by the construction contractor or its subcontractor(s) that compliance with the emissions control requirements of this mitigation measure is infeasible for any one of the above listed construction equipment, the construction contractor must demonstrate an alternative method of compliance that achieves an equivalent reduction in the project's fleet-wide DPM and other TAC emissions. If alternative means of compliance with the emissions exhaust requirements are further determined to be infeasible, the construction contractor must document, to the satisfaction of the Environmental Review Officer, that the contractor has complied with this mitigation measure to the extent feasible and why full compliance with the mitigation measure is infeasible.	
C-AQ: The draft Plan and the proposed Transit Tower would contribute considerably to cumulative air quality impacts.	SU	Implement Mitigation Measures M-AQ-2, M-AQ-3, M-AQ-4a, M-AQ-4b, M-AQ-5, and M-AQ-7.	SU
J. Shadow			
SH-2: The proposed Transit Tower would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	None available.	SU
C-SH: The draft Plan, including the proposed Transit Tower, would contribute to cumulative new shadow that would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	None available.	SU

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources			
CP-2: Development of the proposed Transit Tower could cause a substantial adverse change in the significance of archeological resources.	LSM	**M-CP-2: Archeological Testing Program Specific to Transit Tower.** Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried historical resources. Transit Center District Plan Archeological Research Design and Treatment Plan (Far Western Anthropological Research Group, Inc., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February 2010) included a sensitivity assessment (based on historic archival investigations and geoarchaeological coring) of Transit Tower parcel and parcel-specific archaeological treatment plan. No formally recorded archaeological sites currently are documented on this parcel, and the parcel is considered moderately sensitive for historic-era resources and as having a low sensitivity for prehistoric resources. The Treatment Plan laid out an approach to mitigation efforts at the Transit Tower site that primarily focus on historic-era resources, with much more limited attention given to potential prehistoric resources. This would include identification efforts, and if an archaeological site is located, evaluation and data recovery mitigation work. The project sponsor shall retain the services of an archeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Transit Center District Plan Archeological Research Design and Treatment Plan at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project archaeological research design and treatment plan and of this archaeological mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) (c).	LTS

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		*Archeological Testing Program*. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP) that builds upon the Transit Center District Plan Archeological Research Design and Treatment Plan elements developed for this parcel. The ATP shall identify the testing method to be used and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. The archeological testing program shall be conducted in accordance with the approved ATP. At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either: A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible. *Archeological Monitoring Program*. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented, the archeological consultant shall prepare an archeological monitoring plan (AMP). ▪ The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;	

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		▪ Archeological monitoring shall conform to the requirements of the final AMP reviewed and approved by the ERO; ▪ The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource; ▪ The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits; ▪ The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; ▪ If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO. Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO. *Archeological Data Recovery Program*. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the	

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical. The scope of the ADRP shall include the following elements: ▪ Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations. ▪ Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures. ▪ Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies. ▪ Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. ▪ Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. ▪ Final Report. Description of proposed report format and distribution of results. ▪ Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. *Human Remains and Associated or Unassociated Funerary Objects.* The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation,	

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
D. Cultural and Paleontological Resources (cont.)			
CP-2 (cont.)		and final disposition of the human remains and associated or unassociated funerary objects. *Final Archeological Resources Report.* The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.	
F. Noise and Vibration			
NO-4: The proposed Transit Tower project would not result in a substantial permanent increase in ambient noise levels in the project vicinity, and it would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance.	LSM	Implement Mitigation Measure M-NO-1d, Mechanical Equipment Noise Standard, and Mitigation Measure M-NO-1e, Interior Mechanical Equipment.	LTS
NO-5: Construction of the proposed Transit Tower project would result in a temporary and/or periodic increase in ambient noise levels and vibration in the project vicinity above levels existing without the project.	LSM	Pile Driving, and Mitigation Measure M-NO-2b, General Construction Noise Control Measures.	LTS

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Significant but Mitigable Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
I. Wind			
C-WI: Implementation of the draft Plan and the proposed Transit Tower, along with cumulative development, would neither cause large increases in ground-level wind speeds over a substantial portion of the Plan area, nor result in a new exceedance of the wind hazard criterion.	LSM	Implement Mitigation Measure M-WI-2.	LTS
N. Biological Resources			
BI-3: Development of the Transit Tower has the potential to adversely impact 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 Game or U.S. Fish and Wildlife Service.	LSM	Implement Mitigation Measure M-BI-1a, Pre-Construction Bird Surveys, for construction of the Transit Tower project.	LTS
Q. Hazards and Hazardous Materials			
HZ-7: Excavation for the proposed Transit Tower would require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release to the environment during construction.	LSM	Implement Mitigation Measures M-HZ-2a, 2b, and 2c, Site Assessment and Corrective Action, for construction of the Transit Tower project.	LTS

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
A. Land Use			
LU-3: The implementation of the Transit Tower project would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	None required.	LTS

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TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
A. Land Use (cont.)			
C-LU: The draft Plan, including the Transit Tower, along with other cumulative development, would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	None required.	LTS
B. Aesthetics			
AE-5: The implementation of the Transit Tower project would alter the visual character of the tower site vicinity and alter public views of the site and the surrounding Plan area from key public vantage points as well as alter views into the surrounding neighborhoods from within the Plan area.	LTS	None required.	LTS
AE-6: The proposed Transit Tower would result in increased light and glare.	LTS	None required.	LTS
C-AE-2: The proposed Transit Tower, in combination with the draft Plan and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not contribute considerably to this change, and would not adversely affect scenic resources or substantially increase light and glare.	LTS	None required.	LTS
C. Population and Housing, Business Activity and Employment			
PH-1: The incremental new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would induce growth in population and employment, but the impact would not be substantial.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
C. Population and Housing, Business Activity and Employment (cont.)			
PH-2: The incremental new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would not displace a large number of people (involving either housing or employment)	LTS	None required.	LTS
PH-3: Neither the draft Plan nor the proposed Transit Tower would create substantial demand for additional housing in San Francisco, or substantially reduce the housing supply.	LTS	None required.	LTS
C-PH: The draft Plan and proposed Transit Tower would not contribute considerably to a substantial growth in population or employment, to displacement of a large number of people, or to substantial demand for additional housing in San Francisco, nor would they reduce the housing supply.	LTS	None required.	LTS
D. Cultural and Paleontological Resources			
CP-6: Development of the proposed Transit Tower would not directly or indirectly result in substantial adverse changes in the significance of historical resources.	LTS	None required.	LTS
E. Transportation			
TR-11: Transit ridership generated by the proposed Transit Tower would not result in a substantial increase in transit demand that could not be accommodated by adjacent transit capacity resulting in unacceptable levels of transit service, or cause a substantial increase in delays or operating costs.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
E. Transportation (cont.)			
TR-13: The proposed project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	LTS	None required.	LTS
TR-15: The proposed project would not result in inadequate emergency access.	LTS	None required.	LTS
F. Noise and Vibration			
NO-6: The proposed Transit Tower project would not be substantially affected by existing noise levels.	LTS	None required.	LTS
G. Air Quality			
AQ-6: Construction of the Transit Tower would result in emissions of criteria air pollutants, including ozone precursors, that would contribute to an existing or projected air quality violation or result in a cumulatively considerable increase in criteria pollutants, and could expose sensitive receptors to construction dust.	LTS	**I-AQ-6 Construction Vehicle Emissions Minimization:** To reduce construction vehicle emissions, the project sponsor shall incorporate the following into construction specifications: ▪ All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.	LTS
AQ-8: Operation of the proposed Transit Tower would not conflict with *2010 Clean Air Plan,* result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment, either individually or cumulatively.	LTS	None required.	LTS
AQ-9: Operation of the proposed Transit Tower would not result in emissions of carbon monoxide that would exceed state or federal standards, either individually or cumulatively.	LTS	None required	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
G. Air Quality (cont.)			
AQ-10: Operation of the proposed Transit Tower would not expose sensitive receptors to substantial levels of toxic air contaminants.	LTS	None required	LTS
G. Greenhouse Gas Emissions			
GG-2: The proposed Transit Tower would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment, nor would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	None required.	LTS
I. Wind			
WI-1: The proposed Transit Tower would not result in a new exceedance of the wind hazard criterion.	LTS	None required.	LTS
K. Recreation and Public Space			
RE-2: The proposed Transit Tower would result in the increased use of existing neighborhood parks and recreational facilities, but not to such a degree that would lead to or accelerate their deterioration, nor require the construction of new facilities.	LTS	None required.	LTS
L. Utilities and Service Systems			
UT-5: The proposed Transit Tower would not result in the need for new or physically altered facilities related to water or wastewater, energy, or solid waste.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
L. Utilities and Service Systems (cont.)			
C-UT: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of utilities and service systems.	LTS	None required.	LTS
M. Public Services			
PS-4: The proposed Transit Tower would not result in the need for new or physically altered facilities related to police, fire protection, or emergency medical services.	LTS	None required.	LTS
C-PS: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of public services.	LTS	None required.	LTS
N. Biological Resources			
BI-4: Implementation of the Transit Tower Project could interfere substantially with the movement of native resident wildlife species and with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	**I-BI-4a: Bird-Safe Standards for City Park.** The Transbay Joint Powers Authority, as sponsor of the Transit Center and City Park, could incorporate, as feasible, into the design of City Park bird-safe standards that are applicable to parks and open spaces, as described in the newly adopted Standards for Bird-Safe Buildings. **I-BI-4b: Night Lighting Minimization.** The Transbay Joint Powers Authority, as sponsor of the Transit Center and City Park and the owner of the Transit Tower site, could incorporate, as feasible, into the design of City Park, and could require incorporation, as feasible, in the design of the proposed Transit Tower, the light minimization features identified in Improvement Measure I-BI-2.	LTS
C-BI: Implementation of the Transit Center District Plan and the Transit Tower project would not make a considerable contribution to adverse effects on biological resources.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
O. Geology, Soils, and Seismicity			
GE-5: The proposed Transit Tower 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.	LTS	None required.	LTS
GE-6: The proposed Transit Tower would not result in substantial erosion or loss of top soil.	LTS	None required.	LTS
GE-7: The proposed Transit Tower site would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LTS	None required.	LTS
C-GE: The proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to geology and soils.	LTS	None required.	LTS
P. Hydrology and Water Quality			
HY-7: The proposed Transit Tower would not violate water quality standards or otherwise substantially degrade water quality.	LTS	None required.	LTS
HY-8: The proposed Transit Tower 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.	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
P. Hydrology and Water Quality (cont.)			
HY-9: The proposed Transit Tower would implement stormwater control measures that would reduce the quantity and rate of stormwater runoff to the combined sewer system, decreasing the potential for erosion or flooding.	LTS	None required.	LTS
HY-10: The proposed Transit Tower 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.	LTS	None required.	LTS
HY-11: The proposed Transit Tower would not expose people, housing, or structures, to substantial risk of loss due to flooding.	LTS	None required.	LTS
HY-12: The proposed Transit Tower would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	LTS	None required.	LTS
C-HY: The proposed Transit Center District Plan and Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to hydrology and water quality.	LTS	None required.	LTS
Q. Hazards and Hazardous Materials			
HZ-6: The proposed Transit Tower would not create a significant hazard through routine transport, use, or disposal of hazardous materials.	LTS	None required.	LTS
HZ-8: Workers and the public would not be exposed to hazardous building materials as a result of construction of the proposed Transit Tower. (No Impact)			

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

TABLE S-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROPOSED TRANSIT TOWER

Less than Significant Impact	Level of Significance	Mitigation Measures	Level of Significance with Mitigation
Q. Hazards and Hazardous Materials (cont.)			
HZ-9: The proposed Transit Tower would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	None required.	LTS
HZ-10: The proposed Transit Tower would not expose people or structures to a significant risk of loss, injury or death involving fires.	LTS	None required.	LTS
C-HZ: Implementation of the Transit Center District Plan and construction of the proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to hazards and hazardous materials.	LTS	None required.	LTS
R. Mineral and Energy Resources			
ME-1: Neither the Transit Center District Plan nor the development of the Transit Tower would encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	None required.	LTS
S. Agricultural and Forest Resources			
AG-1: Neither the Transit Center District Plan nor the development of the Transit Tower would convert farmland to non-agricultural use or conflict with existing agricultural zoning or a Williamson Act contract, conflict with zoning for forest land, result in the loss of forest land to non-forest use, or involve any other changes that would convert farmland to non-agricultural use or convert forest land into non-forest use. (No Impact)	LTS	None required.	LTS

SU – Significant and Unavoidable LSM – Less than Significant with Mitigation LTS – Less than Significant

C. Significant Environmental Impacts That Cannot Be Avoided in the Project Is Implemented

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Sections 15040, 15081 and 15082 of the State CEQA Guidelines, potential impacts that could not be eliminated or reduced to an insignificant level are limited to effects related to aesthetics, cultural (historic architectural) resources, transportation, noise, air quality, and shadow. The following significant and unavoidable impacts are identified in this EIR:

Impact AE-3: The draft Plan would alter public views of the Plan area from key long-range vantage points.

Impact C-AE-1: The draft Plan, in combination with the Transit Tower and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not adversely affect scenic resources or substantially increase light and glare.

Impact CP-3: Changes to the zoning controls in the Plan area could result in adverse impacts to historic architectural resources through demolition or substantial alteration.

Impact C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources.

Impact TR-1: Traffic growth related to the draft Plan, including the street changes, would adversely affect local intersection operation, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.

Impact TR-2: Traffic growth related to the draft Plan, including the street changes, would result in a considerable contribution to congested operations at the Fourth/Harrison Streets and First/Harrison Streets freeway on-ramps, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.

Impact TR-3: Transit ridership related to the draft Plan, including the street changes, would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; and would cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result.

Impact TR-4: Pedestrian activity resulting from implementation of the draft Plan would cause the level of service at sidewalks, street corners, and crosswalks to deteriorate.

Impact TR-5: Development of large projects pursuant to the draft Plan would create potentially hazardous conditions for pedestrians and otherwise interfere with pedestrian accessibility.

Impact TR-6: Implementation of the draft Plan would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.

Impact TR-7: Implementation of the draft Plan would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, and pedestrians.

Impact TR-9: Plan area construction, including construction of individual projects and ongoing construction of the Transit Center, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.

Impact TR-10: Traffic generated by the proposed Transit Tower would increase average vehicle delay and would degrade level of service at local intersections.

Impact TR-12: The proposed Transit Tower would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas.

Impact TR-14: The proposed project would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and could create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles and pedestrians.

Impact TR-16: Project construction, along with construction of the Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.

Impact NO-1: Implementation of the draft Plan would not result in a substantial permanent increase in ambient noise or vibration levels, but Plan implementation could result in exposure of persons to noise levels in excess of standards in the San Francisco General Plan and could introduce new sensitive uses that would be affected by existing noise levels.

Impact NO-3: Construction activities in the Plan area could expose persons to temporary increases in vibration levels substantially in excess of ambient levels.

Impact C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts.

Impact AQ-2: The draft Plan would expose sensitive receptors to substantial concentrations of PM2.5 and toxic air contaminants.

Impact AQ-3: The draft Plan would expose sensitive receptors to substantial pollutant concentrations by exposing existing sensitive receptors to potentially elevated levels of PM2.5 and toxic air contaminants from new vehicles and equipment.

Impact AQ-4: Implementation of the draft Plan would result in construction-period emissions of criteria air pollutants, including ozone precursors, that would contribute to an existing or projected air quality violation or result in a cumulatively considerable increase in criteria pollutants, and could expose sensitive receptors to substantial levels of construction dust.

Impact AQ-5: Implementation of the draft Plan could expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.

Impact AQ-7: Construction of the Transit Tower would expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.

Impact C-AQ: The draft Plan and the proposed Transit Tower would contribute considerably to cumulative air quality impacts.

Impact SH-1: The draft Plan would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.

Impact SH-2: The proposed Transit Tower would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.

Impact C-SH: The draft Plan, including the proposed Transit Tower, would contribute to cumulative new shadow that would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.

D. Significant Irreversible Environmental Changes That Would Result if the Proposed Project Is Implemented

In general, irreversible environmental changes include commitments of resources such as energy consumed and construction materials used in construction of a proposed project, as well as the energy and natural resources (notably water) that would be required to sustain a project and its inhabitants or occupants over the usable life of the project. While not all residents, employees, and visitors in the Plan area would be new to the City, the draft Plan would intensify development in the Plan area and at the Transit Tower project site, bringing new residential units, office and other commercial uses, and hotel rooms to the Plan area. It is noted, however, that both the draft Plan and the proposed Transit Tower would be generally consistent with land use and development patterns in the built-out urban environment that characterizes downtown San Francisco. Development pursuant to the draft Plan, including development of the Transit Tower project, would commit future generations to an irreversible commitment of energy, primarily in the form of fossil fuels for heating and cooling of buildings, for automobile and truck fuel, and for energy production for lighting, computers, and other equipment in the Plan area buildings. Implementation of the draft Plan, including the proposed Transit Tower, would also require an ongoing commitment of potable water for building occupants and landscaping, although the draft Plan includes policies intended to reduce potable water consumption, and the Transit Center and proposed Transit Tower would include such features. Fossil fuel would also be consumed during demolition of existing buildings and parking lots where new buildings would be located, and in construction of the proposed new buildings themselves. Construction would also require the commitment of construction materials, as well as water. Because all development in the Plan area would comply with *California Code of Regulations* Title 24 and the City's Green Building Ordinance, this development would be expected to use less energy and water over the lifetime of newly constructed buildings than comparable structure not built to current standards.

E. Areas of Controversy to Be Resolved

On the basis of public comments on the Notice of Preparation, it is believed that areas of controversy with respect to the draft Plan and Transit Tower include the potential for shadow impacts on Recreation and Park Department parks and other open spaces, as well as recreation and park impacts generally; wind effects, including combined effects of wind, shadow, and fog, and shading of sidewalks; aesthetic impacts, including changes in views from entry points to the City and from elevated viewpoints outside downtown; effects on traffic, transit, pedestrians, and bicyclists, along with cumulative impacts associated with potential future high-speed rail service to the new Transit Center; potential contamination of soil and/or groundwater from historical uses and the resulting need for remediation; and seismic impacts, including effects on emergency vehicle access. Each of these issues is analyzed in this EIR.

In addition, comments were received with respect to concerns about the potential for greater development intensity than proposed in the draft Plan, and the use and applicability of the EIR and its analyses in consideration of development projects in the Plan area. With respect to the former, Chapter VI, Alternatives,

includes an alternative identified as the Developer Scenario (Alternative D), under which towers at select sites are assumed to be built to greater heights, as proposed by project sponsors with projects on file at the Planning Department. Any development or subsequent project that is not encompassed within the proposed project or the range of alternatives analyzed in this EIR could be subject to future project-specific CEQA analysis. With respect to the use and applicability of this EIR with respect to subsequent development projects, the Planning Department anticipates, consistent with CEQA Guidelines Section 15183, considering whether subsequent projects require further environmental review, or whether they can rely, in general, on this EIR. Section 15183 provides an exemption from environmental review for projects that are consistent with the development density established by existing zoning, community plan or general plan policies for which an EIR was certified, except as might be necessary to examine whether there are project-specific effects which are peculiar to the project or its site. The Planning Department has prepared such "community plan exemptions" for projects in the Eastern Neighborhoods and Market & Octavia plan areas, and may prepare such documents for projects in the proposed Transit Center District Plan area in the future.

F. Alternatives

Chapter VI of this EIR analyzes the following alternatives to the Transit Center District Plan and the Transit Tower as proposed in November 2009 and March 2011, respectively:

- No Project Alternative (Alternative A);
- Reduced Project Alternative (Alternative B);
- Reduced Shadow Alternative (Alternative C); and
- Developer Scenario (Alternative D).

Alternatives to the Transit Tower are discussed within the each Plan alternative, including No Project (No Build) and Existing Zoning (30-foot height limit) Alternatives, are also analyzed.

Below is a description of each alternative. Effects of each alternative, relative to those of the proposed project, are summarized in **Table S-3** for the Transit Center District Plan and **Table S-4** for the proposed Transit Tower.

Alternative A: No Project

CEQA Guidelines Section 15126.6(e)(3)(A) states that, generally, when a project being analyzed is the revision of an existing land use or regulatory plan—such as the Transit Center District Plan and *Planning Code* and Zoning Map revisions that would implement the plan—the No Project Alternative should be considered to be continuation of the existing plan into the future. Consistent with this guidance, the No Project Alternative considered in this EIR, with respect to the draft Plan, is the maintenance of the existing zoning and height and bulk controls in the Plan area, and no adoption of the draft Plan. This alternative assumes that development in Zone 1 of the approved Transbay Redevelopment Plan area—primarily along the north side of Folsom Street east of Essex Street, and also between Beale and Main Streets south of Mission Street—would proceed as approved. Approved development in the Rincon Hill

Plan area would also proceed, and projects proposed west of the Transit Center District Plan area would also be undertaken, although at generally lesser heights than currently presumed.

Development assumptions for the No Project Alternative include the addition, in the Plan area, of approximately 4.2 million square feet of office space (about one-third less than with the project), approximately 500 dwelling units (about 60 percent fewer), and about 180 hotel rooms (less than one-fifth of the project's total). Ground-floor retail space would be similar to that with the draft Plan. Impacts were assessed with an assumption of a 550-foot tall Transit Tower with approximately 564,000 square feet of office space, consistent with the Transbay Redevelopment Plan, although the No Project Alternative for the Transit Tower itself would involve no development (see below).

Transit Tower

Consistent with the CEQA Guidelines, a project-specific No Project – No Build scenario for the proposed Transit Tower would involve no development on that site. A project-specific No Project – Existing Zoning Alternative for the Transit Tower would include development of a 30-foot-tall building, which is the height of the building that could be built on the Transit Tower site if the property were not rezoned.

Alternative B: Reduced Project

This alternative assumes construction on each of the "soft" development sites identified in this EIR, but at lesser heights and intensity than would be permitted under the draft Plan. The heights are those at which development would cast no additional shadow on parks under the jurisdiction of the Recreation and Park Department, beyond that which could occur from buildings developed to existing height limits. As a result of the lesser heights, it is assumed that development of Plan area sites containing historical resources would proceed in a different manner than would be allowed under the draft Plan, thereby reducing the Plan's impacts on historic architectural resources. In particular, this alternative assumes that development at five sites in the Plan area that contain identified or potential historic architectural resources would generally be undertaken consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (or otherwise determined by Planning Department preservation staff to result in less-than-significant impacts under CEQA, to the maximum extent feasible) in order that historical resources on these sites are minimally affected.

This alternative would include some of the public realm improvements, subject to funding, that are proposed under the draft Plan. However, the Reduced Project Alternative would not convert Howard Street to two-way operations between New Montgomery and Fremont Streets, nor would it convert Folsom Street to two-way operations between Second and Fremont Streets. This alternative also would not include installation of signalized mid-block crosswalks across First Street at Minna and Natoma Streets, north and south of the new Transit Center.

This alternative would entail development of about 308 million square feet of office space (about 39 percent less than with the project), approximately 960 dwelling units (about 26 percent fewer), and about 415 hotel rooms (32 percent of the project's total). Ground-floor retail space would be similar to the

draft Plan, because the sites where development is anticipated would be essentially the same, although shorter, somewhat less bulky buildings would be developed. There would be no change under this alternative in the assumptions for nearby development in Zone 1 of the Transbay Redevelopment Plan, in the Rincon Hill Plan area, or with respect to cumulative projects west of the Plan area.

Under the Reduced Project Alternative, the Transit Tower would be 550 feet tall, with the same development program as under the draft Plan's No Project Alternative.

Alternative C: Reduced Shadow

The Reduced Shadow Alternative is premised on reducing to some degree the new shadow resulting from the Plan while retaining in large measure the draft Plan's fundamental urban design concept that the Transit Tower, which would identify the location of the new Transit Center, be the City's tallest and most prominent building—the "crown" of the downtown core that rises notably above the dense cluster of downtown buildings, as stated in draft Plan Policy 2.1. In contrast to Alternative B, which is based on site-by-site evaluation of building heights to reduce shadow on Section 295 parks, Alternative C would retain the Transit Tower as the tallest building in the Plan area, at a height of 840 feet. (It is assumed that this would entail about 790 feet of enclosed building space and a 50-foot-tall sculptural element.) At a height of 840 feet, the Transit Tower would be about 60 feet taller than the Bank of America Building, and about 15 feet shorter than the tip of the Transamerica Pyramid.

This alternative would also proportionally adjust the proposed height limits on the other sites in the Plan area in relation to the Transit Tower in order to maintain similar massing/height relationships as contemplated under the draft Plan's urban form concepts.

This alternative would include some of the public realm improvements, subject to funding, that area proposed under the draft Plan. There would be no change under this alternative in the assumptions for nearby development in Zone 1 of the Transbay Redevelopment Plan, in the Rincon Hill Plan area, or with respect to cumulative projects west of the Plan area.

This alternative would entail development of about 5.3 million square feet of office space (about 14 percent less than with the project), approximately 1,145 dwelling units (about 12 percent fewer), and about 830 hotel rooms (36 percent less than the project's total), along with comparable ground-floor retail.

The Transit Tower would contain about 1 million square feet of office space (about 20 percent less than under the proposed project), along with approximately the same amount of retail space (16,500 square feet) as under the project.

Alternative D: Developer Scenario

This alternative differs from the draft Plan in that development assumptions for certain specific sites would reflect project applications that are on file at the Planning Department. In up to three instances, this alternative would therefore permit taller buildings than the draft Plan proposes, while for two other

sites, lesser height is assumed. The major difference in height, compared to the draft Plan, is that the proposed residential tower at the Palace Hotel is proposed at a height of 727 feet, whereas the Plan calls for a 600-foot building. The other two projects for which "additional" height is proposed are 50 First Street and 181 Fremont Street. In both of these cases, the developer-proposed height is the same at the roof line as called for in the Plan; the potential difference is that the draft Plan would potentially allow additional height on particular building sites if the form above the roof height does not cast significant shadow on protected open spaces. This determination would have to be made based on a detailed, project-specific shadow analysis of each applicable project, which would be undertaken at a greater level of precision than is feasible or appropriate for this programmatic EIR. In addition to height, some projects proposed are not fully consistent with the ratio of office to non-office development proposed in the draft Plan.

Although this alternative would result in several buildings being taller than proposed with the draft Plan development assumptions for the Developer Scenario Alternative would be similar to those of the Plan with respect to office space, and somewhat less intensive than the Plan with respect to residential units and hotel space. This is because the projects with applications on file at the Planning Department propose a different mix of uses than the Plan forecasts assume for those sites, propose generally larger residential units than the Plan assumes, and because an office project was approved in 2011 at 350 Mission Street at a lesser height than proposed in the draft Plan. For the this alternative, development assumptions include the net addition, in the Plan area, of approximately 6.1 million square feet of office space (about 1 percent less than with the project), approximately 1,125 dwelling units (about 13 percent fewer), and about 665 hotel rooms (50 percent fewer than with the draft Plan). Ground-floor retail space would be similar.

The Transit Tower would be 1,070 feet tall under this alternative, as under the draft Plan.

The Developer Scenario Alternative is assumed to implement the same public realm improvements as would be undertaken with implementation of the draft Plan. Under this alternative, there would be no change in the assumptions for nearby development in Zone 1 of the Transbay Redevelopment Plan, in the Rincon Hill Plan area, or with respect to cumulative projects west of the Plan area.

TABLE S-3
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Significant Unavoidable Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
B. Aesthetics					
AE-3: The draft Plan would alter public views of the Plan area from key long-range vantage points.	SU	**LTS**	**LTS**	SU ⇓	SU ⇑
C-AE-1: The draft Plan, in combination with the Transit Tower and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not adversely affect scenic resources or substantially increase light and glare.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
D. Cultural and Paleontological Resources					
CP-3. Changes to the zoning controls in the Plan area could result in adverse impacts to historic architectural resources through demolition or substantial alteration.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
E. Transportation					
TR-1: Traffic growth related to the draft Plan, including the street changes, would adversely affect local intersection operation, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-2: Traffic growth related to the draft Plan, including the street changes, would result in a considerable contribution to congested operations at the Fourth/Harrison Streets and First/Harrison Streets freeway on-ramps, and therefore would conflict with established measures of effectiveness for the performance of the circulation system.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-3: Transit ridership related to the draft Plan, including the street changes, would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; and would cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Significant Unavoidable Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
E. Transportation (cont.)					
TR-4: Pedestrian activity resulting from implementation of the draft Plan would cause the level of service at sidewalks, street corners, and crosswalks to deteriorate.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-5: Development of large projects pursuant to the draft Plan would create potentially hazardous conditions for pedestrians and otherwise interfere with pedestrian accessibility.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-6: Implementation of the draft Plan would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-7: Implementation of the draft Plan would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, and pedestrians.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
TR-9: Plan area construction, including construction of individual projects and ongoing construction of the Transit Center, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
F. Noise and Vibration					
NO-1: Implementation of the draft Plan, including the proposed Transit Tower, would not result in a substantial permanent increase in ambient noise or vibration levels, but Plan implementation could result in exposure of persons to noise levels in excess of standards in the *San Francisco General Plan* and could introduce new sensitive uses that would be affected by existing noise levels.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Significant Unavoidable Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
F. Noise and Vibration (cont.)					
NO-3: Construction activities in the Plan area could expose persons to temporary increases in vibration levels substantially in excess of ambient levels.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
G. Air Quality					
AQ-2: The draft Plan would expose sensitive receptors to substantial concentrations of $PM_{2.5}$ and toxic air contaminants.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
AQ-3: The draft Plan would expose existing and future sensitive receptors to substantial levels of $PM_{2.5}$ and toxic air contaminants from new vehicles and equipment.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
AQ-4: Implementation of the draft Plan would result in construction-period emissions of criteria air pollutants, including ozone precursors, that would contribute to an existing or projected air quality violation or result in a cumulatively considerable increase in criteria pollutants, and could expose sensitive receptors to substantial levels of construction dust.	SU for criteria pollutants; LSM for construction dust	SU ⇓	SU ⇓	SU ⇓	SU ⇔
AQ-5: Implementation of the draft Plan could expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
C-AQ: The draft Plan and the proposed Transit Tower would contribute considerably to cumulative air quality impacts.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇔
J. Shadow					
SH-1: The draft Plan would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇑
C-SH: The draft Plan, including the proposed Transit Tower, would contribute to cumulative new shadow that would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	SU ⇓	SU ⇓	SU ⇓	SU ⇑

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Significant but Mitigable Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
D. Cultural and Paleontological Resources					
CP-1. Development projects in the Plan area could cause a substantial adverse change in the significance of archeological resources.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
CP-5. Construction activity in the Plan area could result in damage to historic architectural resources.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
F. Noise and Vibration					
NO-2: Construction activities in the Plan area could expose persons to temporary increases in noise levels substantially in excess of ambient levels.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
I. Wind					
WI-2: Implementation of the draft Plan would not cause large increases in pedestrian wind speeds or wind speeds in publicly accesssible open spaces over a substantial portion of the Plan area.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
C-WI: Implementation of the draft Plan and the proposed Transit Tower, along with cumulative development, would neither cause large increases in ground-level wind speeds over a substantial portion of the Plan area, nor result in a new exceedance of the wind hazard criterion.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
N. Biological Resources					
BI-1: Development under the draft Plan has the potential to adversely impact 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 Game or U.S. Fish and Wildlife Service.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔
Q. Hazards and Hazardous Materials					
HZ-2: Excavation in the Transit Center District Plan area would require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release to the environment during construction.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Significant but Mitigable Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
Q. Hazards and Hazardous Materials (cont.)					
HZ-3: Demolition and renovation of buildings in the Transit Center District Plan area could potentially expose workers and the public to hazardous building materials including asbestos-containing materials, lead-based paint, PCBs, DEHP, and mercury, or result in a release of these materials to the environment during construction.	LSM	LSM ⇓	LSM ⇓	LSM ⇓	LSM ⇔

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
A. Land Use					
LU-1: Implementation of the draft Plan would not physically divide an existing community.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
LU-2: The draft Plan would not substantially alter the existing character of the Plan area.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
C-LU: The draft Plan, including the Transit Tower, along with other cumulative development, would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
B. Aesthetics					
AE-1: The draft Plan would alter the height and bulk limits within the Plan area, allowing for a number of high-rise buildings to be constructed over time. This would alter the visual character of the Plan area but would not adversely affect scenic resources.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
AE-2: The draft Plan would alter the public views of the Plan area from short-range and mid-range vantage points as well as alter views into the surrounding neighborhoods from within the Plan area.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
AE-4: The draft Plan would result in increased light and glare in the Plan area.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
C. Population and Housing, Business Activity and Employment					
PH-1: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would induce growth in population and employment, but the associated physical impact would not be substantial.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
PH-2: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would not displace a large number of people, involving either housing or employment.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
PH-3: Neither the draft Plan nor the proposed Transit Tower would create substantial demand for additional housing beyond projected increases in housing supply in San Francisco, or substantially reduce the housing supply.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
C-PH: The draft Plan and proposed Transit Tower would not contribute considerably to a substantial growth in population or employment, to displacement of a large number of people, or to substantial demand for additional housing in San Francisco, nor would they reduce the housing supply.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
D. Cultural and Paleontological Resources					
CP-4: Changes to the height and bulk limits in the Plan area could result in indirect impacts to historic architectural resources.	LTS	LTS ⇓	LTS ⇓	LTS ⇔	LTS ⇔
E. Transportation					
TR-8: Implementation of the draft Plan would not result in inadequate emergency access.	LTS	LTS⇔	LTS⇔	LTS⇔	LTS⇔
G. Air Quality					
AQ-1: The draft Plan would not conflict with or obstruct implementation of the *2010 Clean Air Plan* or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

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	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
H. Greenhouse Gas Emissions					
GG-1: Implementation of the proposed Plan would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment, nor would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
K. Recreation and Public Space					
RE-1: The implementation of the draft Plan would result in an increased use of existing neighborhood parks and recreational facilities, but not to a degree that would lead to or accelerate their physical deterioration or require construction of new facilities.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
L. Utilities and Service Systems					
UT-1: The draft Plan and Transit Tower would not require or result in the construction or substantial new water treatment facilities, and SFPUC would have sufficient water supply available from existing entitlements.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
UT-2: The draft Plan and Transit Tower would increase sanitary wastewater flows, but it would not require or result in the construction or substantial new wastewater treatment or stormwater facilities, or exceed the wastewater treatment requirements of the Regional Water Quality Control Board.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
UT-3: The draft Plan and Transit Tower would increase demand for electricity and natural gas, but not to an extent that would result in a significant impact.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
UT-4: The draft Plan and Transit Tower would be served by a landfill with sufficient permitted capacity to accommodate solid waste generated by projects constructed pursuant to the plan. Individual building owners and tenants would comply with federal, state, and local statutes and regulations related to solid waste.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-UT: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of utilities and service systems.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
M. Public Services					
PS-1: The draft Plan and Transit Tower would not result in the need for new or physically altered police protection facilities.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
PS-2: The draft Plan and Transit Tower would not result in the need for new or physically altered fire protection facilities, but may delay emergency medical response.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
PS-3: The draft Plan and Transit Tower would not result in the need for new or physically altered school facilities.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-PS: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of public services.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
N. Biological Resources					
BI-2: Implementation of the draft Plan could interfere substantially with the movement of native resident wildlife species and with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
C-BI: Implementation of the Transit Center District Plan and the Transit Tower project would not make a considerable contribution to adverse effects on biological resources.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
O. Geology, Soils, and Seismicity					
GE-1: The proposed Transit Center District Plan 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.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
GE-2: The proposed Transit Center District Plan would not result in substantial erosion or loss of top soil.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
GE-3: Development sites within the proposed Transit Center District Plan area would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
O. Geology, Soils, and Seismicity (cont.)					
GE-4: The proposed Transit Center District Plan would not be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
GE-8: The draft Plan would not result in development located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
C-GE: The proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to geology and soils.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
P. Hydrology and Water Quality					
HY-1: The proposed Transit Center District Plan would not violate water quality standards or otherwise substantially degrade water quality.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HY-2: The proposed Transit Center District Plan 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.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HY-3: The proposed Transit Center District Plan would implement stormwater control measures that would reduce the quantity and rate of stormwater runoff to the combined sewer system, decreasing the potential for erosion or flooding.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HY-4: The proposed Transit Center District Plan 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.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HY-5: The proposed Transit Center District Plan would not expose people, housing, or structures, to substantial risk of loss due to flooding.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
P. Hydrology and Water Quality (cont.)					
HY-6: The proposed Transit Center District Plan would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
C-HY: The proposed Transit Center District Plan and Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to hydrology and water quality.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
Q. Hazards and Hazardous Materials					
HZ-1: Implementation of the Transit Center District Plan would not create a significant hazard through routine transport, use, or disposal of hazardous materials.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HZ-4: Implementation of the Transit Center District Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
HZ-5: Implementation of the Transit Center District Plan would not expose people or structures to a significant risk of loss, injury or death involving fires.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
C-HZ: Implementation of the Transit Center District Plan and construction of the proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to hazards and hazardous materials.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔
R. Mineral and Energy Resources					
ME-1: Neither the Transit Center District Plan nor the development of the Transit Tower would encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔

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TABLE S-3 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT CENTER DISTRICT PLAN)

Less than Significant Impact of Plan	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
S. Agricultural and Forest Resources					
AG-1: Neither the Transit Center District Plan nor the development of the Transit Tower would convert farmland to non-agricultural use or conflict with existing agricultural zoning or a Williamson Act contract, conflict with zoning for forest land, result in the loss of forest land to non-forest use, or involve any other changes that would convert farmland to non-agricultural use or convert forest land into non-forest use. (No Impact)		LTS ⇔	LTS ⇔	LTS ⇔	LTS ⇔

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TABLE S-4
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Significant Unavoidable Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
D. Cultural and Paleontological Resources					
C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
E. Transportation					
TR-10: Traffic generated by the proposed Transit Tower would incrementally increase average vehicle delay, but would not degrade level of service at local intersections.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
TR-12: The proposed Transit Tower would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
TR-14: The proposed project would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and could create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles and pedestrians.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
T**R-16:** Project construction, along with construction of the Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
F. Noise and Vibration					
C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
G. Air Quality					
AQ-7: Construction of the Transit Tower would expose sensitive receptors to substantial levels of toxic air contaminants generated by construction equipment.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔

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TABLE S-4 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Significant Unavoidable Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
G. Air Quality (cont.)					
C-AQ: The draft Plan and the proposed Transit Tower would contribute considerably to cumulative air quality impacts.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
J. Shadow					
SH-2: The proposed Transit Tower would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔
C-SH: The draft Plan, including the proposed Transit Tower, would contribute to cumulative new shadow that would adversely affect the use of various parks under the jurisdiction of the Recreation and Park Department and, potentially, other open spaces.	SU	**LTS**	SU ⇓	SU ⇓	SU ⇔

Significant but Mitigable Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
D. Cultural and Paleontological Resources					
CP-2. Development of the proposed Transit Tower could cause a substantial adverse change in the significance of archeological resources.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔
F. Noise and Vibration					
NO-4: The proposed Transit Tower project would not result in a substantial permanent increase in ambient noise levels in the project vicinity, and it would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔
NO-5: Construction of the proposed Transit Tower project would result in a temporary and/or periodic increase in ambient noise levels and vibration in the project vicinity above levels existing without the project.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔

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TABLE S-4 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Significant but Mitigable Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
I. Wind					
C-WI: Implementation of the draft Plan and the proposed Transit Tower, along with cumulative development, would neither cause large increases in ground-level wind speeds over a substantial portion of the Plan area, nor result in a new exceedance of the wind hazard criterion.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔
N. Biological Resources					
BI-3: Development of the Transit Tower has the potential to adversely impact 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 Game or U.S. Fish and Wildlife Service.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔
Q. Hazards and Hazardous Materials					
HZ-7: Excavation for the proposed Transit Tower would require the handling of potentially contaminated soil and groundwater, potentially exposing workers and the public to hazardous materials, or resulting in a release to the environment during construction.	LSM	**LTS**	LSM ⇓	LSM ⇓	LSM ⇔

Less than Significant Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
A. Land Use					
LU-3: The implementation of the Transit Tower project would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-LU: The draft Plan, including the Transit Tower, along with other cumulative development, would neither divide an existing community nor substantially alter the existing character of the Plan area.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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TABLE S-4 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Less than Significant Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
B. Aesthetics					
AE-5: The implementation of the Transit Tower project would alter the visual character of the tower site vicinity and alter public views of the site and the surrounding Plan area from key public vantage points as well as alter views into the surrounding neighborhoods from within the Plan area.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
AE-6: The proposed Transit Tower would result in increased light and glare.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-AE-2: The proposed Transit Tower, in combination with the draft Plan and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not contribute considerably to this change, and would not adversely affect scenic resources or substantially increase light and glare.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C. Population and Housing, Business Activity and Employment					
PH-1: The incremental new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would induce growth in population and employment, but the impact would not be substantial.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
PH-2: The incremental new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would not displace a large number of people (involving either housing or employment)	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
PH-3: Neither the draft Plan nor the proposed Transit Tower would create substantial demand for additional housing in San Francisco, or substantially reduce the housing supply.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-PH: The draft Plan and proposed Transit Tower would not contribute considerably to a substantial growth in population or employment, to displacement of a large number of people, or to substantial demand for additional housing in San Francisco, nor would they reduce the housing supply.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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TABLE S-4 (Continued)
SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Less than Significant Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
D. Cultural and Paleontological Resources					
CP-6: Development of the proposed Transit Tower would not directly or indirectly result in substantial adverse changes in the significance of historical resources.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
E. Transportation					
TR-11: Transit ridership generated by the proposed Transit Tower would not result in a substantial increase in transit demand that could not be accommodated by adjacent transit capacity resulting in unacceptable levels of transit service, or cause a substantial increase in delays or operating costs.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
TR-13: The proposed project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
TR-15: The proposed project would not result in inadequate emergency access.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
F. Noise and Vibration					
NO-6: The proposed Transit Tower project would not be substantially affected by existing noise levels.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
G. Air Quality					
AQ-6: Construction of the Transit Tower would result in emissions of criteria air pollutants, including ozone precursors, that would contribute to an existing or projected air quality violation or result in a cumulatively considerable increase in criteria pollutants, and could expose sensitive receptors to construction dust.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
AQ-8: Operation of the proposed Transit Tower would not conflict with *2010 Clean Air Plan,* result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment, either individually or cumulatively.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
AQ-9: Operation of the proposed Transit Tower would not result in emissions of carbon monoxide that would exceed state or federal standards, either individually or cumulatively.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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SUMMARY OF IMPACTS BY ALTERNATIVE (TRANSIT TOWER)

Less than Significant Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
G. Air Quality (cont.)					
AQ-10: Operation of the proposed Transit Tower would not expose sensitive receptors to substantial levels of toxic air contaminants.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
G. Greenhouse Gas Emissions					
GG-2: The proposed Transit Tower would not generate greenhouse gas emissions, either directly or indirectly, that would have a significant impact on the environment, nor would the project conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
I. Wind					
WI-1: The proposed Transit Tower would not result in a new exceedance of the wind hazard criterion.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
K. Recreation and Public Space					
RE-2: The proposed Transit Tower would result in the increased use of existing neighborhood parks and recreational facilities, but not to such a degree that would lead to or accelerate their deterioration, nor require the construction of new facilities.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
L. Utilities and Service Systems					
UT-5: The proposed Transit Tower would not result in the need for new or physically altered facilities related to water or wastewater, energy, or solid waste.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-UT: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of utilities and service systems.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
M. Public Services					
PS-4: The proposed Transit Tower would not result in the need for new or physically altered facilities related to police, fire protection, or emergency medical services.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔

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Less than Significant Impact (Transit Tower)	Level of Significance (with Mitigation)				
	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
M. Public Services (cont.)					
C-PS: The draft Plan, including demand on public services from the proposed Transit Tower, would not result in a considerable contribution to any significant impacts related to provision of public services.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
N. Biological Resources					
BI-4: Implementation of the Transit Tower Project could interfere substantially with the movement of native resident wildlife species and with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
C-BI: Implementation of the Transit Center District Plan and the Transit Tower project would not make a considerable contribution to adverse effects on biological resources.	LTS	LTS ⇓	LTS ⇓	LTS ⇓	LTS ⇔
O. Geology, Soils, and Seismicity					
GE-5: The proposed Transit Tower 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.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
GE-6: The proposed Transit Tower would not result in substantial erosion or loss of top soil.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
GE-7: The proposed Transit Tower site would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
C-GE: The proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to geology and soils.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔

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	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
P. Hydrology and Water Quality					
HY-7: The proposed Transit Tower would not violate water quality standards or otherwise substantially degrade water quality.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HY-8: The proposed Transit Tower 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.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HY-9: The proposed Transit Tower would implement stormwater control measures that would reduce the quantity and rate of stormwater runoff to the combined sewer system, decreasing the potential for erosion or flooding.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HY-10: The proposed Transit Tower 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.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HY-11: The proposed Transit Tower would not expose people, housing, or structures, to substantial risk of loss due to flooding.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HY-12: The proposed Transit Tower would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
C-HY: The proposed Transit Center District Plan and Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant cumulative impacts to hydrology and water quality.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
Q. Hazards and Hazardous Materials					
HZ-6: The proposed Transit Tower would not create a significant hazard through routine transport, use, or disposal of hazardous materials.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HZ-8: Workers and the public would not be exposed to hazardous building materials as a result of construction of the proposed Transit Tower. (No Impact)		LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔

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	Draft Plan	**No Project**	**Reduced Project**	**Reduced Shadow**	**Developer Alt.**
Q. Hazards and Hazardous Materials (cont.)					
HZ-9: The proposed Transit Tower would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
HZ-10: The proposed Transit Tower would not expose people or structures to a significant risk of loss, injury or death involving fires.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
C-HZ: Implementation of the Transit Center District Plan and construction of the proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects in the site vicinity, would result in less-than-significant impacts related to hazards and hazardous materials.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
R. Mineral and Energy Resources					
ME-1: Neither the Transit Center District Plan nor the development of the Transit Tower would encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner.	LTS	LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔
S. Agricultural and Forest Resources					
AG-1: Neither the Transit Center District Plan nor the development of the Transit Tower would convert farmland to non-agricultural use or conflict with existing agricultural zoning or a Williamson Act contract, conflict with zoning for forest land, result in the loss of forest land to non-forest use, or involve any other changes that would convert farmland to non-agricultural use or convert forest land into non-forest use. (No Impact)		LTS ⇓	LTS ⇔	LTS ⇔	LTS ⇔

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CHAPTER I
Introduction

This environmental impact report (EIR) analyzes potential environmental effects associated with the proposed Transit Center District Plan (draft Plan) project at a program level, and analyzes impacts of the proposed Transit Tower at a project-specific level. The 2009 draft Plan proposes new planning policies and controls for land use; urban form, including building height and design; street network modifications/ public realm improvements; historic preservation; and district sustainability, including enhancement of green building standards in the district, among other features. The Plan would allow for height limit increases in subareas composed of multiple parcels or blocks within the Plan area. It also includes one or more financial programs to support the development of the new Transit Center, which is under construction and will replace the former Transbay Terminal as a regional transit hub. The proposed Transit Tower would be a 61-story, 1,070-foot-tall (including sculptural element) building containing approximately 1.3 million square feet of office space and about 16,500 square feet of retail space. Further detail regarding the proposed project components that form the basis for the EIR analysis are discussed in depth in Chapter II, Project Description.

A. Environmental Review

The Environmental Planning Division of the San Francisco Planning Department is serving as Lead Agency responsible for administering the environmental review for the proposed project. CEQA requires that before a decision can be made to approve a project that would pose potential adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate potential environmental impacts of a project, to recommend mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The information contained in the EIR is reviewed and considered by the Lead Agency prior to a decision to approve, disapprove, or modify the proposed project. CEQA requires that the Lead Agency shall neither approve nor implement a project unless the project's significant environmental effects have been reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the expected impact, except when certain findings are made. If the Lead Agency approves a project that will result in the occurrence of significant adverse impacts that cannot be mitigated to less-than-significant levels, the agency must state the reasons for its action in writing, demonstrate that its action is based on the EIR or other information in the record, and adopt a Statement of Overriding Considerations.

On July 20, 2008, the Planning Department sent a Notice of Preparation (NOP) to governmental agencies, including responsible and trustee agencies, and to organizations and persons interested in the project. The NOP is included as Appendix A of this EIR. The NOP requested agencies and interested parties to comment on environmental issues that should be addressed in the EIR. The comment letters received in response to the Initial Study and the NOP are available for review as part of Case File No. 2007.0558E. The Planning Department also conducted a public scoping meeting on August 5, 2008, to receive oral comments on the scope of the EIR. Comments requested that the EIR analyze the following:

- effects on traffic, transit, pedestrians, and bicyclists, potentially including specific standards for non-auto travel modes and financing, scheduling, and monitoring of mitigation, including applicable fees and fair-share contributions;
- cumulative impacts associated with potential future high-speed rail service to the new Transit Center;
- potential contamination of soil and/or groundwater from historical uses and the resulting need for remediation;
- shadow impacts on Recreation and Park Department parks, as well as recreation and park impacts generally;
- wind effects, including combined effects of wind, shadow, and fog, and shading of sidewalks;
- visual impacts, including changes in views from entry points to the City and from elevated viewpoints outside downtown;
- seismic impacts, including effects on emergency vehicle access;
- the potential for greater development intensity than proposed in the draft Plan;
- the use and applicability of the EIR and its analyses in consideration of development projects in the Plan area.

The City has considered the public comments made by the public in preparing the Draft EIR for the proposed project.

B. Purpose of This EIR

This EIR is intended as an informational document, that in and of itself does not determine whether a project will be approved, but aids the planning and decision-making process by disclosing the potential for significant and adverse impacts. In conformance with CEQA, California Public Resources Code, Section 21000 *et. seq.*, this EIR provides objective information addressing the environmental consequences of the project and identifies possible means of reducing or avoiding its potentially significant impacts.

This document is a "program level" Environmental Impact Report (EIR) for the Transit Center District Plan, as proposed by the San Francisco Planning Department, and a "project-level" EIR for the Transit Tower. 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.

Specific technical studies prepared for the environmental analysis of the Transit Center District Plan project include a transportation study by AECOM (2011); historical resources background report Kelley & VerPlanck (2009) and Carey & Co. (2010); shadow analysis by CADP (2011); and wind analysis by RWDI Inc. (2011). These technical studies are detailed data reports and are available for review with the San Francisco Planning Department, in Case File No. 2007.0558E. In addition, an Archeological Research Design and Treatment Plan was prepared by Far Western Anthropological Research Group, Inc., Past Forward Inc., and JRP Historical Consulting.

The state CEQA *Guidelines* define the role and expectations of this EIR as follows:

> **Information Document.** An EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency (Section 15121(a)).
>
> **Degree of Specificity.** An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow (Section 15146(b)).
>
> **Standards for Adequacy of an EIR.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information, which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

The CEQA *Guidelines*, Section 15382, define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project…." Therefore, in identifying the significant impacts of the project, this EIR concentrates on its substantial physical effects and upon mitigation measures to avoid, reduce, or otherwise alleviate those effects.

C. Organization of the Draft EIR

This Draft EIR has been organized as follows:

Summary. This chapter summarizes the EIR by providing a concise overview of the project, including the project description, the environmental impacts that would result from the project, mitigation measures identified to reduce or eliminate these impacts, and alternatives to the proposed project.

Chapter 1, Introduction. This chapter (above) and the contents herein, including a discussion of Environmental Review, a summary of the comments received on the scope of the EIR, and the organization of the EIR.

Chapter 2, Project Description. This chapter discusses the project objectives, provides background data on the project location, describes the operational and physical characteristics of the Master Plan, and identifies required project approvals.

Chapter 3, Plans and Policies. This chapter provides a summary of the applicable plans, policies, and regulations of the City and County of San Francisco (City), and regional, state, and federal agencies that have policy and regulatory control over the project site and discusses the proposed project's consistency with those policies.

Chapter 4, Environmental Setting and Impacts. This chapter describes the project's existing setting, environmental impacts, and cumulative impacts. Each environmental topic is discussed in a separate section within this chapter.

Chapter 5, Other CEQA Considerations. This chapter presents any growth-inducing impacts that would result from the proposed project, recapitulates the significant environmental effects that cannot be mitigated to a less-than-significant level, presents significant irreversible changes that would result if the project is implemented, and presents any areas of controversy left to be resolved.

Chapter 6, Alternatives. This chapter presents the following alternatives to the proposed project: the required No Project Alternative, the Reduced Project Alternative, and the Reduced Shadow Alternative, as well as an alternative that reflects specific projects proposed and on file with the Planning Department.

Appendices.

D. Public Participation

The state CEQA *Guidelines* and Chapter 31 of the San Francisco Administrative Code encourage public participation in the planning and environmental review processes. The City will provide opportunities for the public to present comments and concerns regarding the CEQA and planning process. These opportunities will occur during a public review and comment period and a public hearing before the San Francisco Planning Commission. Written public comments may be submitted to the Planning Department during the specified public review and comment period (indicated on the cover of this DEIR), and written and oral comments may be presented at public hearings concerning the project.

CHAPTER II
Project Description

A. Overview

The Transit Center District Plan (referred to hereinafter as the "Plan") is a comprehensive plan for the southern portion of San Francisco's downtown Financial District, encompassing approximately 145 acres roughly bounded by Market Street, Steuart Street, Folsom Street, and a line to the east of Third Street (see **Figure 1**). The area includes private properties as well as properties owned or to be acquired by the Transbay Joint Powers Authority (TJPA)[2] in and around the Transbay Redevelopment Project Area (for which a redevelopment plan was adopted in 2005) and the Transbay Terminal/Transbay Transit Center site.[3] The Plan area includes all of Zone 2 of the Transbay Redevelopment Area; the Plan area also includes most of Zone 1 but would not make any use district or height and bulk changes within Zone 1 (see Figure 1).[4] The Transit Tower, a high-rise office tower (up to approximately 1,070 feet tall)[5] would be located on the south side of Mission Street between Fremont Street and First Street, adjacent to the new Transbay Transit Center terminal currently under construction. The Transit Tower would be constructed on land currently owned by the TJPA that is intended to be sold to a private developer for the purpose of building the tower. The Transit Center District Plan and Transit Tower together comprise the proposed project analyzed in this EIR.

The project analyzed in this EIR is the draft Transit Center District Plan published in November 2009, and the Transit Tower based on plans that accompanied a revised Environmental Review Application dated March 18, 2011.

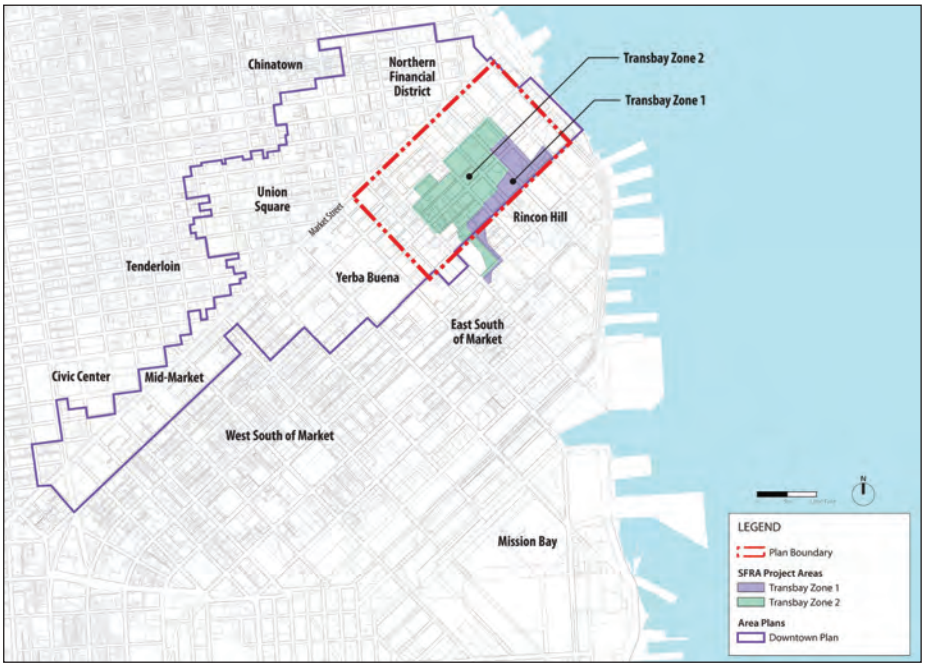
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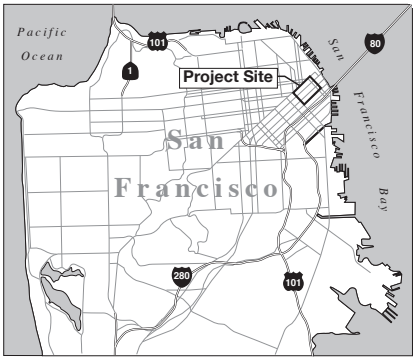
2 The TJPA is a Joint Powers Agency, formed pursuant to *California Government Code* Sections 6500 *et seq.*, composed of the City and County of San Francisco, the Alameda-Contra Costa Transit District ("AC Transit"), and the Peninsula Corridor Joint Powers Board-Caltrain, which is authorized to develop, design, construct, build, operate and maintain the new Transbay Transit Center. More information concerning the TJPA is available at: http://transbaycenter.org/tjpa/about-the-tjpa.

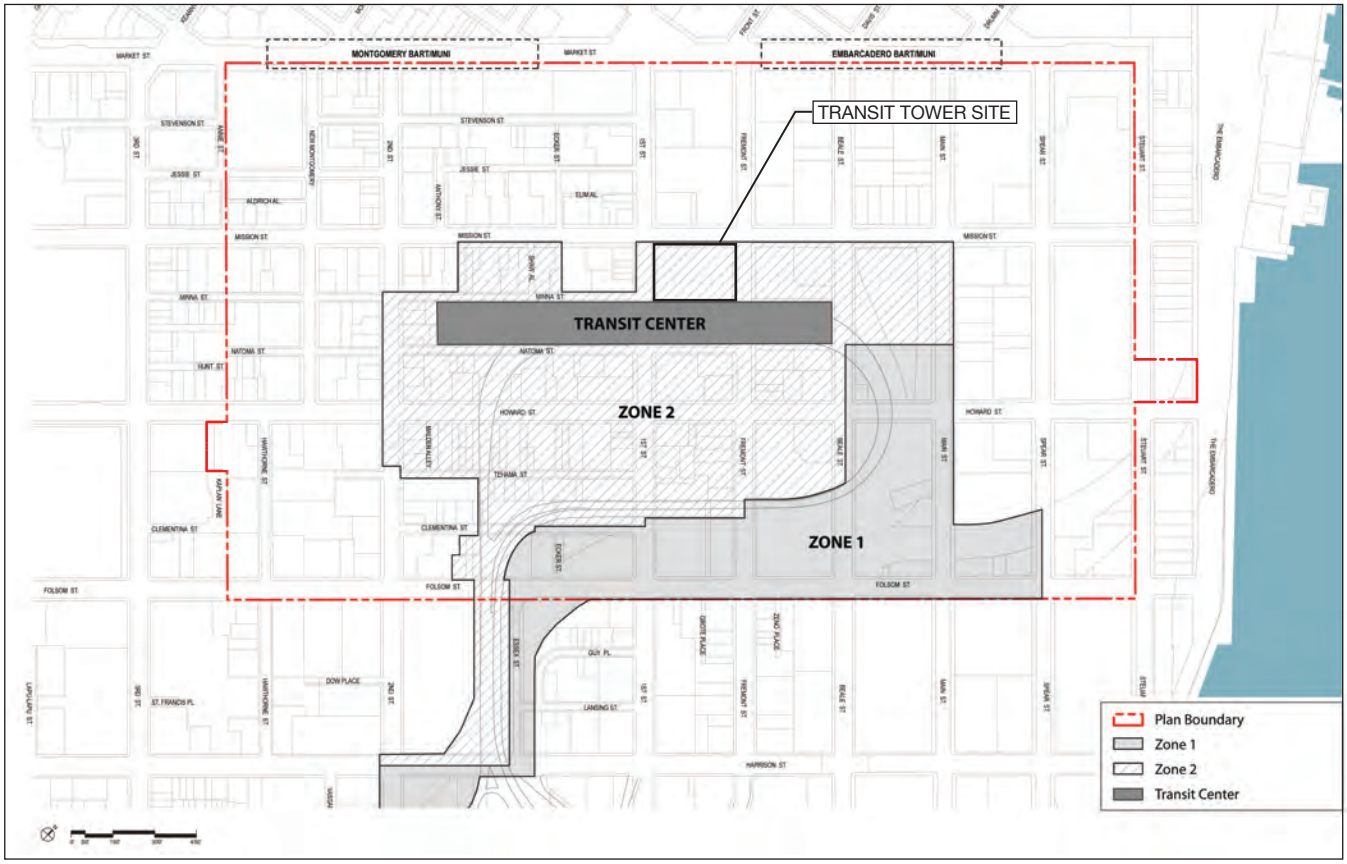
3 Demolition of the Transbay Terminal for purposes of constructing the new terminal, known as the Transbay Transit Center (or simply, the "Transit Center"), began August 2010. The Transit Center is now under construction.

4 Zone 1 of the Transbay Redevelopment Area generally comprises the parcels formerly occupied by the Terminal Separator Structure, which was the series of freeway ramps that formerly connected the Bay Bridge to the Embarcadero Freeway and to on- and off-ramps at Beale and Main Streets. Zone 1 is under the direct land use jurisdiction of the San Francisco Redevelopment Agency. The remainder of the Transbay Redevelopment Area is subject to the *San Francisco Planning Code*; in this Zone 2 the Redevelopment Agency has delegated its land use authority to the Planning Department.

5 The current design of the Transit Tower, as of spring 2011, is for a building 920 feet tall to the roof, with an unoccupied sculptural element rising an additional 150 feet, for a total height of 1,070 feet.







SOURCE: San Francisco Planning Department

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 1
Project Location and Plan Area Boundaries

The proposed project would result in new planning policies and controls for land use; urban form, including building height and design; street network modifications/public realm improvements; historic preservation; and district sustainability, including the enhancement of green building standards in the district, among other features. The Plan would allow for height limit increases in subareas composed of multiple parcels or blocks within the Plan area. It also includes one or more financial programs to support the Transit Center Program[6] and other public infrastructure and amenities in the area, through the implementation of one or more new fees, taxes, or assessments that would be applied to new development.

The proposed project would result in a comprehensive plan and implementing mechanisms, including *General Plan*, *Planning Code* and Zoning Map amendments, as necessary.

The main goals and objectives of the proposed Plan are listed below. In general, they include increasing the amount of allowable development in the transit-rich downtown core, while at the same time improving public amenities, modifying the system of streets and circulation to meet the needs and goals of a dense transit-oriented district, providing additional open space, and implementing policies to preserve existing historic structures and to promote sustainability.

This document is a "program level" Environmental Impact Report (EIR) for the Transit Center District Plan, as proposed by the San Francisco Planning Department, and a "project level" EIR for the Transit Tower. 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.

In addition to the new policies and controls (including modified building height controls) proposed by the Planning Department for the Transit Center District Plan, the EIR also analyzes, at a programmatic level, a Developer-Proposed Scenario that reflects certain applications submitted to the Planning Department by private project sponsors proposing individual buildings, which in some cases exceed or differ from the height limits identified in the proposed Plan.[7]

The Transit Tower, the subject of the project-level analysis, is described in greater detail below, in Section II.D, beginning on p. 38.

6 The "Transit Center Program" includes the new Transbay Transit Center on the site of the former Transbay Terminal, the downtown extension of rail for Caltrain and future California High-Speed Rail from the current rail terminus at 4th/King Streets into the Transit Center, along with ancillary bus ramps and bus staging areas.

7 These individual proposed projects include 350 Mission Street (Case No. 2006.1524; Final EIR certified and project approved on February 10, 2011), 50 First Street (Case No 2006.1523), 41 Tehama Street (Case No. 2008.0801), 181 Fremont Street (Case No. 2007.0456), and 2 New Montgomery Street (Case No. 2005.1101). These case files are available for review at the Planning Department, 1650 Mission Street, Suite 400.

B. Project Objectives

The Project Sponsor for the Transit Center District Plan is the San Francisco Planning Department. According to the Plan:

> The overarching premise of the Transit Center District Plan is to continue the concentration of additional growth where it is most responsible and productive to do so—in proximity to San Francisco's greatest concentration of public transit service. The increase in development, in turn, will provide additional revenue for the Transit Center project and for the necessary improvements and infrastructure in the District.[8]

A fundamental premise underlying the Transit Center District Plan is that, to accommodate projected office-related job growth in San Francisco, particularly under a so-called "Smart Growth" scenario[9] in which job growth is maximized in transit-accessible locations, additional office development capacity must be provided in downtown San Francisco. According to a study commissioned by the Planning Department, "there is about half of the necessary development capacity under current zoning to accommodate downtown projected job growth for the next 25 years."[10] Accordingly, the draft Plan seeks to "maintain Downtown San Francisco as the region's premier location for transit-oriented job growth within the Bay Area" (November 2009 Draft Plan, Objective 1.1) and to "reinforce the role of downtown within the City as its major job center by protecting and enhancing the central district's remaining capacity, principally for employment growth" (November 2009 Draft Plan, Objective 1.2).

The project objectives for the Transit Center District Plan are set forth in the draft Plan's five "fundamental core goals," which are as follows:[11]

(1) Build on the *General Plan's* Urban Design Element and Downtown Plan, establishing controls, guidelines, and standards to advance existing policies of livability, as well as those that protect the unique qualities of place;

(2) Capitalize on major transit investment with appropriate land use in the downtown core, with an eye toward long-term growth considerations;

(3) Create a framework for a network of public streets and open spaces that support the transit system, and provides a wide variety of public amenities and a world-class pedestrian experience;

(4) Generate financial support for the Transbay Transit Center project, district infrastructure, and other public improvements; and

(5) Ensure that the Transit Center District is an example of comprehensive environmental sustainability in all regards.

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8 November 2009 draft, p. 4

9 The "Smart Growth" scenario was included in analysis of the demand for office space in San Francisco conducted in support of preparation of the draft Plan. This analysis is contained in: Seifel Associates, "Downtown San Francisco: Market Demand, Growth Projections, and Capacity Analysis." May 2008; p. II-9. Available on the Transit Center District Plan webpage (reviewed January 8, 2011) at: http://www.sf-planning.org/ftp/CDG/docs/transit_center/R_TransitCenter_051308_Final.pdf.

10 November 2009 draft, p. 15; based on Seifel Associates study cited in footnote 9.

11 November 2009 draft, p. 4

Additionally, the proposed Plan has three "sustainability goals," which are also project objectives:

(1) Support (and where possible exceed) existing city environmental, sustainability and climate change objectives;

(2) Require and enable low impact, high performance development within the Transit Center development area; and

(3) Pursue the coordination and planning for district-level sustainability programs and objectives.

For purposes of this EIR, the Project Sponsor for the Transit Tower is the Transbay Joint Powers Authority (TJPA). The objectives for the Transit Tower include the following, in addition to the project objectives applicable to the entire Plan area:

(1) Create a signature building to serve as the new visual focus of downtown San Francisco;

(2) Provide complementary design of and access between the new Transit Center and the proposed Transit Tower (although the two structures have been designed to be constructed independently), along with accompanying open space and public amenities;

(3) Generate substantial funding from the development rights for the tower to help enable successful completion of the Transit Center Program, including construction of the approved Transit Center with capability to accommodate regional and local bus service, a future downtown Caltrain extension, and future high-speed rail service; and

(4) Create a substantial amount of new transit-oriented office and retail space.

C. Background

The proposed Transit Center District Plan (November 2009 draft) builds on a number of prior and current planning efforts that have sought to shape the intensity, design, and pattern of future development in the vicinity of the project site. The most notable of these are the Downtown Plan (an area plan within the *San Francisco General Plan*), which was adopted by the City in 1985, and the Urban Design Element of the *General Plan*, which was adopted by the City in 1971.

In addition, in response to more recent development trends and infrastructure investments in the vicinity of downtown San Francisco, the Planning Department has determined that it is appropriate to draft a comprehensive plan for the area around the Transbay Transit Center. The proposed plan is, therefore, analyzed in the context of the following concurrent plans and projects:

- *Transbay Transit Center/Downtown Rail Extension* – The Transit Center terminal will replace the former Transbay Terminal with a new modern multimodal Transit Center that will serve multiple local and regional transportation systems under one roof and anchor the Transbay Redevelopment Area. The new terminal will replace the former Transbay Terminal as the downtown terminal for much of the service provided by the San Francisco Municipal Railway (Muni), AC Transit, SamTrans, and Golden Gate Transit, along with Greyhound bus service. Assuming that additional funding is secured, the Transit Center also would accommodate an underground extension of the Caltrain line as well as the future California High-Speed Rail from Fourth and King Streets to the new terminal. The new Transit Center and the rail extension were analyzed in an EIS/EIS prepared

in 2004 and subsequently amended.[12] The Transit Center will also include a new 5-acre public open space, known as "City Park," atop the Transit Center building; this park is planned as part of the initial phase of the new Transit Center, which is currently under construction, and is not dependent on the Caltrain or high-speed rail component.

- *Transbay Redevelopment Plan* – The Transbay Redevelopment Project Area, created in 2005, encompasses about 55 acres and is generally bounded by Mission, Main, Folsom, and Second Streets. The Redevelopment Plan area contains the former Transbay Terminal and access ramps, as well as a number of vacant and underutilized properties and older buildings, many of which are substantially deteriorated and/or constructed of unreinforced masonry. The Plan sets forth various projects and programs that will be funded with tax increment dollars over the life of the Redevelopment Plan. Proceeds from the sale of the property and approximately $178 million of the net tax increment will be pledged to the Transbay Joint Powers Authority to help pay the cost of rebuilding the Transbay Terminal as an improved, modern regional transit hub (the Transit Center). The Plan also calls for new residential development on parcels along Folsom Street formerly occupied by the Embarcadero Freeway ramps, as well as a tower adjacent to the new terminal (the Transit Tower site). The Transbay Redevelopment Plan was also analyzed in the previously-referenced EIS/EIR for the Transbay Transit Center/Rail Extension.

- *Rincon Hill Plan* – The Rincon Hill Plan, adopted in 2005, encourages high-density residential development and greater building heights in the area between Folsom Street and the Bay Bridge. The goal of the Plan is to encourage the ongoing transformation of the area into a new mixed-use high-density residential neighborhood adjacent to the downtown, 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 plans for the Transbay Redevelopment Plan, the Rincon Hill 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. Funding for the acquisition and development of open space in the district is also included, from development impact fees.

The Planning Department has determined that, due to the changes described above, coupled with the realization of moving forward with the Transit Center Program and the fact that substantial growth has occurred in the 25 years since the Downtown Plan was adopted, the land uses, urban form and public realm of the downtown core should be reexamined. This planning effort is intended to shape the next generation of downtown growth, extrapolating on the core principles of city building at the heart of the Urban Design Element and Downtown Plan.

The proposed Transit Center District Plan is intended to build on the Downtown Plan, which envisioned the area around the former Transbay Terminal as the heart of the expanded downtown. In contrast to the adopted Transbay Redevelopment Plan, which focuses mostly on public properties south of the Transit

[12] U.S. Department of Transportation Federal Transit Administration, the City and County of San Francisco, Peninsula Corridor Joint Powers Board, and San Francisco Redevelopment Agency, *Transbay Terminal/Caltrain Downtown Extension Redevelopment Project Final Environmental Impact Statement/Environmental Impact Report and Section 4(f) Evaluation, June 2004*, and subsequently published Addenda 1 through 5 (SCH #95063004). Available along with addenda to the EIS/EIR, at http://transbaycenter.org/tjpa/documents/environmental-documents.

Center along Folsom Street, this new effort focuses on both private properties and properties owned or to be owned by the TJPA around the Transit Center itself and extending toward Market Street. The Transit Center District Plan includes mechanisms to direct funding to the construction of the Transit Center and other public improvements in the area.

The Transit Center District Plan area overlaps with the Transbay Redevelopment Project Area, and includes all of Zone 2 of the Transbay Redevelopment area, with the exception of a "tail" that extends southward from Folsom Street generally along Essex Street to encompass elevated bus ramps and the right-of-way of former freeway off-ramps.[13] The San Francisco Redevelopment Agency has implemented a Delegation Agreement with the Planning Department to generally delegate responsibility and jurisdiction for planning, zoning, and project entitlements in Zone 2 to the Planning Department and Planning Commission. The Redevelopment Plan is being implemented in partnership with the Redevelopment Agency and involves review by the Agency's Transbay Citizens' Advisory Committee.

D. Project Components

Transit Center District Plan

Location

As noted above, the Plan area is located in the southern portion of the downtown Financial District, roughly bounded by Market Street, Steuart Street, Folsom Street, and a line to the east of Third Street. It includes all of Zone 2 of the Transbay Redevelopment Area, and includes a portion of Zone 1 (see Figure 1), only for streetscape changes and roadway modifications consistent with the Transbay Redevelopment Plan. No changes in land use controls are proposed for Zone 1. Altogether, the Plan area comprises approximately 145 acres and is surrounded by the Financial District, Rincon Hill, the waterfront, and the Yerba Buena Center neighborhoods; it is centered on the site of the former Transbay Terminal, which was demolished in 2010. The Plan area boundary delineates the designated area that is analyzed in this EIR.

Existing Land Use Controls

The principal land use in the Plan area is office, although the Plan area also contains retail and mixed-used developments, as well as a limited number of residential buildings, two hotels—the Palace on New Montgomery and a Courtyard by Marriott on Second Street—and a limited amount of institutional and light industrial or Production, Distribution, and Repair (PDR) uses. (Two additional hotels, the St. Regis and the W, are on Third Street, just outside the Plan area.) In terms of zoning, the Transit Center District Plan area is generally composed of the Downtown Office (C-3-O), Downtown Office (Special Development) (C-3-O (SD)), Downtown Support (C-3-S), Transbay Downtown Residential (TB-DTR), and

[13] The draft Plan includes streetscape changes and road modifications within Zone 1 of the Transbay Redevelopment Area, although no land use or height changes are proposed within this area.

Public (P) use districts, the last one primarily encompassing the site of the former Transbay Terminal and its ramps (see **Figure 2**). Areas zoned TB-DTR comprise Zone 1 of the Transbay Redevelopment Area.

In terms of permitted uses, the C-3-O and C-3-O (SD) districts, which make up the majority of the Plan area, both permit office uses as principal uses and include controls that generally encourage concentrated, high density office development. Residential uses and some related retail and service uses are also permitted within these districts. In addition, the C-3-O (SD) district allows a lesser intensity of development, measured in terms of floor area ratio, as of right than does the C-3-O district, but the C-3-O (SD) district also permits unused development potential on lots containing historic resources from other C-3 districts to be directed to sites in the C-3-O (SD) district through the transferrable development rights (TDR) process, discussed below. Notwithstanding this distinction, all other provisions listed for the C-3-O district also apply to the C-3-O (SD) district. Both districts permit the same maximum floor area ratio of 18:1.

Those portions of the Plan area within the P zoning district are intended for some form of public use, including open space, while the areas designated TB-DTR are entirely within the Transbay Redevelopment Project Area and are, therefore, envisioned for high-density, predominantly residential uses, with some retail uses and open space, as provided for in the Transbay Redevelopment Plan and its companion documents, including the *Design for the Development* and the *Development Controls and Design Guidelines* for the Transbay Redevelopment Project.

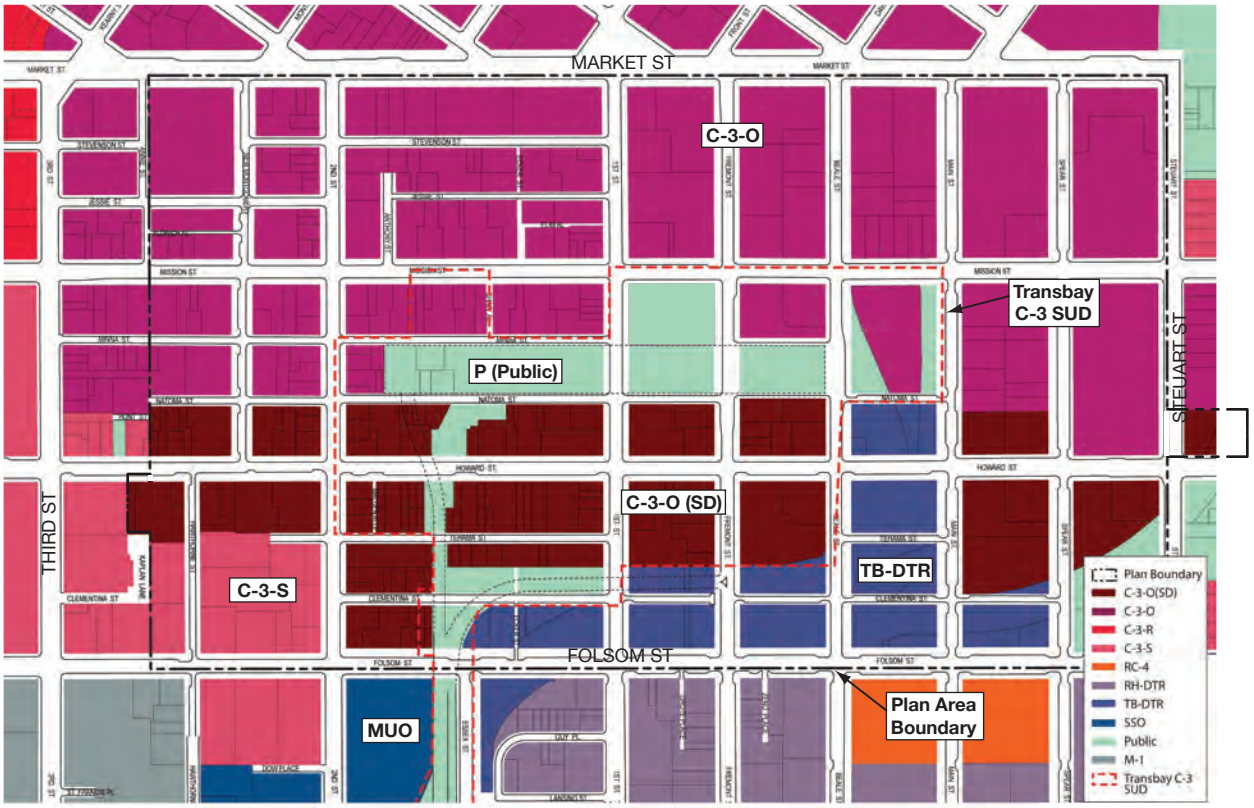
The Plan area also contains the Transbay C-3 Special Use District (SUD), which is coterminous with Zone 2 of the Redevelopment Area, and which contains additional land use controls to implement the Transbay Redevelopment Plan and its companion documents (*Planning Code* Section 249.28). In general, these controls require proposed development within the SUD to undertake streetscape improvements, deposit fees into the Downtown Open Space Fund and pay other fees into the Redevelopment Agency's Citywide Affordable Housing Fund to construct affordable housing on-site[14] and, for any parcels adjacent or facing the new Transit Center and its ramp structures, provide active ground floor uses and direct pedestrian access from these areas to the ramps around the future Transit Center.

Existing Height Controls

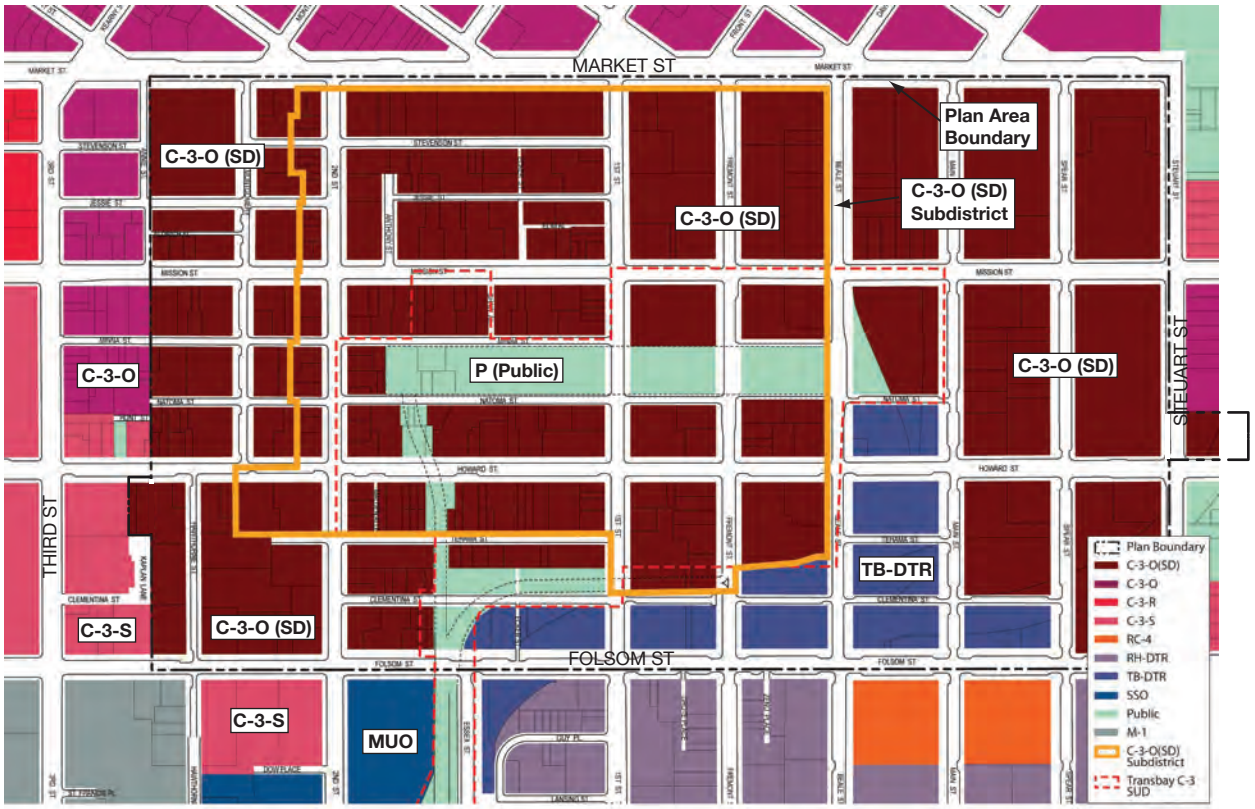
The Plan area contains a mixture of height and bulk districts within its boundaries. The height districts range from 30 feet to 550 feet and bulk districts include X, I and S.[15] **Figure 3** presents existing and proposed height limits. Because the existing controls in the Plan area support and encourage high-density office development, and because the Plan area is located in an area supported by a wide range of public

[14] Contribution to funds and payment of fees are similar to requirements established in other districts; however, these funds are directed specifically to the San Francisco Redevelopment Agency.

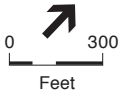
[15] The X bulk district places no limitations on building bulk and applies only in height districts that permit relatively shorter buildings. The I bulk district limits building bulk (i.e., requires setbacks in larger buildings) above 150 feet. The S bulk district, unique to the C-3 (Downtown) use districts, limits building bulk based on formulae determined by the width of adjacent streets and the height of the building. It also sets absolute limits on the bulk of high rise towers.



Existing Zoning



Proposed Zoning



Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: San Francisco Planning Department, 2009

Figure 2
Existing and Proposed Zoning



Existing Height Limits



Proposed Height Limits

Areas Proposed for Increased Height Limits

Transbay Redevelopment Plan (Zone 1)

0 300 Feet

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: San Francisco Planning Department, 2009

Figure 3
Existing and Proposed Height Limits

transit systems and is in close proximity to the historical financial and commercial core of San Francisco, the project vicinity contains a large number of mid-rise and high-rise buildings as compared to other parts of San Francisco. Consistent with the Downtown Plan's direction to expand the traditional downtown to a new "South Financial District" around the site of the former Transbay Terminal, the Plan area's 550-foot height limits in the vicinity of the terminal site are the greatest heights currently permitted anywhere in San Francisco, with the exception of a single parcel on Rincon Hill and a single parcel on Folsom Street in Zone 1.

Proposed Planning Policies and Land Use Controls

The draft Plan would rezone the bulk of the Plan area to the C-3-O (SD) use district, with the exception of Zone 1 of the Transbay Redevelopment Plan, which would not change, and most existing P Districts (other than the Transit Tower site), which would remain similar to present conditions.[16] The Plan would also include additional policies and land use controls intended to implement the Plan. These proposed policies and land use controls are described below and would fall under six major categories: Land Use, Urban Form, Public Realm, Moving About (transportation), Historic Preservation, and District Sustainability.

Selected Plan objectives and policies are included below; a complete list of objectives and policies proposed as part of the draft Transit Center District Plan is provided in **Appendix B**.

Land Use

Creation of a Commercial District

As a prelude to drafting the Transit Center District Plan, the Planning Department commissioned a study to evaluate the future of job and housing growth in San Francisco.[17] The study's conclusions were that, particularly with the implementation of so-called "smart growth" policies across the Bay Area that encourage development of jobs near transit, downtown San Francisco would not be able to provide sufficient space for anticipated growth in office space based on existing zoning. On the other hand, the downtown has sufficient capacity to accommodate the demand for future residential development, whether based on historical trends or smart growth forecasts.[18]

Accordingly, one of the major goals of the draft Plan is to ensure that there is sufficient growth opportunity for high-density, largely office-based, jobs in the downtown core, immediately proximate to

16 Changes to P Districts would consist of elimination of P zoning on an approximately 60-foot-wide strip on the east side of Main Street south of Mission Street; elimination of P zoning on the block bounded by Howard, Steuart, Folsom, and Spear Streets (former Embarcadero Freeway right-of-way); reconfiguration of P parcels along the realigned route of the Transit Center ramps between Tehama and Howard Streets; and rezoning of the Transit Tower site to C-3-O (SD).

17 Seifel Associates, "Downtown San Francisco: Market Demand, Growth Projections, and Capacity Analysis." May 2008; see footnote 9, p. 9.

18 The Seifel Associates study did not consider affordability of housing; provision of sufficient housing that is affordable to lower-income residents remains an ongoing concern of the City, but is not addressed in this discussion. The study referenced herein is available on the internet at: http://www.sf-planning.org/ftp/CDG/docs/transit_center/R_TransitCenter_051308_Final.pdf.

the region's best transit service. To this end, the Plan would limit the amount of non-office space in major new construction within a portion of the Plan area, as a mechanism to attain an overall ratio of no less than 70 percent office space within the Plan area. To achieve this, the Plan proposes two additional zoning changes in addition to rezoning to C-3-O (SD): elimination of limits on floor area ratio (FAR)[19] and enactment of limits on the amount of non-commercial development in the core of the Plan area.

The maximum permitted FAR is currently 18:1. The base allowable FAR in the Plan area varies from 5:1 in C-3-S districts to 9:1 in C-3-O districts. At present, a project may achieve up to a maximum of 18:1 through purchase and application of transferrable development rights (TDR) from qualifying historic buildings in the downtown. (Future use of TDR is discussed under Historic Preservation, p. 32, below.) The draft Plan proposes the following zoning changes:

- Rezone the entre Plan area to C-3-O (SD) and eliminate the maximum 18:1 cap on Floor Area Ratio (FAR) limit on development in this zone (November 2009 Draft Plan, p. 18).

The limit on non-commercial development would occur through creation of a sub-district within the Plan area within which major new construction on large sites would be required to have a minimum ratio of commercial to non-commercial (e.g. residential, hotel, cultural) uses. The proposed requirement is as follows:

- On development sites larger than 15,000 square feet within a prescribed sub-area of the C-3-O (SD) district, new construction greater than 6:1 FAR would be required to have at least three square feet of commercial space for every one square foot of residential, hotel, or cultural space. (November 2009 Draft Plan, p. 19)

The C-3-O (SD) Subdistrict in which the limits on non-commercial space would apply is proposed to be bounded generally by Market Street on the north, Main Street on the east, Zone 1 of the Transbay Redevelopment Plan and Tehama Street on the south, and midway between Second and New Montgomery Streets on the west. Figure 2, p. 13, illustrates the proposed C-3-O (SD) Subdistrict described above, as well as other proposed changes in Planning Code use districts.

To maximize the potential for the Plan area to accommodate future job growth, the Plan also proposes a minimum level of development—a FAR of at least 9:1—on sites larger than 15,000 square feet. According to the draft Plan, "to site buildings of modest scale on the few handful of downtown sites adjacent to regional transit that are considered appropriate for taller and denser buildings is probably not the best long-term land use or transportation decision."[20] In addition, the draft Plan seeks to encourage continuous consumer retail uses on key street frontages, and maximize the diversity of businesses on the ground floor to create lively destination commercial areas. Establishment of zoning controls to achieve the following would address this goal:

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19 Floor area ratio is the ratio of total floor area within a building (absent specified exceptions) to the size of the lot. That is, a three-story building that fully covers its lot would have a floor area ratio (not counting exceptions) of 3:1.

20 November 2009 draft, p. 20.

- Active retail uses are required along the following frontages:

  - 2nd Street between Market and Folsom streets
  - Natoma between 2nd Street and half way between 2nd and 1st streets
  - Ecker Street and the continuation of Ecker Street between Market and Mission streets

- Banks/credit unions/financial service, insurance, travel agencies, offices, and gyms/health clubs are not permitted on the first floor along the frontages listed above. Building lobbies should be located on alternative street frontages, if available, to those listed above.

- Buildings fronting on non-service pedestrian alleys (Ecker, Elim, Malden, Oscar) should be lined at the ground level with active uses—lobbies, retail, public open space (November 2009 Draft Plan, p. 21).

Urban Form: Building Heights and Design

As noted, the Plan seeks to build upon the Downtown Plan and the Urban Design Element of the *General Plan.* "These plans set out the policies that have achieved the characteristics of downtown San Francisco we enjoy today: a compact, human-scaled, walkable and dynamic urban center and a dramatic concentrated skyline set against the natural backdrop of the city's hills. [The Plan's urban design framework] builds on the core principles of city form established in these two plans. It presents key objectives and policies for directing new development in a manner that enhances the overall cityscape and builds upon established and planned transit assets downtown."[21]

Figure 3, p. 14, illustrates the proposed height limits under the draft Plan and the specific subareas where height limits are proposed to be increased within the Plan area.

The draft Plan seeks to create an "elegant skyline … with its apex at the Transit Center, and tapering in all directions" so that the Transit Center becomes "the center of downtown, reinforcing the primacy of public transit in organizing the City's development pattern" (November 2009 Draft Plan, Objectives 2.2 and 2.3).

The greatest proposed height limit is a 1,000-foot height district at a site on the south side of Mission Street between First and Fremont Streets, adjacent to the north side of the new Transit Center. This is the site of the proposed Transit Tower, which the Plan envisions as the City's tallest structure, with an "enclosed" height (i.e., the height to the highest occupiable floor and mechanical level, if the latter would cast shadow on protected parks) of 1,000 feet (November Draft Plan, Policy 2.1). The Plan also calls for a sculptural element atop the 1,000-foot-tall tower, provided that this element does not result in "significant" shadows (November Draft Plan, Policy 2.2).[22] Other height districts that exceed the current maximum of 550 feet would allow for approximately six very tall buildings nearby whose height—up to a maximum of 850 feet—would be appropriately shorter than the Transit Tower. The Transit Tower

21 November 2009 draft, p. 23.

22 As noted previously, and discussed in more detail in the description of the proposed Transit Tower, p. 39, the current proposed height for the Transit Tower is 920 feet to the roof and 1,070 feet in total.

would be required to be developed at a minimum height of 750 feet, and a minimum total height with architectural feature of 950 feet (November 2009 Draft Plan, Policy 2.6).

South towards Folsom Street, heights would not be increased above generally prevailing existing height limits to provide for "a lower 'saddle' to clearly distinguish the downtown from the Rincon Hill form and to maintain views between the city's central hills and the Bay Bridge" (November 2009 Draft Plan, Policy 2.4).

The Plan proposes an 850-foot height district on the west side of First Street between Stevenson Street and Elim Alley, just north of First Street (see Figure 3). Recognizing that private interests will be responsible for the majority of development activity in the Plan area, the Plan calls for consideration of shifting this zone slightly to the west, along Mission Street, 10 years hence should no building taller than 700 feet be erected in the 850-foot zone.

Table 1 summarizes the proposed changes to height districts within each of the Plan subareas.

Shadow on Public Spaces

Because the Transit Center District Plan calls for changes in height limits that would permit buildings up to 450 feet or more (including sculptural elements) than are permitted currently, the draft Plan considers potential shading impacts on public open spaces. The Plan expressly acknowledges that new buildings 600 feet and taller could add new shadow to certain public open spaces, including Union Square, St. Mary's Square, Portsmouth Square, and Ferry Park and Justin Herman Plaza (the latter two of which extend from Washington Street to south of Market Street). The draft Plan notes that some of the initial proposals for increased height limits were adjusted as a result of a preliminary analysis of shadow impacts. The Plan calls for potential improvements to some of the affected parks, as well as the creation of new open spaces within the Plan area. The Plan proposes, however, that shadow impacts of tall buildings be considered in light of the Plan's other goals and objectives, including creating a graceful skyline form and accommodating future job growth, and the draft Plan proposes policy language to this effect:

> Balance consideration of shadow impacts on key public open spaces with other major goals and objectives of the plan, and if possible, avoid shading key public spaces during prime usage times (November 2009 Draft Plan, Objective 2.5).[23]

A complete analysis of potential shadow impacts of the draft Plan and the proposed Transit Tower can be found in Section IV.J, Shadow, p. 466.

[23] The draft Plan does not propose revisions to *Planning Code* Section 295, which generally prohibits the approval of projects that would shade Recreation and Park Department properties during the period from one hour after sunrise to one hour before sunset, unless the Planning Commission, upon the advice of the Recreation and Park Commission, determines that the shadow would have an insignificant impact on the use of the property.

TABLE 1
PROPOSED HEIGHT LIMIT INCREASES

Subarea Location	Existing Height Limits (feet)	Proposed Height Limit (feet)
1. Transit Tower (Mission and First Streets)	30	1,000
2. Between Fremont and Beale Streets, north and south of Mission Street	Ranges from 450 to 550	700
3. East side of Fremont Street, north of Howard Street	350	700
4. Between Fremont and Beale Streets, from Howard Street south to Clementina Street	Ranges from 80 to 350	350 to 400
5. Between Clementina and Folsom Streets, from Second Street to Essex Street	200	250
6. Between Natoma and Howard Streets, east of Second Street	450	750
7. Between Stevenson Street and Elim Alley, west of First Street	550	850
8. Between Jessie and Mission Streets, mid-block between First and Anthony Streets	550	700
9. South side of Tehama Street, mid-block between First and Second Streets	350	400
10. North side of Tehama Street, mid-block between First and Second Streets	200	350
11. Between Stevenson and Jessie Streets, from Annie to west of New Montgomery Streets	300	600
12. Between Natoma Street and Howard Street, mid-block between New Montgomery and Third Streets	250	350

SOURCE: San Francisco Planning Department, 2009

Building Bulk and Design Guidelines

The Plan proposes guidelines regarding bulk and building form that build upon the standards established in the Downtown Plan, and proposes ground-floor design standards that are meant to encourage active and spacious ground floors, promote continuous street-level facades, and allow for the widening of sidewalks in areas where the redevelopment of contiguous parcels is anticipated to occur.

While the Plan proposes the elimination of maximum limits on floor area ratio, existing tower separation rules in the C-3 districts would remain in force, and would be extended to cover buildings greater than the current maximum 550-foot height limit, such that the top of a 1,000-foot-tall building would have to be set back 70 feet from the center of a typical major street in the Plan area. Also, where multiple towers are developed on the same property, setbacks of up to 70 feet would apply to these towers, as well to towers on separate lots.

The upper portions of tall towers (generally the top one-third of new buildings greater than 550 feet in height, referred to as the "upper tower") would be required to have an average floor plate that is at least 25 percent smaller than, and an average diagonal dimension at least 14 percent less than, that of the "lower tower" (the remainder of the building above the base). This requirement is similar to, although

less restrictive than, the volume reduction requirement currently contained in *Planning Code* Section 270(d)(3)(B), which requires that the upper tower contain floor plates up to 40 percent smaller than those of the lower tower.

The draft Plan proposes to strengthen the Downtown Plan's controls that call for the base of a tall building to be differentiated from the tower above, with the intent of establishing a more comfortable pedestrian environment at the ground level by limiting the height of continuous building façades rising from the sidewalk, requiring horizontal breaks at the streetwall height (between 50 and 110 feet), and encouraging the intermingling of lower scale building among the taller ones. Whereas the Downtown Plan includes a policy calling for a horizontal element (a "belt course") on the façade in a manner that suggests a human-scaled building base, the draft Plan states that "this architectural feature alone is insufficient"[24] to visually break up a very tall street wall that extends straight up from grade. By including this direction, the Plan would promote a more modest pedestrian scale at the ground level and would ensure that any proposed high-rise buildings proposed within the Plan area boundaries establish a distinct base element that defines the street realm at a comfortable height (no more than 1.25 times the width of the street).

To achieve these objectives, the draft Plan includes the following objectives and policies:

- Ensure that buildings taller than 150 feet establish a distinct base element to define the street realm at a comfortable height of not more than 1.25 times the width of the street.
    - Such a base element must be discernable from the tower form by any combination of upper level setbacks, projections, or other building features or articulations.
    - provide combined horizontal relief of at least 10 feet for at least 60 percent of the lot width.
    - Recesses of the base or changes of material alone are not sufficient streetwall defining treatments (November 2009 Draft Plan, Policy 2.10).
- A setback of 15 feet would be required within the existing New Montgomery-Second Street Conservation District (November 2009 Draft Plan, Policy 2.11).[25]

The draft Plan seeks to "ensure that development is pedestrian-oriented, fostering a vital and active street life" (November 2009 Draft Plan, Objective 2.12) through a number of design guidelines and directives. These include the following proposed policies:

- Limit the street frontage width of lobbies to 40 feet in width or 25 percent of the street frontage of the building, whichever is larger, and require the remaining frontage to be lined with public oriented uses, including commercial uses and public space (November 2009 Draft Plan, Policy 2.19);

24 November 2009 draft, p. 34.

25 This district, listed in Article 11 of the *Planning Code,* is proposed in the draft Plan to be expanded and renamed the New Montgomery-Mission-Second Street Conservation District; see discussion in Section IV.D, Cultural Resources, p. 33.

- Eliminate the Floor Area Ratio penalty for tall floors (November 2009 Draft Plan, Policy 2.23);[26] and
- Prohibit access to off-street parking and loading on key street frontages. Whenever possible, all loading areas should be accessed from alleys (November 2009 Draft Plan, Policy 2.24).

In addition, the Plan calls for amendment of *Planning Code* Section 136 to permit overhead horizontal projections of a decorative character deeper than 1 foot at all levels of a building on major streets (November 2009 Draft Plan, Policy 2.18).

Further, arcades would be discouraged (November 2009 Draft Plan, Policy 2.20), and ground-level facades would be required to have substantial transparency (November 2009 Draft Plan, Policy 2.21).

The draft Plan would pursue building setbacks along designated streets (see below) to allow for additional sidewalk widening beyond the widths called for in the public realm plan (see below, p. 21). A 10-foot setback would be required along the south side of Mission Street between First and Fremont Streets (location of the Transit Tower site). The proposed Plan also recommends 10-foot building setbacks be considered on the following frontages, depending on the sequence and particulars of development:

- North side of Mission Street between First and Second Streets;
- North side of Howard Street between First Street and Second Street; and
- West side of First Street between Market and Mission Streets (November 2009 Draft Plan, Policy 2.14 and 2.15).

Where applicable, such setbacks must be designed as an extension of the sidewalk, and must be:

- at sidewalk grade;
- completely free of all columns or other building elements; and
- open at all times for pedestrian circulation.

Finally, the draft Plan includes objectives and policies calling for high-quality building design and materials, including "green" building techniques such as use of materials that absorb minimal heat and the creation of "living," or planted walls.

Public Realm

Pedestrian Environment and Circulation

The draft Plan would build on the Downtown Streetscape Plan of 1995, as well as the 2006 Streetscape and Open Space Plan for the Transbay Redevelopment Area and the citywide Better Streets Plan, adopted in 2010, to create a "high quality public realm" covering the "shared space" of the Plan area, including its streets, alleys, sidewalks, parks, and plazas.[27]

[26] Sec. 102.11 currently requires creating and counting "phantom floors" in square footage calculation where average floor-to-floor height exceeds 15 feet. This discourages relatively taller ground floor spaces.

[27] November 2009 draft plan, p. 43.

Envisioning a sizable increase in pedestrian activity due to both new development and increased transit service to and from the new Transit Center (including the potential for a Caltrain extension to downtown and statewide high-speed rail service), the draft Plan places heavy emphasis on improving the pedestrian environment by widening and making improvements to sidewalks (including installation of landscaping and street furniture and other amenities), selectively eliminating on-street parking, and applying a "living streets" treatment to create "linear plazas" along Beale, Main, and Spear streets in the eastern portion of the Plan area (November 2009 Draft Plan, Policies 3.1 – 3.4). The draft Plan calls for creating sidewalk bulbs at intersections to increase sidewalk capacity and shorten crossing distances and improvements to crosswalks (e.g., special paving, raised crossings, lighting) (November 2009 Draft Plan, Policies 3.5 and 3.6), as well as the development of empirical measurement techniques to judge "the quality of streets both as walking corridors and social spaces for people" (November 2009 Draft Plan, Policy 3.7).

Under the draft Plan, curb cuts for access to off-street parking and loading would be restricted on Mission Street, Second Street, and additional mid-block alleys within the Plan area, and discouraged along First and Fremont Streets within the Plan area, while existing restrictions on new curb cuts along Folsom and Market Streets within the Plan area would be continued (November 2009 Draft Plan, Objective 3.5) (see **Figure 4**). The draft Plan calls for an explicit *Planning Code* change to implement this objective, including a requirement that exceptions be approved by the Board of Directors of the Municipal Transportation Agency (MTA):

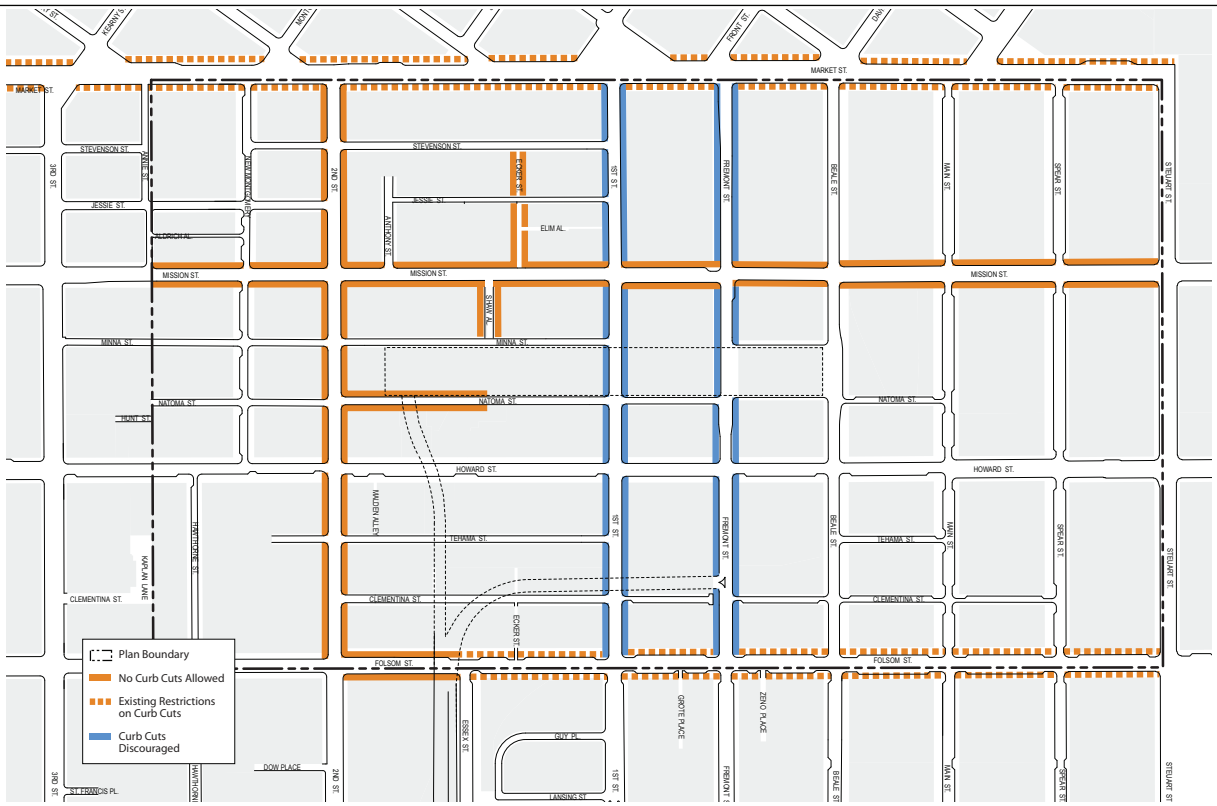
- *Amend Section 155(r) to prohibit access to off-street parking and loading on Mission, Second, Ecker and portions of Folsom and Natoma Streets in the Plan area, and to permit such access on portions of First, Fremont, and Beale streets only with Conditional Use Authorization from the Planning Commission and approval by the SFMTA Board (November 2009 Draft Plan, p. 52)*

The Plan also seeks to ensure that any proposed new development would enhance the pedestrian network and reduce the scale of large blocks. This would be done by maintaining and improving public access along existing alleys and creating new connections where none exist on long blocks and at congested locations. Shaw Alley (across Mission Street from Golden Gate University, west of First Street) is considered a key link in the pedestrian network that would serve the Transit Center. For this reason, a permanent closure of this alley to vehicles is sought in order to convert it to an open space and a pedestrian connection to the Transit Center (November 2009 Draft Plan, Policy 3.13).

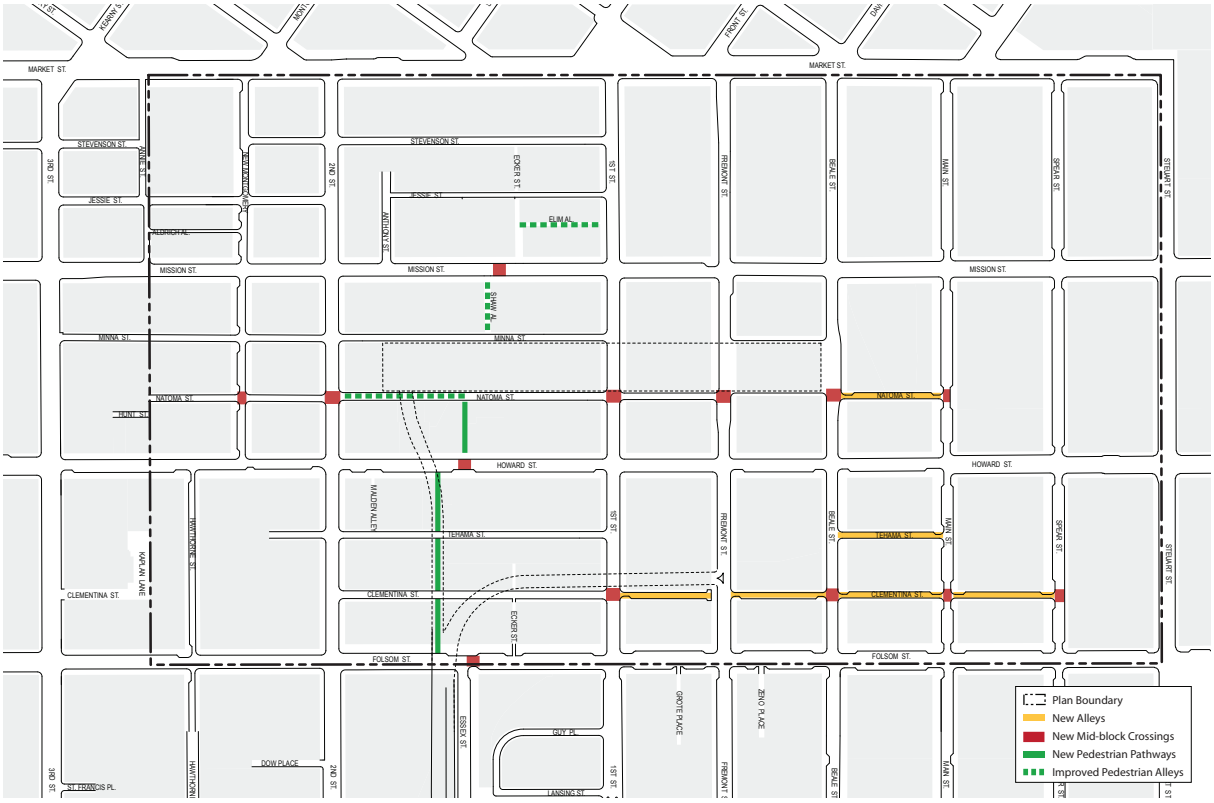
Both new and improved mid-block alleys and mid-block signalized crosswalks—including those set forth in the Transbay Redevelopment Plan's streetscape plan—would be added to enhance the pedestrian network (November 2009 Draft Plan, Objectives 3.6 – 3.9) (see Figure 4), including the following, which are proposed to facilitate access to the Transit Center:

- Require a new public mid-block pedestrian pathway on Block 3721[bounded by First, Second, Mission, and Howard Streets], connecting Howard and Natoma Streets between First and Second Streets (November 2009 Draft Plan, Policy 3.12).

- Convert the western portion of Natoma Street between First and Second streets on the south side of the Transit Center to a primarily pedestrian-only street (November 2009 Draft Plan, Policy 3.14).



Curb Cut Restrictions



Alley

0 300
Feet

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: San Francisco Planning Department, 2009

Figure 4
Curb Cuts and Alleys

Other mid-block pedestrian crossings are proposed across Mission Street between Second and First Streets (near Shaw Alley), across Main Street at both Clementina and Natoma Streets, across Beale Street at both Natoma and Clementina Streets, across First Street at Clementina Street, across Howard Street between Second and First Streets (near Oscar Alley and a proposed new pedestrian and bicycle path from Howard to Folsom Streets), and across New Montgomery Street at Natoma Street.

In general, the draft Plan calls for mid-block pathways to be attractive and useful:

- Ensure that mid-block crosswalks and through-block passageways are convenient, safe, and inviting (November 2009 Draft Plan, Objective 3.9).

Such mid-block pathways "must be at sidewalk grade and open to public passage. They need not be open to the sky, but must have clear space of at least 25 feet in height and 20 feet in width, be open to the public at all times (24 hours per day, 7 days per week), and lined with lobbies or active uses. They must be open to the air at both ends, similar to an arcade or galleria, and must not require opening of doors to access" (Text accompanying Policy 3.11 of the November 2009 Draft Plan).

Open Space

As noted in II.C, Background, as part of the Transit Center project being implemented by the TJPA, a new 5-acre "City Park" will be created atop the new Transit Center.[28] In addition, the draft Transit Center District Plan proposes to create a new public space at the northeast corner of Howard and Second Streets that would include a vertical circulation feature connecting to the City Park and the Transit Center, which would facilitate public access from the south to both the new open space and transit service (November 2009 Draft Plan, Policy 3.15). This public space would be located on the combined parcels now occupied by the buildings identified for demolition as part of construction for the Transit Center bus ramps and the Caltrain Downtown Extension (Block 3721/ Lots 022, 023, 025, 092-106, 109-118), analyzed in the EIS/EIR for that project (see footnote 12, p. 10). The public space could be an open plaza, an indoor space, or a combination of indoor and outdoor space.

With regard to the residential and non-residential open space requirements currently mandated by the *Planning Code*, the draft Plan includes a number of objectives and policies that would encourage flexibility in meeting these requirements within the Plan area, particularly in the vicinity of, and to enhance connections to, the Transit Center's City Park (November 2009 Draft Plan, Objective 3.13). One approach included in the Plan is for future projects adjacent to the City Park to meet *Code*-mandated open space requirements by providing direct pedestrian connections to the City Park rather than incorporating privately owned, publicly accessible open spaces into project designs, as is typically the case with downtown buildings, in fulfillment of the requirements of *Planning Code* Section 138 (November 2009 Draft Plan, Policies 3.17 and 3.20). A payment of in-lieu fees is another measure proposed in the Plan to allow for greater flexibility in meeting open space requirements for individual projects within the Plan

[28] As stated, the Transit Center, including City Park, is under construction, and neither the transportation terminal facility nor the part atop the building is part of the Transit Center District Plan project or Transit Tower project analyzed in this EIR.

area (November 2009 Draft Plan, Policy 3.19). The draft Plan proposes these different approaches for projects to meet open space requirements in recognition of the fact that project-site-specific open spaces that are privately owned but publicly accessible are difficult to provide on constrained sites; could, over time, "erode the urban fabric"[29] by creating a series of gaps in otherwise solid street walls; and, depending on access and design, do not always feel "public."

The draft Plan would also require that open space provided within the interior of new buildings "have a distinct street presence separate from the building's primary entrance and lobby functions" to emphasize the public identity and use of the space, and that such space be at sidewalk grade, be open to the public during daytime and evening hours, be abutted by one or more permanent enclosed retail spaces that open directly onto such interior open space as well as from a public sidewalk, plaza, or other outdoor public space, and "be accessible through permeable building openings without the need to open doors [such as through] sliding or folding panels that can be kept open" (November 2009 Draft Plan, Policy 3.21).

In addition, the draft Plan includes provisions that would grant the general public access to views of the city and the region from the upper stories of the tallest high-rise building(s) proposed. (In general, such views are currently only available to tenants of such structures.)

> The Transit Tower should have a facility of public accommodation at a level no lower than 650 feet above grade that provides the general public the opportunity for views of the cityscape and Bay. (November 2009 Draft Plan, Policy 3.22)

The Plan encourages other very tall buildings (more than 600 feet) to provide the same public access to observation platforms or other means of public accommodation (e.g., sky lobby, restaurant).

Moving About

The draft Plan seeks to manage vehicular traffic and to enhance transit, pedestrian, and bicycle travel.

> The District's transportation system will prioritize and incentivize the use of transit. Public transportation will be the main, non-pedestrian mode for moving into and between destinations in the Transit Center District (November 2009 Draft Plan, Objective 4.1).

The transportation system will also "implement and require transportation demand management strategies to minimize growth in auto trips and reduce volumes as necessary"; "meet changing transit needs, particularly to support the new Transbay Transit Center and accommodate increased densities"; "prioritize pedestrian amenity and safety"; "build on successful traffic and parking management programs and policies that are in place"; "require management of Bay Bridge queues to reduce and mitigate impacts of regional travel on transit circulation and the public realm"; and "further sustainability goals" (November 2009 Draft Plan, Objectives 4.2 – 4.7).

29 November 2009 draft, p. 60.

The draft Plan calls for attempts to discourage traffic—especially regional traffic that passes through the District to and from the Bay Bridge. Vehicle parking would be further restricted, bicycle parking would be increased, and car sharing would be encouraged. As noted above in the discussion of the Public Realm, the Plan would include features and policies to make walking between destinations in the District more feasible and attractive.

For example, the draft Plan includes the following objectives and policies:

- Support and implement a public bicycle sharing program in the District (November 2009 Draft Plan, Policy 4.42).

- Do not compromise pedestrian, bicycle, or transit amenity or service within the District to accommodate or maintain levels of service for regional auto trips (November 2009 Draft Plan, Policy 4.44).

- Pursue measures to actively manage traffic volumes and bridge and freeway vehicle queues in order to achieve appropriate levels of traffic necessary to allow for the creation of the public realm and circulation system envisioned and necessary for the District (November 2009 Draft Plan, Policy 4.45).

- Consider rerouting bridge and freeway vehicle queues onto other streets outside the core of the District, avoiding primary transit, bicycle, and pedestrian streets (November 2009 Draft Plan, Policy 4.47).

- Consider converting some one-way streets to two-way in order to improve local circulation (November 2009 Draft Plan, Policy 4.48).

- Establish an absolute maximum cap on number of parking spaces in the district and adjacent areas based on the established targets for traffic reduction and goals for transit usage (November 2009 Draft Plan, Policy 4.50).

- Scrutinize and restrict new accessory and non-accessory parking in the Plan area until a comprehensive cap on new parking is adopted (November 2009 Draft Plan, Policy 4.51).

Until a cap is adopted, the draft Plan recommends that the maximum amount of floor area devoted to parking for non-residential uses in the Plan area be reduced from the current cap of 7 percent to 3.5 percent, pending establishment of an "absolute cap" on parking spaces in the Plan area, as called for in Policy 4.50.

- Prohibit parking and loading curb cuts on key transit and pedestrian streets, including Mission, Second, and Folsom streets (November 2009 Draft Plan, Policy 4.53).

- Restrict commercial loading and deliveries to non-peak periods (November 2009 Draft Plan, Policy 4.64).

The draft Plan also calls for evaluation of creating a transit-only zone on Mission between First and Fremont streets (November 2009 Draft Plan, Policy 4.3) and of the feasibility of implementing congestion

pricing for traffic (November 2009 Draft Plan, Policy 4.11), and evaluation of a potential future bicycle connection to the Bay Bridge, should a bicycle path be added to the bridge's west span in the future (November 2009 Draft Plan, Policies 4.37 and 4.38).

Planning Code revisions proposed in relation to parking and car sharing are the following:

- *Amend Section 155.4 to increase number of required on-site secure bicycle parking spaces for commercial buildings from maximum of 12 spaces (for buildings larger than 50,000 gsf) to accommodate visitors and five percent of all on-site employees bicycling to work. The proposed requirement should be the equivalent of at least one bike parking space for every 6,000 gsf of office space. Spaces should be located in highly visible and well-lit locations and may not be located more than one story above or below grade (November 2009 Draft Plan, p. 81).*

- *Amend Planning Code Section 156 to prohibit new surface parking lots in the District and to require the inclusion of bicycle parking and parking spaces dedicated for car sharing vehicles, as well as landscaping and other site improvements, as a condition for the extension of approvals of a surface parking lot in the District (November 2009 Draft Plan, p. 86).*

- *Amend Section 166 to require car sharing spaces in all garages in the Plan area.*[30]

In the area of transportation demand management (TDM), the draft Plan calls for expanding participation in, and the role of, the Transportation Management Association, which is a building-owner-funded non-profit organization, established pursuant to the Downtown Plan, that provides information on commute options. The draft Plan calls for the following change in the *Planning Code*:

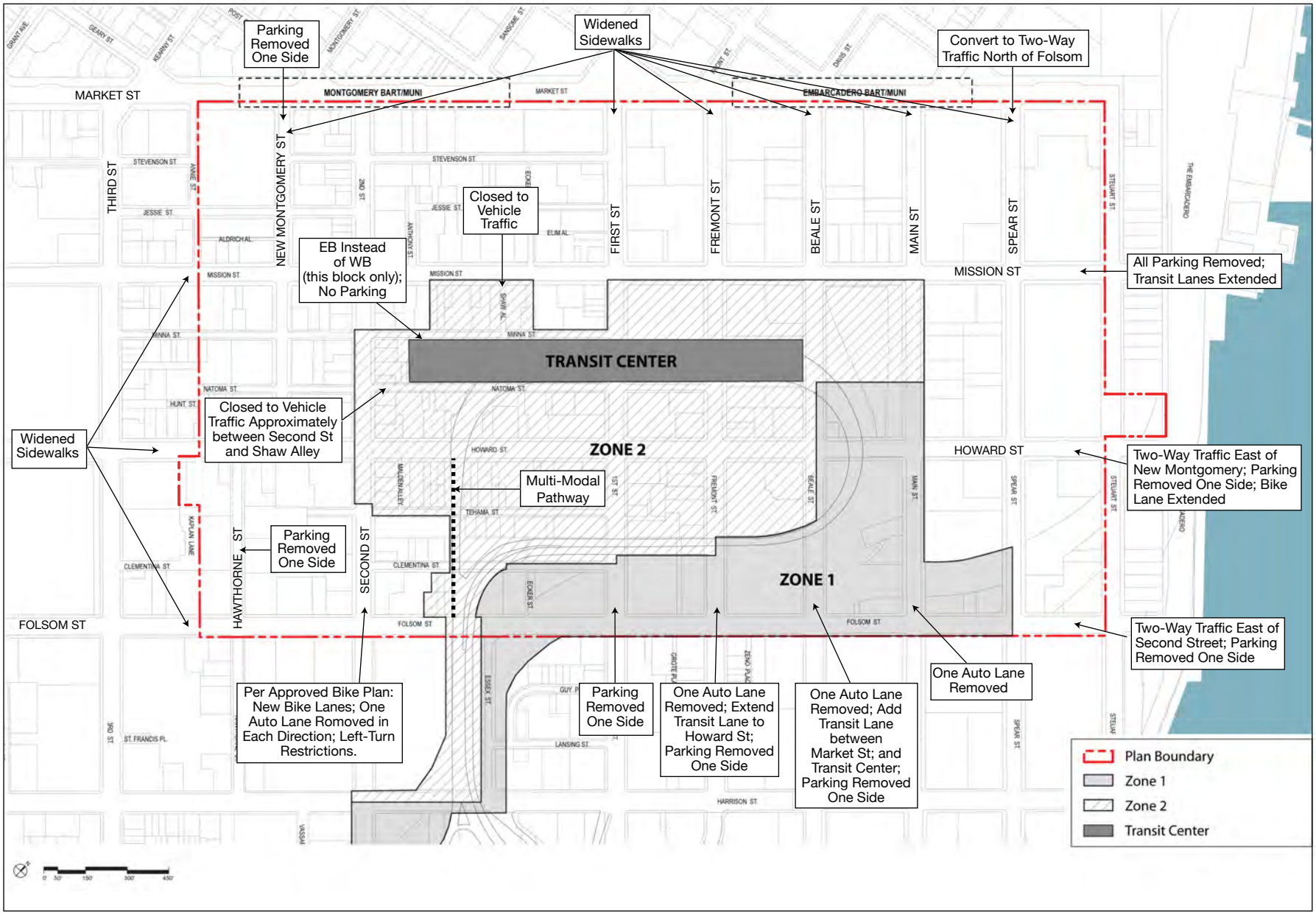
- *Amend Planning Code Section 163 based on … policies [concerning TDM] to apply to projects in excess of 25,000 gsf and to apply to all new nonresidential buildings (November 2009 Draft Plan, p. 73).*

Streets and Circulation

The draft Plan would reconfigure many of the existing rights-of-way throughout the Plan area in an effort to meet the changing transportation and public space needs within the area, particularly to accommodate anticipated increases in pedestrian volume that would result from the intensification of the land uses and the completion of the Transbay Transit Center Program.

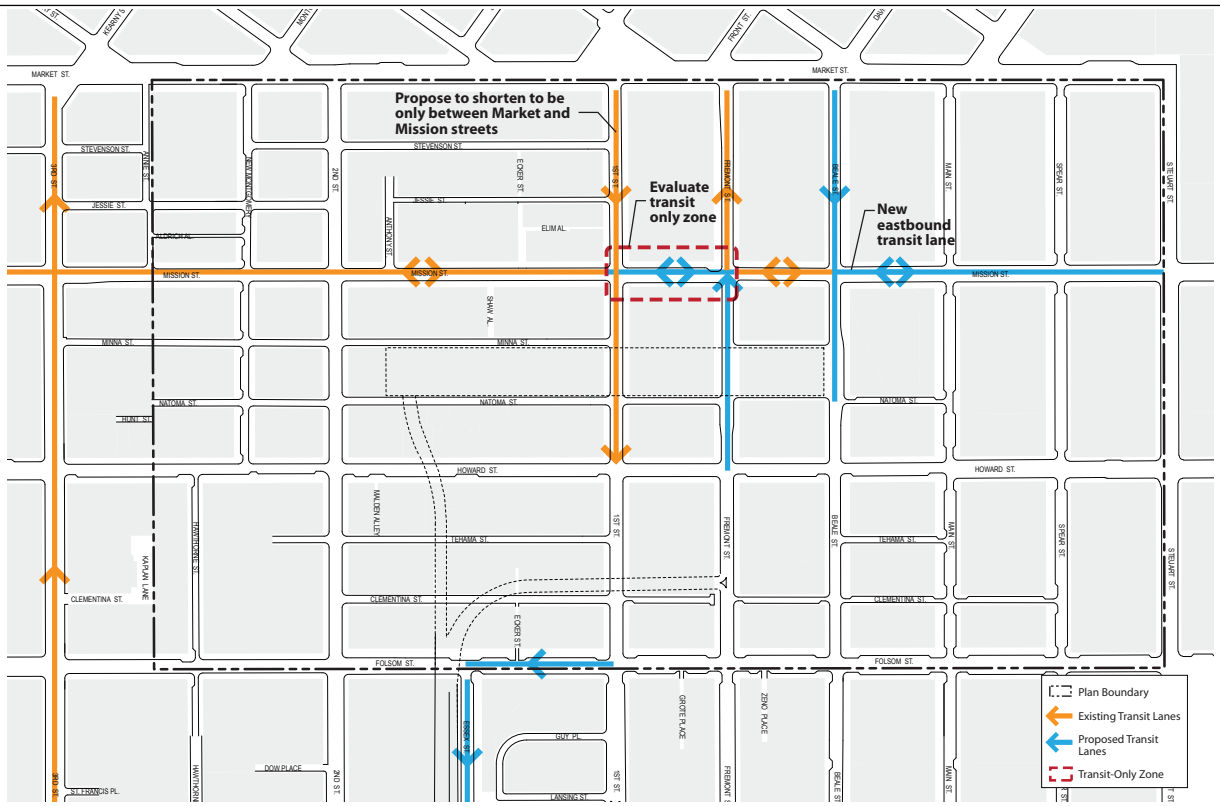
Such modifications would include the widening of sidewalks, the removal or reconfiguration of on-street parking and/or loading; the closure of one or more streets and alleys to general automobile traffic; installation of traffic-calming mechanisms; removal, addition or reconfiguration of auto travel lanes; conversion of one or more one-way streets into two-way operations; and dedication of transit-only lanes and delineation of pedestrian areas. Some of the key street and circulation changes are listed below and are illustrated in **Figure 5**. Existing and proposed transit lanes and existing and proposed bicycle lanes are depicted in **Figure 6**. A graphical representation of the complete public realm plan, including

30 The changes recommended in the November 2009 Draft Plan (one car-sharing space for new buildings with 25 to 49 parking spaces and, for 50 or more parking spaces, one car-sharing space plus one additional space for every 50 parking spaces in excess of 50) were subsequently adopted by the Board of Supervisors, in November 2010, and are now included in Section 166.

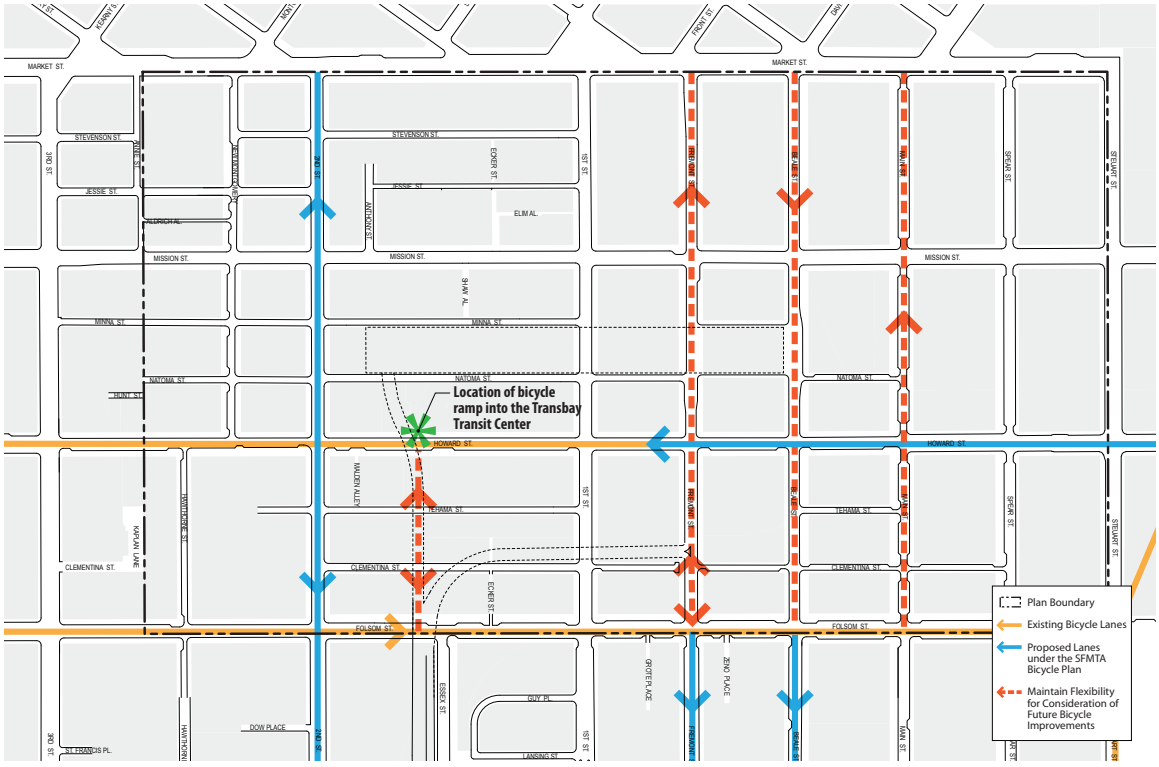


SOURCE: San Francisco Planning Department

Figure 5
Street and Circulation Changes



Transit Lanes



Bicycle Lanes

0 300
Feet

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: San Francisco Planning Department, 2009

Figure 6
Transit and Bicycle Lanes

proposed travel lane configurations, changes to on-street parking and loading, widened sidewalks, mid-block crossings, and other changes proposed under the draft Plan, is presented in **Appendix C**.[31]

- **Mission Street –** Remove parking and loading lanes on both sides of the street, add commercial loading turn-outs (one per block face), and widen sidewalks. Between Beale and Main Streets, convert dedicated turn lanes into turn pockets and convert one auto lane in each direction into dedicated transit lanes. Existing transit lanes between First and Third Streets would be relocated from the curb lane to the center lane in each direction, with in-street boarding islands provided in each direction at Second Street.

- **Howard Street** – Convert to two-way operations between Fremont and New Montgomery Streets; between Main and Fremont Streets and between First and Second Streets, remove one automobile travel lane and one parking lane; implement modifications outlined in the Transbay Streetscape and Open Space Plan; widen sidewalks and curb lanes. Between First and Fremont Streets, in addition to the modifications described above, relocate the automobile parking/casual carpool lane from the south side of street to the north side of street. Between Second and Third Streets, remove one auto travel lane and one parking lane and widen sidewalks. Retain existing bicycle lane west of Fremont Street (extension of that bike lane to the Embarcadero is part of approved Bicycle Plan).

- **Folsom Street** – West of Second Street, continue one-way operations, but remove one automobile travel lane and one parking lane and widen sidewalks; preserve exclusive right-turn lane onto Second Street. East of Second Street, convert to two-way operations and implement modifications outlined in the Transbay Redevelopment Plan Streetscape and Open Space Plan; remove one, and in some cases, two automobile travel lanes and/or one parking lane; widen sidewalks, preserve exclusive right-turn lanes onto First Street and Essex Streets. Retain existing bicycle lane.

- **Hawthorne Street** – Between Howard and Folsom Streets, eliminate one auto travel lane and one parking/loading lane on the east side of the street and add commercial loading turn-outs; widen sidewalks.

- **New Montgomery Street –** Between Market and Howard Streets, eliminate parking and loading on the east side of street and add commercial loading turn-outs; widen sidewalks; add a signalized mid-block crossing at Natoma Street.

- **Second Street** – In accordance with the approved Bicycle Plan, between Market and Harrison Streets, one vehicular travel lane and one bicycle lane in each direction (eliminate one auto travel lane in each direction), with curb parking and loading in each direction); left turns generally prohibited; right turns from parking lane.

[31] Detailed design and engineering for the various components of the Public Realm Plan would be undertaken if the draft Plan is adopted and the City has funding to implement those components. The Municipal Transportation Agency (MTA) has authority over parking regulations, intersection geometry, traffic signals, and travel lanes, and MTA would review and approve any future designs. The Department of Public Works (DPW) has authority over sidewalks. As part the regular DPW review process, the Transportation Advisory Staff Committee, composed of representatives from MTA, the Police Department, and the Fire Department, among others, would review detailed proposals, including bulb-outs. Any changes to sidewalk width would generally require that the Board of Supervisors amend the official sidewalk width ordinance, which would require a public hearing.

- **First Street** – Between Market and Howard Streets, widen sidewalks, prohibit daytime parking and loading on the east side of street, and allow commercial loading turn-outs on the west side of street. Between Howard and Folsom Streets, widen sidewalks, allow non-peak-hour parking in left (east) curb lane.

- **Fremont Street** – Between Market and Howard Streets, remove one automobile lane, and widen sidewalks; extend existing transit-only lane south to Howard Street. In addition, between Folsom Street and the Bay Bridge off-ramp, prohibit parking and loading on the east side of the street and accommodate commercial loading with turn-outs. A new intersection would be created where the Transit Center, now under construction, will have a ground-level bus plaza (with four bus bays for Muni and one for Golden Gate Transit; buses will enter the Bus Plaza from Beale Street and exit onto Fremont Street), on the east side of Fremont Street between Minna and Natoma Streets. A traffic signal would be installed at Fremont and Natoma Streets to allow buses to enter Fremont Street traffic and pedestrians to cross Fremont Street at new crosswalks.

- **Beale Street –** Between Market Street and the new Transit Center, replace one automobile travel lane with a transit-only lane, widen sidewalks, and enhance landscaping. South of Howard Street, remove peak-hour parking and loading on both sides of the street and accommodate commercial loading with turn-outs; allow non-peak hour parking on east side only. This street would remain one-way in the southbound direction.

- **Main and Spear Streets –** Between Market and Folsom Streets, remove one automobile lane, widen sidewalks, and enhance landscaping. Convert Spear Street to two-way operations, with one lane in each direction.

- **Shaw Alley –** Close permanently to vehicles and design it as a pedestrian-only space for through-connection to the Transit Center as well as open space.

- **Minna Street –** Convert from one-way westbound to one-way eastbound between First and Second Streets to provide loading access; remove on-street parking.

- **Natoma Street –** As stated previously, Natoma Street from Second Street east to midway between First and Second Streets would be converted to pedestrian access and emergency vehicles only, with a potential exception for delivery vehicles during certain non-peak periods. To the east, Natoma Street would be converted to two-way traffic from First Street to approximately 250 feet west of First Street.

The public realm plan would also add signalized mid-block pedestrian crossings at a number of intersections: New Montgomery/Natoma Streets; Second/Natoma Streets; Howard Street/Oscar Alley; Mission Street / Shaw Alley; First/Minna Streets; First/Natoma Streets; First/Clementina Streets; Fremont Street/Transit Center Bus Plaza; Fremont/Natoma Streets; Beale/Natoma Streets; Beale/Clementina Streets; Main/Natoma Streets; Main/Tehama Streets; and, Main/Clementina Streets. Also proposed, as previously approved under the Transbay Redevelopment Plan, are extensions of Clementina Street (First Street to Spear Street) and Natoma and Tehama Streets (Beale Street to Main Street).

A new multi-use pedestrian and bicycle path is proposed between Howard and Folsom Streets, near Essex Street and beneath the ramp that links the Transit Center to the Bay Bridge. The Plan does not propose new

bicycle lanes on existing streets, but does propose that lane configurations on Fremont, Beale, and Main Street "maintain flexibility for consideration of future bicycle improvements" (see Figure 6).

Historic Preservation

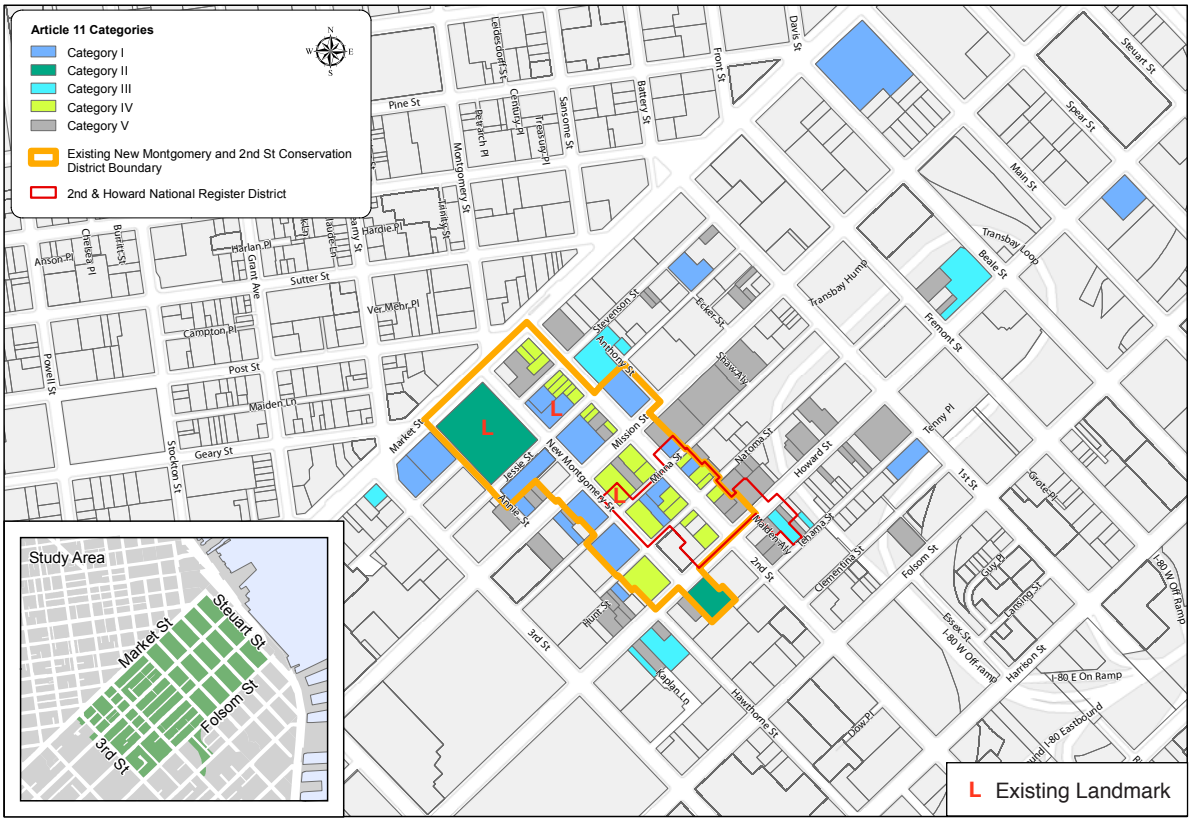
The Plan area contains two listed historic districts, the New Montgomery-Second Street Conservation District and the Second and Howard National Register District. As discussed further in Section IV.D, Cultural Resources, the draft Plan proposes expansion and renaming of the conservation district.

The New Montgomery-Second Street Conservation District, a downtown conservation district listed in Article 11 of the *Planning Code*,[32] extends southward from Market Street, generally encompassing both sides of Second and New Montgomery Streets, as far as Howard Street. Most of the existing office-over-retail buildings within this District were erected in the decade after the 1906 earthquake and fire, although the most visible office building, the Pacific Telephone and Telegraph Building at 140 New Montgomery, was completed in 1925. The New Montgomery–Second Street Conservation District, by virtue of being listed in Article 11 of the *Planning Code*, is a historical resource under CEQA. Buildings identified as contributors to a listed or eligible historic district are also considered historical resources for purposes of CEQA review.

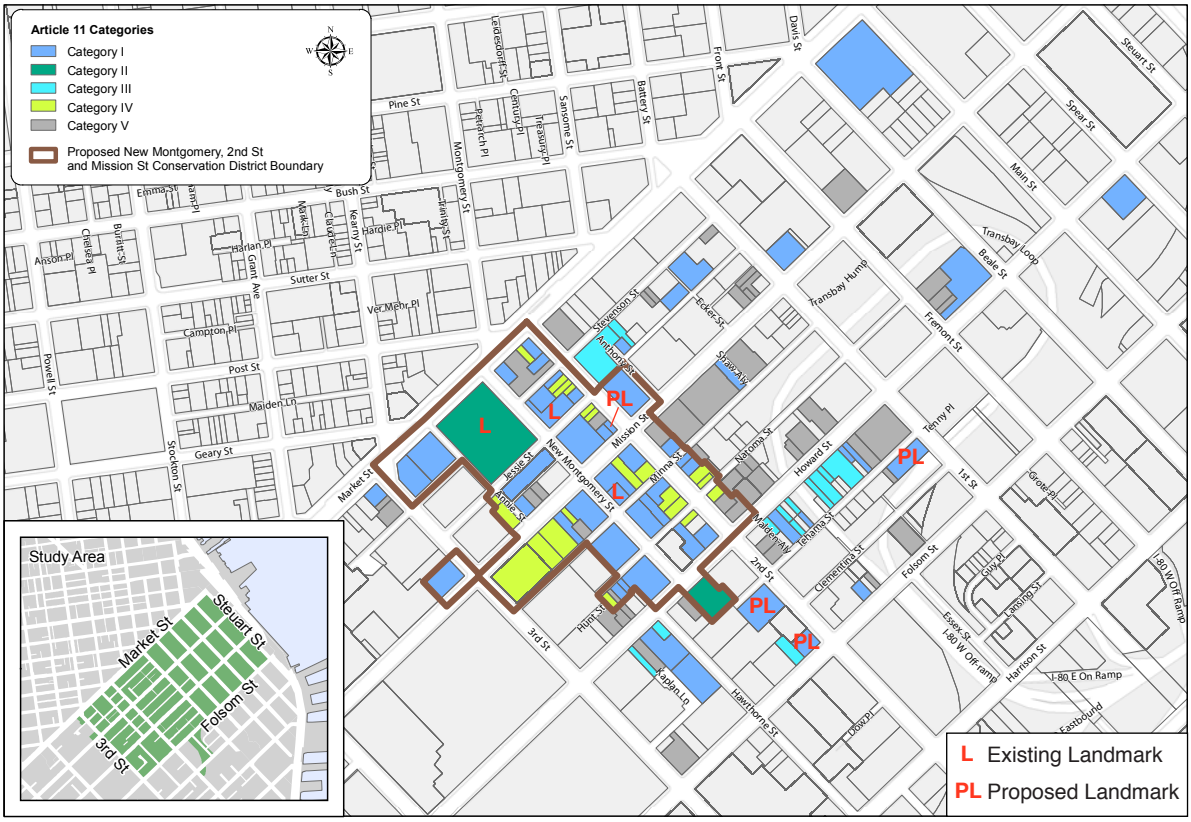
The Second and Howard National Register District, a historic district listed in the National Register of Historic Places in 1999, contains 19 contributing buildings. This District is generally contained within boundaries of the much larger New Montgomery-Second Street District, except that the National Register district extends eastward the distance of a few lots' width along both sides of Howard Street to the east of the local district (see **Figure 7**). The Second and Howard Streets District and the New Montgomery-Second Street District share some degree of architectural character and have a common history in that almost all their buildings were constructed as part of the rapid rebuilding of downtown San Francisco in the aftermath of the 1906 earthquake and fire. However, the buildings in the Second and Howard Streets District are generally smaller than many of those in the local district, inasmuch as the buildings in the National Register district were typically constructed as loft-style buildings, suitable for a variety of uses, including storage, wholesale display or light manufacturing, whereas New Montgomery Street housed more traditional, larger office buildings.

The Planning Department has completed historic survey work within and surrounding the Plan area, and through this process identified additional historic resources for potential preservation and rehabilitation. As a result of this, the Department is proposing in the draft Plan to expand the existing New Montgomery–Second Street Conservation District, to recommend additional individual resources for Landmark designation under *Planning Code* Article 10, and to revise the Article 11 historic ratings of

[32] Article 11 of the *Planning Code* addresses preservation of buildings and districts of architectural, historical, and aesthetic importance in the C-3 (Downtown) zoning district. Adopted in 1985 as part of the implementation of the Downtown Plan, Article 11 divides all buildings in the C 3 Zoning Districts (generally, downtown) into five categories according to the Building Rating Methodology as set forth and explained in the "Preservation of the Past" section of the Downtown Plan (*Planning Code* Sec. 1102).



Existing Article 11 Designations and Historic Districts



Proposed Article 11 Designations and Historic Districts

SOURCE: San Francisco Planning Department, 2009

Figure 7
Historical Resources

several individual resources. The proposed expansion of the conservation district would encompass areas along both sides of Mission Street between New Montgomery and Third Streets (except the northeast corner of Third and Mission Streets), and would cross Third Street to include the Aronson Building on the northwest corner of Third and Mission Streets. The expansion would also extend westward on Natoma Street to Hunt Street. The Department proposes to rename the expanded district the "New Montgomery–Mission–Second Street Conservation District."

The *Planning Code* Article 11 ratings for individual building Categories I – V would be revised and updated, and newly-rated buildings would become eligible to sell transferrable development rights to development sites in the C-3 zoning districts.

In addition, the draft Plan proposes to seek City Landmark designation for four individual structures, three of which are outside existing or proposed historic districts, under Article 10[33] of the Planning Code. These include the Planters Hotel (606 Folsom Street), the Philips & Van Orden Building (234 First Street), the Marine Firemen's Union building (240 Second Street), and the Burdette Building (90 Second Street).

The draft plan also includes the following policies to address architectural cultural resources:

- Recognize and protect historic and cultural resources that are less than fifty years old that may display exceptional significance to the recent past (November 2009 Draft Plan, Policy 5.4).

- Develop incentives that promote the retention and rehabilitation of significant resources within the Transit Center District Plan area (November 2009 Draft Plan, Policy 5.5).

Concerning transferrable development rights (TDR), the draft Plan notes that since the Downtown Plan was adopted in 1985, some 2.75 million square feet of development rights has been "retired" from sites containing historic buildings and has been transferred to other sites, primarily for the construction of new high-rise structures. The program assists in preservation of historic structures by allowing owners to sell the development rights above a historic structure, up to the base FAR that would otherwise be permitted, thus relieving the owner of the "penalty" for ownership and operation of a smaller-than-permitted structure.

Another approximately 2.25 million square feet of TDR has been certified as meeting the program requirements but not used; the draft Plan states that much of this potential development floor area has likely been acquired for as-yet unbuilt projects but not formally accounted for. The draft Plan states that approximately 3 million additional square feet of TDR could theoretically be available, but indicates that much of this space would come from very small parcels and would be cumbersome to assemble for the benefit of one or more larger new towers. Accordingly, the draft Plan proposes policies and *Planning Code* revisions that would allow increased flexibility in the application of preservation incentives:

[33] Adopted in 1967 as Article 10 of the *Planning Code*, San Francisco City Landmarks are protected from inappropriate alterations and demolitions by subjecting projects to review by the San Francisco Landmarks Preservation Advisory Board. San Francisco City Landmarks are buildings, properties, structures, sites, districts and objects of "special character or special historical, architectural or aesthetic interest or value and are an important part of the City's historical and architectural heritage."

- Maintain the TDR program as a critical component of the historic preservation program in the downtown and the Plan area, but modify the program in the Plan area based on updated information about the TDR program and on other objectives of this Plan (November 2009 Draft Plan, Policy 5.6).

- Balance the TDR requirement with other public benefits programs in the District by reducing the square footage requirement for the purchase of TDR by each individual development project (November 2009 Draft Plan, Policy 5.7).

Planning Code changes proposed in connection with the above policies are as follows:

- *Based on the District Plan proposal to rezone all of the Plan area to C-3-O (SD) with a base FAR of 6:1, modify the TDR rules in the Planning Code for the Plan area to require that development purchase TDR for all gross square footage between 6:1 and 9:1 FAR (November 2009 Draft Plan, p. 100).*

- *Modify the TDR rules for the C-3-O (SD) to enable eligible historic properties to sell TDR equivalent between the existing square footage of the lot and 9:1 FAR, rather than just to base FAR 6:1 (November 2009 Draft Plan, p. 100).*

- *Provide flexibility for development in satisfaction of the TDR requirement by providing an in-lieu mechanism that directly benefits the preservation, rehabilitation, maintenance and public education of historic resources in the downtown. (November 2009 Draft Plan, Policy 5.8)*

Revision to the *Planning Code* proposed in connection with the above policies is as follows:

- *Establish a Downtown Historic Preservation and Rehabilitation Fund and a TDR In-Lieu Fee, whose proceeds would be deposited in the Fund. Give project sponsors the option to pay into this Fund in lieu of purchasing TDR. The price of the fee shall be set at such a rate that it is more than the historical average market price for TDR, such that purchasing TDR continues to be the preferred option (November 2009 Draft Plan, p. 100).*

District Sustainability

The draft Plan would implement a number of district-wide policies and controls aimed at supporting and, where possible, exceeding the City's existing environmental, sustainability and climate change objectives. Such policies would promote a higher level of coordination and planning than is typically conducted on a project-by-project basis. The incorporation of sustainability-related objectives and policies into the draft Plan is intended to achieve lower impact and higher performance development within the Plan area than would otherwise be achievable. The draft Plan encourages sustainability through many of the policies set forth in each of the five chapters discussed above. (The draft Plan contains a Sustainable Benefits Matrix that cross-references Plan policies that would have benefits in the area of regional smart growth, reduced water usage, improvements in water quality and air quality, greenhouse gas emissions reduction, habitat enhancement, and reduction in the "urban heat island effect"; this matrix is included, along with a complete listing of Plan objectives and policies, in **Appendix B**).

In addition, a separate chapter on District Sustainability contains a number of additional policies, as discussed below.

In the area of **energy efficiency**, the Plan would seek to create a shared district-wide energy and heating system by establishing a centralized Combined Heat and Power (CHP) system within the Plan boundaries that would capture waste heat from buildings and energy generators. A CHP energy and heating system, also known as a cogeneration system, increases efficiency compared to conventional heat generation (e.g., a boiler) or power generation (e.g., a generator) by generating both electricity and usable heat from the same equipment. Typically, this involves the collection of what would otherwise be exhaust heat that is given off during the electricity generation process. This exhaust can be used to heat the air in an office building, provide hot water or steam, power a dehumidifier, or even drive an absorption chiller to provide refrigeration and cooling.[34] A CHP system in the Plan area could entail development of one or more power generating plants, would be able to take advantage of the mixed-use development, which includes a diversity of building uses and types that have different demand profiles (i.e., office demand is highest during the day, while residential demand is highest in the evening). To help implement this vision, the following policies are included in the draft Plan:

- Create efficient, shared district energy, heating and cooling systems in the district (November 2009 Draft Plan, Policy 6.1).
- Pursue a Combined Heat and Power (CHP) system or series of systems for the Transit Center District and the Transbay Redevelopment Area (Zone 1) (November 2009 Draft Plan, Policy 6.2).
- Require new buildings to be designed to connect to such a system in the future (November 2009 Draft Plan, Policy 6.3).
- Require all buildings undergoing major refurbishment (defined as requiring new HVAC plant) to be designed to connect to such a system in the future (November 2009 Draft Plan, Policy 6.4).
- Identify and protect either suitable public sites or major development sites with the Plan area for locating generation facilities (November 2009 Draft Plan, Policy 6.5).
- Require all major development to demonstrate that proposed heating and cooling systems have been designed in accordance with the following order of diminishing preference:
    - Connection to sources of waste heat or underutilized boiler or CHP plant within the Transit Center District or adjacent areas
    - Connection to existing district heating, cooling, and/ or power plant or distribution networks with excess capacity
    - Site-wide CHP powered by renewable energy
    - Site-wide CHP powered by natural gas
    - Building level communal heating and cooling powered by renewable energy

[34] San Francisco Department of the Environment, "An Assessment of Cogeneration for the City of San Francisco." Report prepared by Philip M. Perea. Available on the internet at: http://www.sfenvironment.org/downloads/library/ciscocogenerationreportpdf.pdf. Reviewed June 19, 2011.

- Building level communal heating and cooling powered by natural gas (November 2009 Draft Plan, Policy 6.6)

Several office buildings in the Plan area, and others elsewhere in downtown San Francisco, currently operate cogeneration systems on-site. Generally these consist of natural-gas-fired generator(s) that produce electricity and from which the waste heat is captured and used to provide building heat or hot water or to operate an air conditioning chiller. Existing installations also operate at hospitals and universities, as well as a few hotels and residential buildings. (The largest such system, although technically outside City limits, is in operation at San Francisco International Airport.)[35]

Because no physical improvements have been proposed to implement a district-wide heat and power system in the Plan area, this EIR analyzes this aspect of the draft Plan at a very general, programmatic level. Any district-wide energy or heating and cooling system(s) proposed in the future, including the requirement that buildings be connected to such a system, would be subject to subsequent environmental review. Individual building cogeneration plants are typically subject to review by the Bay Area Air Quality Management District, in much the same manner as are individual boilers and generators.

In the area of **green building design**, the draft Plan would encourage low environmental impact and high performance (with regard to energy, water, materials, construction) for all proposed buildings, in addition to the given inherent factors of location, density and existing city parking controls that all such potential project would automatically meet. The following policy is included in the proposed Plan to address green building design:

- Require all major buildings in the Plan area to achieve the minimum LEED [Leadership in Energy and Environmental Design] levels established in the S.F. Green Building Ordinance, not including credits for the given inherent factors of location, density, and existing City parking controls, in order to achieve high-performance buildings (November 2009 Draft Plan, Policy 6.13).

In the area of **water conservation**, one of the goals of the proposed Plan is to capture, treat, and reuse, where feasible, stormwater runoff, while at the same time reducing the use of potable water. To this end, the draft Plan includes the following policies:

- Create a reliable supply of non-potable water that can be used throughout the Plan area to reduce potable water demand (November 2009 Draft Plan, Policy 6.14).

- Create infrastructure in the Transit Center District and immediately adjacent areas for non-potable water use, including treatment and distribution (November 2009 Draft Plan, Policy 6.16).

The draft Plan calls for investigation of various potential sources of non-potable water, and the identification of potential site(s) in the Plan area for a treatment facility to supply non-potable water (November 2009 Draft Plan, Policies 6.15 and 6.18), along with a priority list of means by which buildings can reduce potable water use, including "low-impact design." However, no specific system is identified for consideration at this time (except at the proposed Transit Tower, as discussed below).

35 *Ibid.*

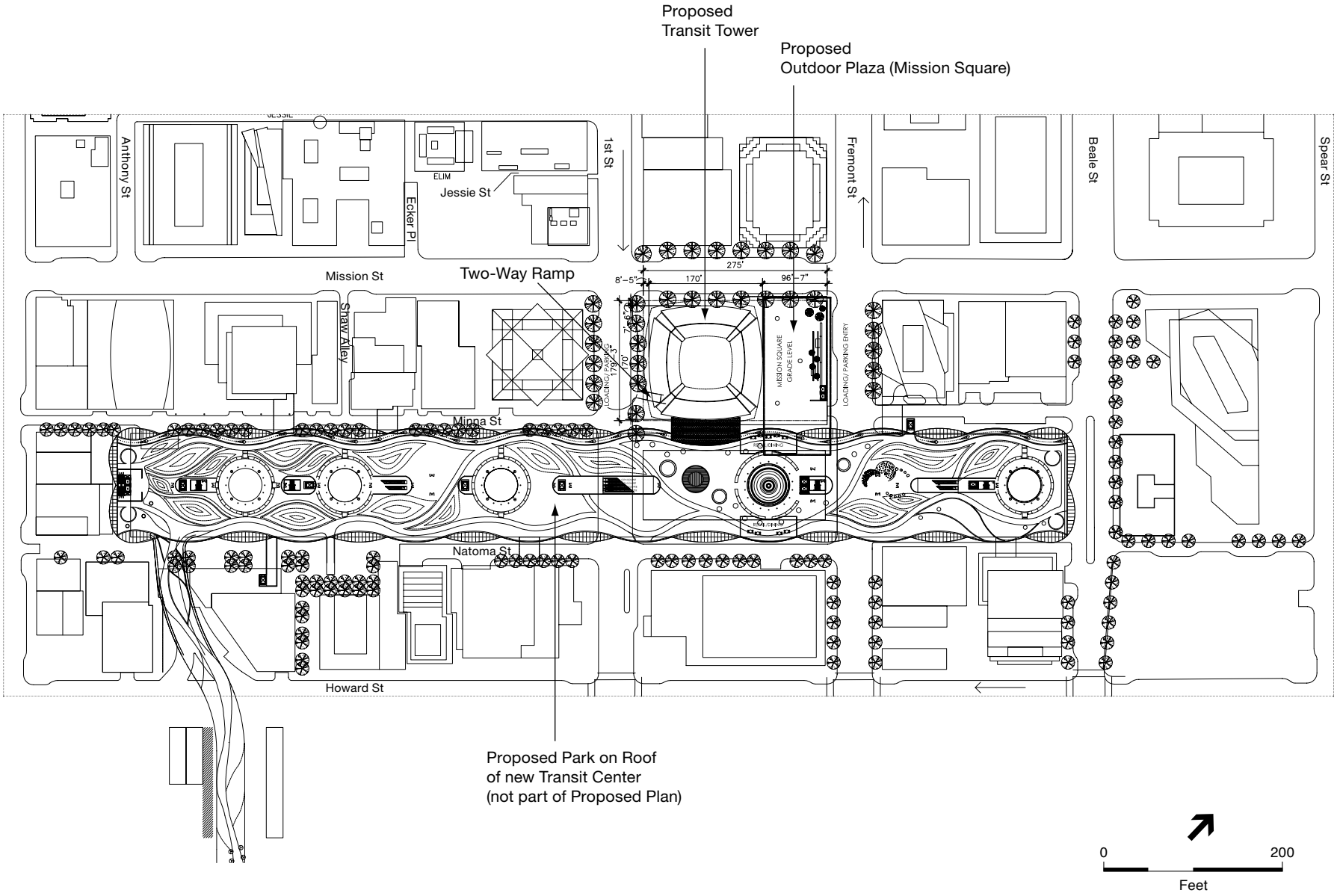
Transit Tower

This EIR analyzes at a project-specific level (in contrast to the program-level analysis otherwise contained in the EIR) the environmental impacts associated with developing the Transit Tower (Case No. 2008.0789E), a 61-story, approximately 1,070-foot-tall office building proposed for approximately the northern third of the block bounded by First, Mission, Fremont, and Howard Streets. The Transit Tower would occupy approximately the northern half of Lot 1 on Block 3720, and would be located adjacent to the new Transit Center, on the south side of Mission Street between Fremont and First Streets (see **Figure 8**).[36] The Transit Tower project site is approximately 50,000 square feet in size and was most recently used as the passenger waiting and loading and Muni drop-off/layover area for the old Transbay Terminal, which was demolished beginning in August 2010.

Under the current design for the proposed Transit Tower project, the building would encompass approximately 1.3 million square feet of office space and about 16,500 square feet of retail space. The tower would be constructed on a roughly square footprint of about 26,000 square feet, with curving frontages of just over 170 feet along each side. The building would have about retail space and a lobby on the ground floor, additional retail space on a portion of the fourth floor (adjacent and connected by a footbridge to the planned City Park atop the new Transit Center) and on portions of one or more other levels between the ground floor and fourth story, and 58 floors of office space,[37] along with two mechanical floors (3 and 61). For consistency with the depth of excavation of the adjacent new Transit Center, the Transit Tower would have three basement levels beneath the entire footprint of the building as well as the Mission Square open space along Fremont Street, and a partial fourth basement level; excavation would be to a depth of approximately 60 feet below grade, and would involve removal of approximately 110,000 cubic yards of soil, assuming excavation beneath the entire 50,000-square-foot site. The Transit Tower would have a concrete slab foundation supported by driven piles anticipated to be founded on bedrock more than 200 feet below grade. The tower's structural system is anticipated to employ the concept of "megacolumns," which are very large structural columns several feet in width. The concentrated load supported by these megacolumns would be sustained by large diameter piles approximately 10 feet in diameter, with additional piles driven to support the building's foundation slab.

Up to approximately 302 independently accessible parking spaces would be provided in the basement, and a total parking supply of about 480 vehicles could be provided with valet operations, potentially including vehicle stackers. Parking, loading, and other subsurface areas would occupy approximately 122,000 square feet. Based on the preliminary design of the Transit Tower, the area devoted to parking would exceed 7 percent of gross floor area, which is the maximum amount of floor area that can be devoted to parking in the C-3-O use districts, and the area in excess of 7 percent of gross floor area would require Conditional Use authorization as a major parking garage, in accordance with Sections 158 and

[36] The proposed Transit Tower is analyzed based on architectural plans dated May 2010 and December 2010.
[37] This would include partial office levels on floors two and four.



SOURCE: Pelli Clarke Pelli Architects, 2008

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 8
Transit Tower and City Park Site Plan

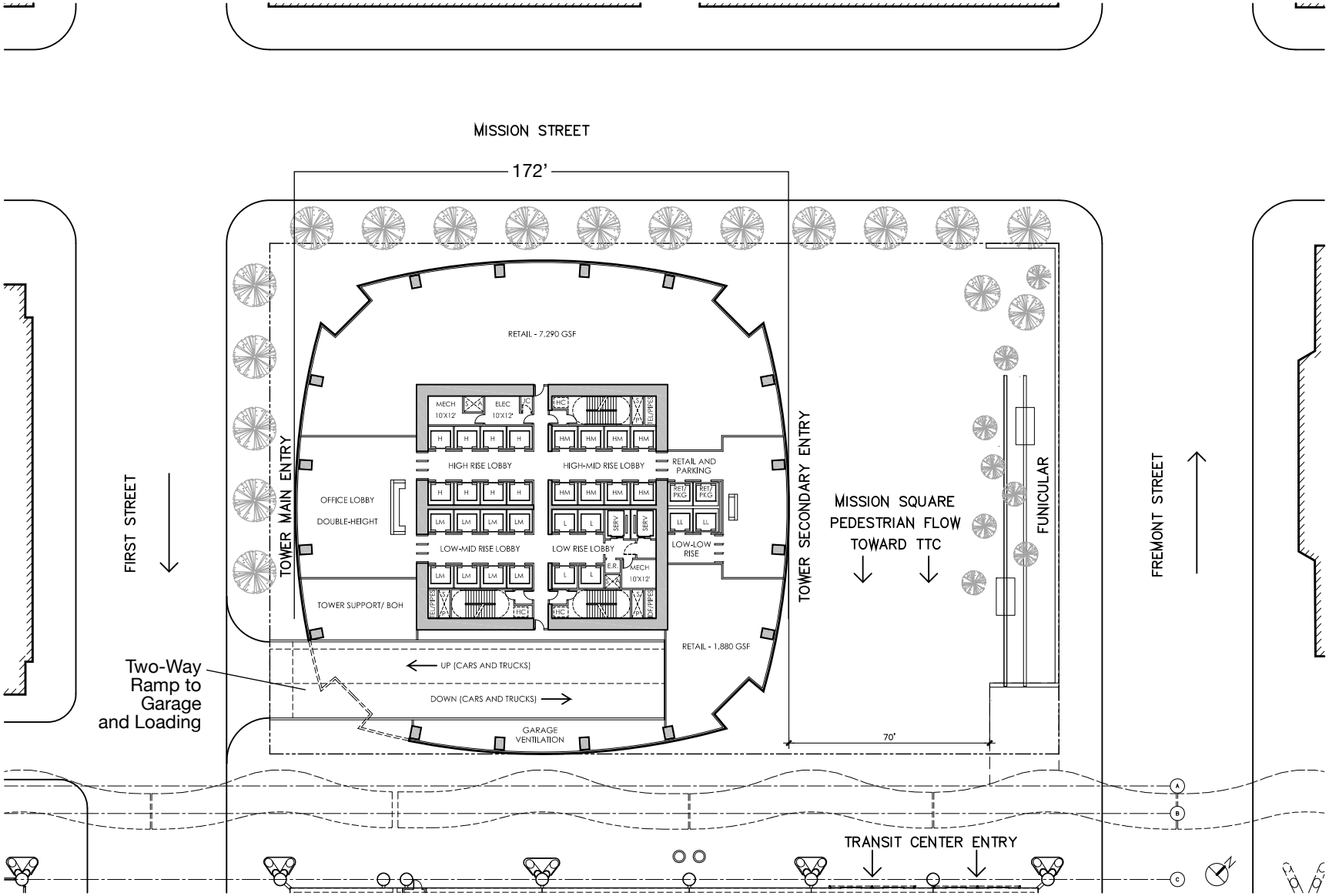
223(p) of the *Planning Code*.[38] Bicycle parking (approximately 225 spaces, based on proposed *Planning Code* revisions under the draft Plan) would also be provided in the garage. Six off-street freight loading spaces would be provided on the first basement level. Access to the parking garage and loading dock would be from a single, two-way ramp on First Street, located near the southwest corner of the building. Pedestrian entrances to the tower lobby would be from both the west (First Street) and east sides of the building; the latter entrance would open onto Mission Square, a public open space that would be developed east of the tower, at the southwest corner of Mission and Fremont Streets. In addition, a pedestrian bridge on the fourth level would provide a walking connection from the Transit Tower to the City Park on top of the Transit Center. City Park would be developed as part of the Transit Center, which is now under construction. The north side of the tower's ground floor would be occupied by retail spaces accessible from Mission Street.

The Transit Tower is proposed to have concave curved exterior walls on all four sides, and the walls would also taper as the building rises, beginning at a height of about 380 feet. From there, the exterior walls would slope gently inward on all four sides, giving the building a curving, obelisk-like form: the 172-foot horizontal dimension along each side of the ground floor would be reduced to about 138 feet at the building roof (i.e., at a height of about 920 feet). Atop the building would be a lattice-like steel sculptural element 150 feet tall, which would continue the building's tapering shape up to a total height of about 1,070 feet. The horizontal dimension at the top of this element would be approximately 89 feet. A two-level mechanical penthouse, set back from the building walls on all four sides, would be enclosed within the sculptural element. **Figures 8 through 13** illustrate the proposed site plan, representative floor plans, and a typical elevation of the proposed tower. **Table 2**, p. 46, summarizes and describes the Transit Tower development program as currently proposed.

In terms of design, the proposed tower would be constructed in a contemporary style, consisting of a slender, tapering silhouette and employing a curved glass curtain wall (a non-structural wall of mostly glass) along all four facades. The tower would consist of a single vertical element rather than a three-part (base, shaft, and capital) arrangement typical in many of the City's buildings. Horizontal metal fins on each floor would act as sunshades and would give the surface texture.

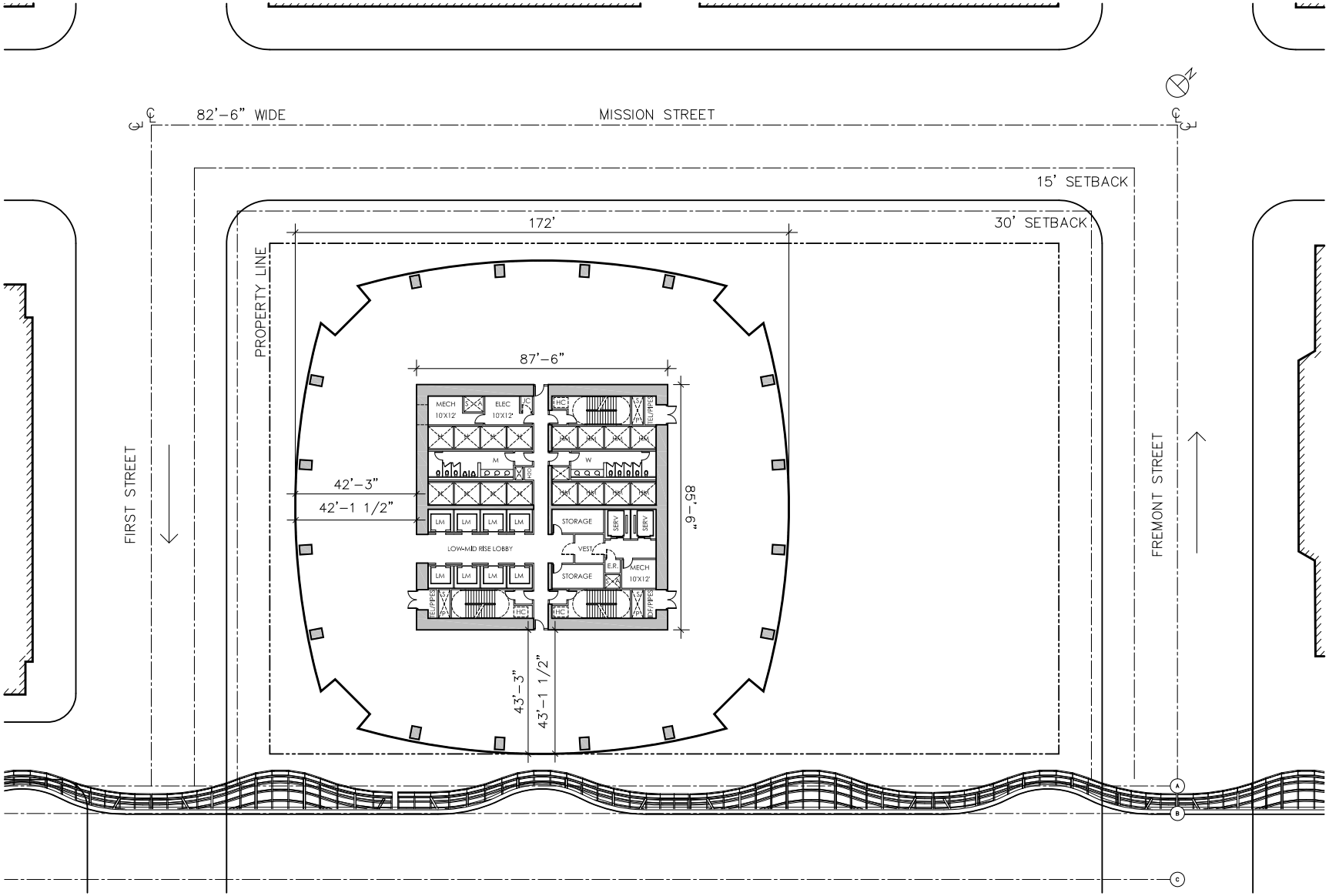
The current design of the Transit Tower would be consistent with the proposed bulk requirements of the draft Plan, which would amend *Planning Code* Section 132.1 to require a 35-foot setback from the center line of the adjacent street—Mission Street, in this case—and a setback increasing to 70 feet from the center line at a height of 1,000 feet. The draft Plan's streetscape and public realm improvements plan would also require that the base of the Transit Tower be set back at least 10 feet from the property line on Mission Street, to permit widening of the street right-of-way to accommodate transit activity on Mission Street. Depending on the location of the interior (southerly) property line, the tower might require an exception, pursuant to Section 309, from the interior property line setback requirements; if built to the property line, the current design would be 3 inches shy of the required 29-foot setback at 1,000 feet.

[38] Because the floor area proposed for parking would exceed 7 percent of gross floor area, it would also exceed the draft Plan's proposed limit of 3.5 percent of gross floor area devoted to parking.



SOURCE: Pelli Clarke Pelli Architects

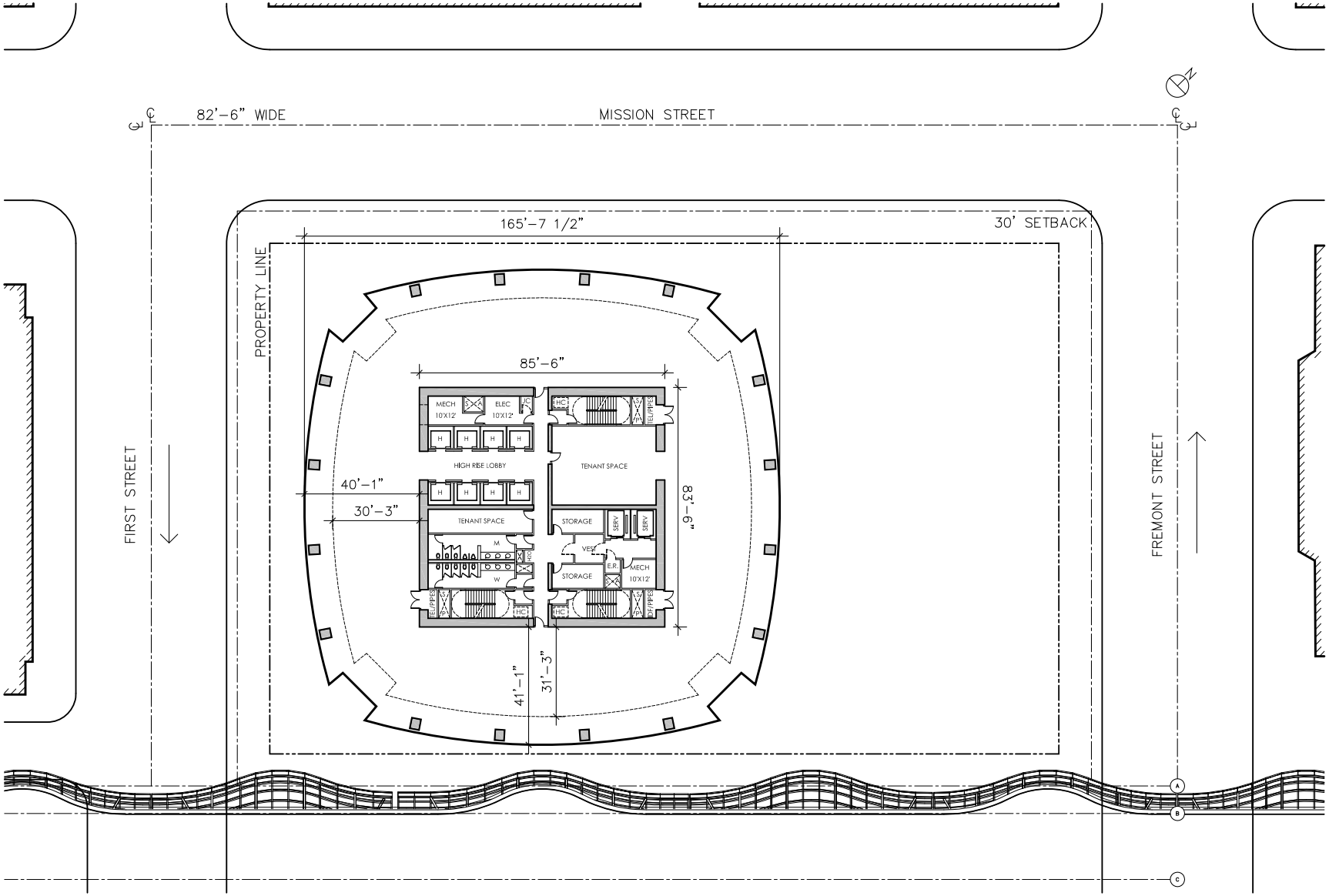
Figure 9
Transit Tower - Ground Level



SOURCE: Pelli Clarke Pelli Architects

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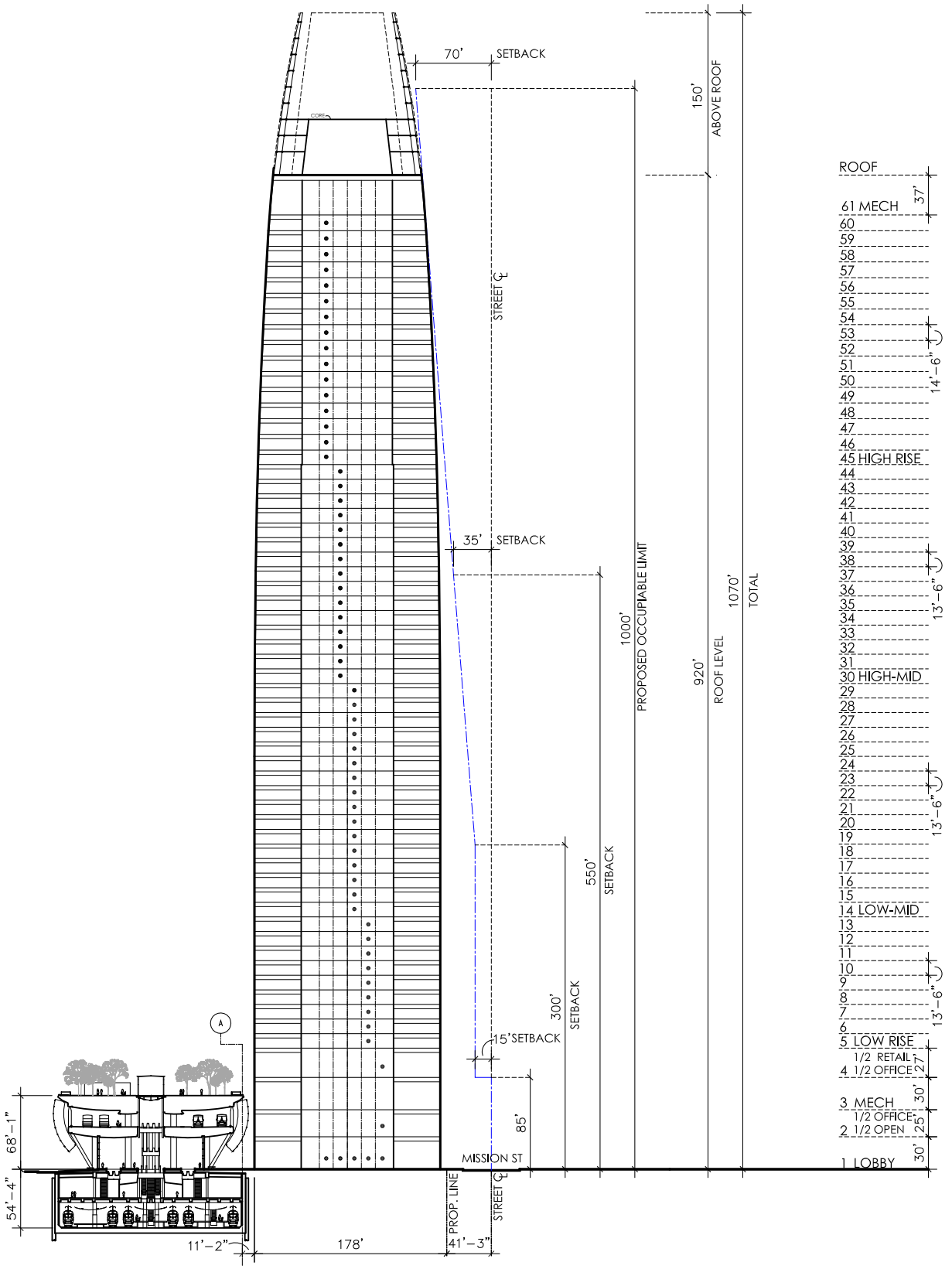
Figure 10
Transit Tower - Level 2



SOURCE: Pelli Clarke Pelli Architects

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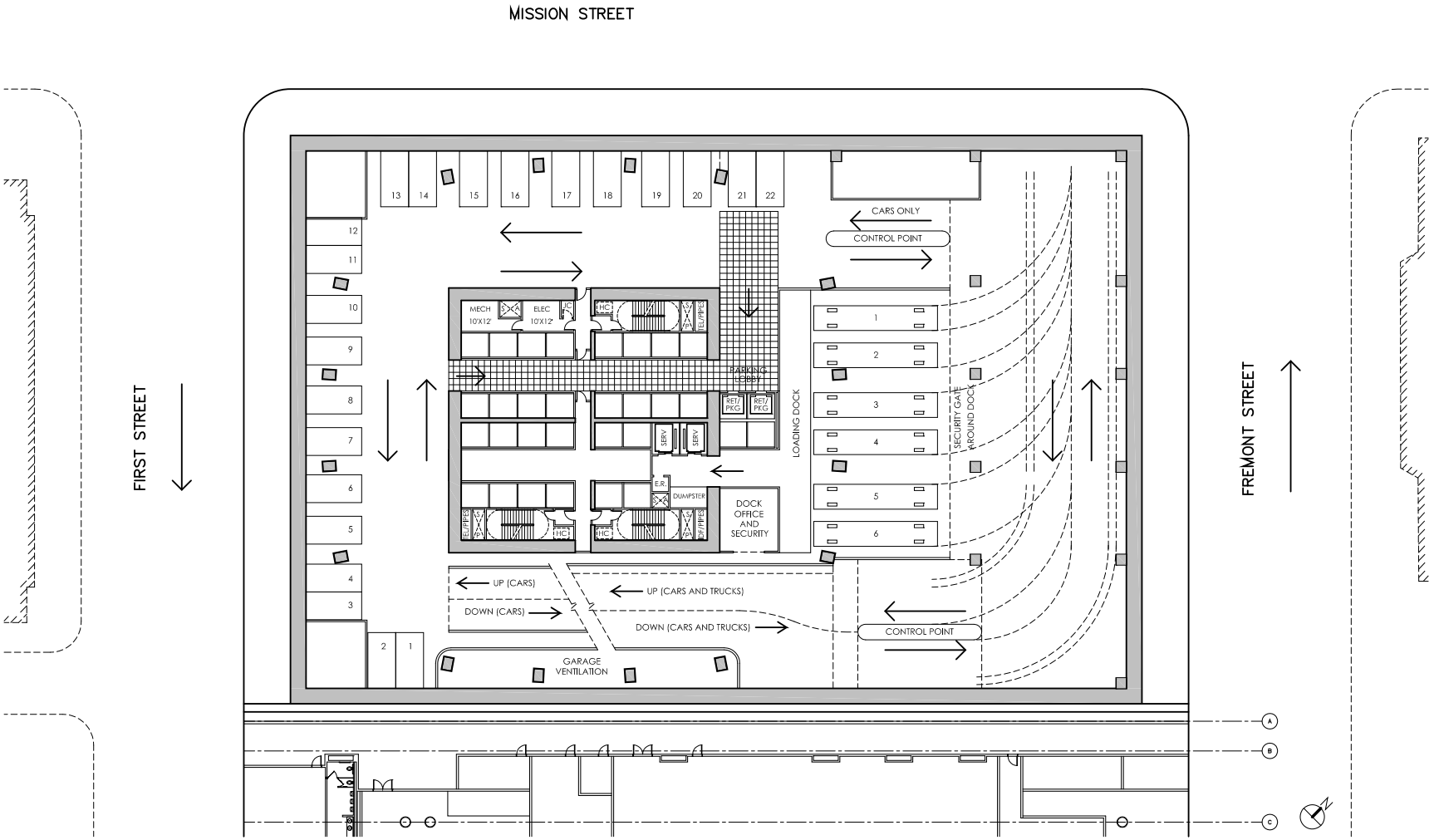
Figure 11
Transit Tower - Typical Floor Plan



Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: Pelli Clarke Pelli Architects

Figure 12
Transit Tower - Elevation



SOURCE: Pelli Clarke Pelli Architects

Figure 13
Transit Tower - First Garage Level

TABLE 2
TRANSIT TOWER PROJECT CHARACTERISTICS

	Square Feet[1]
Office	1,288,000
Retail	16,500
Subtotal	**1,304,500**
Parking,/Loading/Vehicle Circulation	122,000
Mechanical	27,000
Lobby	10,000
Total	**1,416,500**
Parking Spaces (Valet Capacity)	302 (420)
Loading/Service Vehicle Spaces	4
Bicycle Parking (Stalls)	283[2]
Height of Building	1,070 feet total (920 feet to roof of maximum occupied floor plus additional 150' for architectural elements, mechanical equipment)
Number of Stories	61

1 Office space is counted as gross floor area (GFA). Excluded from GFA are ground-floor lobby space and ground-floor retail space not exceeding 5,000 square feet per use, along with certain mechanical space, freight loading, and parking, which is limited to 7 percent of total building GFA.
2 Per proposed changes to the *Planning Code*.

SOURCE: TJPA; Pelli Clarke Pelli Architects

The Transit Tower may incorporate a publicly accessible observation platform at an elevation of no lower than 650 feet (approximately the 40th floor or higher), as called for in the draft Plan.[39] However, no such observation area is included in the proposed Transit Tower design at this time.

The TJPA is developing plans to substantially decrease the use of potable water for non-potable use at both the Transit Center and the proposed Transit Tower. Methods could include collection and reuse, following treatment, of greywater from non-retail restroom sinks and stormwater runoff and reuse of greywater for toilet flushing. Additionally, the adjacent City Park—to be built atop the Transit Center—and Mission Square open spaces would provide opportunities for stormwater retention.

The proposed Transit Tower project is designed to be eligible to receive a LEED (Leadership in Energy and Environmental Design) Gold rating from the U.S. Green Building Council, and would include water and energy-saving features. In addition, the TJPA would require the developer of the Transit Tower to adopt safety and security measures to maximize the protection of the public from injury due to human and natural events, including, but not limited to, earthquake, flood, wind, precipitation, building movement, terrorist attack, sabotage, civil unrest or civil disturbances, accidents, and crime.

39 November 2009 Draft Plan, Policy 3.22

Construction of the Transit Tower would require approximately three years.

The Transit Tower site is in a P (Public) use district. The project's office and retail uses would not be permitted in the P zoning district and an amendment to the zoning map (rezoning) to a Downtown Office (C-3-O SD) zoning district would be required as part of the project approval; this change is proposed as part of the draft Plan. The Transit Tower project site is also within a 30-X height and bulk district, which limits height to 30 feet but has no bulk limit. Amendment of the height and bulk districts (rezoning) would also be required for the Transit Tower site as part of the project approval. (As discussed in the previous section, the necessary rezoning for height is also proposed as a component of the Plan). Total gross floor area, measured according to *Planning Code* Section 102.9, would be approximately 1.32 million square feet,[40] and the project would have a floor area ratio (FAR) of approximately 26 to 1, which would not comply with the basic maximum permitted FAR of 9 to 1 in the surrounding C-3-O and C-3-O (SD) zoning districts. However, because the draft Plan proposes to eliminate the existing FAR restrictions and to rezone the Transit Tower site to C-3-O (SD), no conflict would exist with respect to FAR.

Plan Area Applications on File

As noted above, this EIR also analyzes a Developer-Proposed Scenario for the Transit Center District Plan to reflect several applications that have been submitted to the Planning Department by private project sponsors proposing individual buildings in the area, some of them deviating from Plan parameters with regard to height or other characteristics. This scenario is primarily addressed in Chapter VI, Alternatives, but these projects are discussed as relevant in Chapter IV, Environmental Setting, Impacts, and Mitigation Measures. These projects are summarized below and their locations, which generally correspond to the subareas identified for the Transit Center District Plan, are described below.

- **350 Mission Street** (Case No. 20-06.1524E; Final EIR certified and project approved February 10, 2011[41]): The applicant for this approved project proposes to demolish the existing 4-story building at 350 Mission Street and construct a 24-story, approximately 375-foot-tall office tower with office uses occupying approximately 356,000 square feet. The floor area ratio would be 18:1. The 50-foot-tall ground floor would provide about 1,000 square feet of retail and restaurant space, along with 6,960 square feet of publicly accessible indoor open space in an "indoor park," as set forth in the *Planning Code* (Section 138) and Downtown Plan (Table 1, Guidelines for Downtown Open Space). Four loading spaces and 61 auto parking spaces and 64 bicycle spaces would be provided. This project was approved at a lesser height than the 700-foot height limit identified for this site in the draft Plan; the proposed building is consistent with the existing height limit for this site, although the building would require exceptions to the *Planning Code* bulk controls. As an office building, this proposed project would be consistent with concept of the Plan's proposed commercial sub-district, where at least 75 percent of building floor area would be required to be devoted to office use (i.e., 3:1 ratio of office to non-office space).

40 Assumes approximately 10,000 square feet of ground-floor retail, 100,000 square feet of parking and loading, and lobby and mechanical space would be excluded from gross floor area.

41 This project was approved subsequent to the issuance of the Notice of Preparation for the Transit Center District Plan EIR, and is therefore included in the Developer-Proposed Scenario.

- **177-187 Fremont Street** (Case No. 2007.0456E; also known as 181 Fremont Street): The project applicant proposes a 675-foot-tall, 52-floor mixed-use tower at Natoma and Fremont Streets, that would encompass a total of 571,000 square feet of gross floor area. Approximately 138,000 square feet would be dedicated to residential uses (with approximately 80 dwelling units) and 414,000 square feet would be dedicated to office uses. The project also proposes four levels of parking (partially below grade) containing a total 230 parking stalls. As proposed, this project would not be consistent with the Plan's proposed 3:1 ratio of office to non-office space. This building would have mechanical levels and a rooftop screen extending to a height of 750 feet, which would exceed the 700-foot height limit proposed in the draft Plan for this site. The draft Plan states, in the context of the proposed Transit Tower, "Building elements (e.g. mechanical penthouses) above that height should be set back considerably from the building's façade or limited in bulk and enclosure such that they would not cast additional significant shadows…." Potential shadow effects of this project are discussed in the analysis of Plan shadow impacts in Section IV.J, Shadow, and in Chapter VI, Alternatives, in the context of Alternative D, Developer Scenario.

- **50 First Street** (Case No. 2006.1523E): This project would demolish four existing structures and develop three towers of 15 to 64 stories, ranging in height from 184 to 915 feet (to the top of the proposed parapet on the tallest building; 850 feet to the highest roof) on seven lots located at or near the northwest corner of First and Mission Streets. The three proposed towers would accommodate a mix of office (approximately 1.25 million square feet), residential (about 182 dwelling units in 365,000 square feet), retail (approximately 43,000 square feet), and hotel (about 266 rooms in 211,000 square feet) use, along with a 15,000-square-foot entertainment venue (performance theater), five levels of below grade parking (about 310 spaces), off-street loading spaces, and publicly accessible open space. This project would not be consistent with the Plan's proposed 3:1 ratio of office to non-office space. As with the building at 177 – 187 Fremont Street, the 915-parapet height would exceed the 850-foot height limit proposed in the Plan for this site. Potential shadow effects of this project are discussed in the analysis of Plan shadow impacts in Section IV.J, Shadow, and in Chapter VI, Alternatives, in the context of Alternative D, Developer Scenario.

- **2 New Montgomery (Palace Hotel)** (Case No. 2005.1101E): The project site is currently occupied by the eight-story 552-room Palace Hotel. The proposed project would demolish the non-landmarked portion of the structure, located at the southwest corner of the property near Jessie and Annie Streets, and construct in its place a new 60-story, 710-foot (to the top of the mechanical penthouse), approximately 742,000-square-foot residential tower with approximately 285 units, 192 off-street parking spaces, three car-share spaces and bicycle storage facilities in two basement level. The new tower would also include amenities for the residents as well as share amenities with the hotel, such as a swimming pool. The Gold Ballroom located in the southwest portion of the building would be dismantled and re-assembled in the current location of the Grand Ballroom south of the Garden Court. This project is proposed at a greater height than identified for this site in the draft Plan (600 feet). Potential shadow effects of this project are discussed in the analysis of Plan shadow impacts in Section IV.J, Shadow, and in Chapter VI, Alternatives, in the context of Alternative D, Developer Scenario. This project is proposed outside (west of) the sub-district where the Plan's proposes a 3:1 ratio of office to non-office space, and thus the proposed use would be allowable under the Plan.

- **41 Tehama Street** (Case No. 2008.0801E): Located between First and Second Streets, the project site currently functions as a surface parking lot and has a one-story structure on it that takes up a small portion of the lot. The proposed project would demolish the existing building on the site and construct a 342-foot 32-story residential building with approximately 297 dwelling units and up to

250 parking spaces. This project is proposed at a lower height than the 400-foot height limit proposed under the Plan, and the site is outside (south of) the sub-district where the Plan's proposes a 3:1 ratio of office to non-office space. Thus, this project would generally be allowable under the Plan.

Other height limit changes and other land use controls proposed as part of the Transit Center District Plan would be the same under the Developer-Proposed Scenario Alternative. Under this alternative, there would be no change to the Transit Tower that is proposed as part of the project.

E. Intended Uses of the EIR

The Planning Department will distribute the Draft EIR to state agencies through the State Clearinghouse, to applicable public agencies, and to interested members of the public. Following publication, this Draft EIR will undergo a minimum 45-day public review period, including a public hearing before the Planning Commission, during which comments on the information presented herein will be accepted. Following the public review period, responses to written and oral comments received from the public and agencies will be prepared and compiled in a Comments and Responses document. The Comments and Responses document will also include any staff initiated changes to the Draft EIR. The Draft EIR, together with the Comments and Responses document, make up the Final EIR and will be taken together to the Planning Commission. The Commission will then consider certification of the Final EIR under the California Environmental Quality Act, including consideration of whether the EIR is adequate and accurate. No approvals may be issued before the city certifies the EIR as final. Certification of the Final EIR may be appealed to the Board of Supervisors.

Approvals Required

Approval and implementation of the Transit Center District Plan and Transit Tower (tower approvals noted explicitly) would require the following actions, with acting bodies shown in italics:

- Amendment of the *General Plan* [various elements and Downtown area plan] to conform to the concepts of the Transit Center District Plan rezoning program (the project), as outlined above. *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 create new height and bulk districts greater than the current maximum of 550 feet; establish building setback and separation of towers requirements for buildings taller than 550 feet; eliminate the 18:1 limit on floor area ratio; adopt additional controls on building bulk, massing, and setbacks and façade articulation; modify controls for the use of transferrable development rights; establish a downtown preservation fund; increase bicycle parking and car-share parking requirements; prohibit off-street parking and loading access from Mission, Second, Ecker and portions of Folsom and Natoma Streets in the Plan area, and permit such access on portions of First, Fremont, and Beale streets only with Conditional Use Authorization; prohibit surface parking in the Plan area; allow for greater horizontal projections that emphasize ground floors; and require

transportation demand management programs of all projects 25,000 square feet and larger. *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*
- Modification of the Absolute Cumulative Limit for new shadow on certain City parks and a Section 295 shadow finding (Transit Tower).[42] *San Francisco Planning Commission and San Francisco Recreation and Park Commission*
- Permit for boilers and generators (Transit Tower). *Bay Area Air Quality Management District*
- General Construction Activity Stormwater Permit (Transit Tower). *Regional Water Quality Control Board*
- Approval of Transit Tower under *Planning Code* Section 309 (Permit Review in C-3 Districts) and Section 321 (Office Development: Annual Limit), as well as approval of a Conditional Use under Sections 304, 158, and 223(p) for a Major Parking Garage, for the portion of the Tower's proposed parking in excess of permitted accessory parking. *San Francisco Planning Commission*
- Execution of a purchase and sale agreement with the developer of the Transit Tower, including design approval of tower and pedestrian connection(s) to City Park. *Transbay Joint Powers Authority*
- Building Permits (Transit Tower). *San Francisco Department of Building Inspection*
- Approval for new water, sewer, and street light utility connections (Transit Tower). *San Francisco Public Utilities Commission*
- Approval of stormwater management system and submittal by project sponsor of a Stormwater Control Plan (Transit Tower). *San Francisco Public Utilities Commission*
- Approval of alterations to street rights-of-way, including, for example, the configuration of travel lanes, sidewalks widths, and addition of crosswalks that are part of the draft Plan's modifications to the public realm. *San Francisco Municipal Transportation Agency, Department of Public Works*
- Approval for any proposed curb or street modifications (Transit Tower). San Francisco Municipal Transportation Agency; Department of Public Works; Board of Supervisors

[42] Other buildings that would cast shadow on Recreation and Park Department properties would also require modification of the Absolute Cumulative Limit for one or more parks. However, those subsequent projects would require their own project-specific CEQA analysis and would be considered for approval—including consideration of shadow limits—separately from the Transit Center District Plan and the Transit Tower.

CHAPTER III
Compatibility with Existing Zoning and Plans

This chapter describes any inconsistencies between the draft Transit Center District Plan and proposed Transit Tower and applicable plans and policies, including objectives and policies of the *San Francisco General Plan*, the adopted Transbay Redevelopment Plan that overlaps with a portion of the Transit Center District Plan area, and other applicable local and regional plans. This chapter also discusses the Plan's and tower's compliance with *San Francisco Planning Code*, which implements the *General Plan.* Where inconsistencies are identified that could result in physical effects on the environment, the reader is directed to analysis of those effect in Chapter IV, Environmental Setting, Impacts, and Mitigation Measures. In particular, regional plans pertaining to air quality (e.g., *2010 Clean Air Plan*) are discussed in Section IV.G, Air Quality.

Planning and regulatory control over the Plan area are governed by the San Francisco Planning Department and the San Francisco Redevelopment Agency (parts of the proposed Plan area within Zone 1 of the adopted Transbay Redevelopment Plan). Development in the Plan area is generally covered by the *San Francisco General Plan*, but the Transit Center District Plan area overlaps with the Transbay Redevelopment Project Area, and includes all of Zone 2 of the redevelopment area.[43] The Redevelopment Agency has implemented a Delegation Agreement with the Planning Department to generally assign responsibility and jurisdiction for planning, zoning, and project entitlements in Zone 2 of the redevelopment area to the Planning Department and Planning Commission, relying on the *Planning Code*. The Transbay Redevelopment Plan is being implemented in partnership with the Redevelopment Agency and involves review by the Agency's Transbay Citizens' Advisory Committee. The Transit Tower site is within Zone 2, meaning that it is governed by the *Planning Code*, as administered by the Planning Department and Planning Commission.

As part of the review and approval process, the draft Plan would be reviewed by the Planning Commission, and the Commission and the Board of Supervisors would make findings of consistency with objectives, policies and principles of the *General Plan* at the program level and make amendments to the *General Plan* for consistency with the final version of the Transit Center District Plan.

[43] The draft Plan includes streetscape changes and road modifications within Zone 1 of the Transbay Redevelopment Area, although no land use or height changes are envisioned within this area.

A. San Francisco General Plan

The *San Francisco General Plan*, adopted by the Planning Commission and the Board of Supervisors, is both a strategic and long-term document, broad in scope and specific in nature. The *General Plan* is the embodiment of the city's collective vision for the future of San Francisco, and comprises a series of elements, each of which deal with a particular topic, that applies citywide. The *General Plan* contains 10 elements (Housing, Commerce and Industry, Recreation and Open Space, Community Facilities, Urban Design, Environmental Protection, Transportation, Air Quality, Community Safety, and Arts) that provide goals, policies, and objectives for the physical development of the city. In addition, the *General Plan* includes area plans that outline goals and objectives for specific geographic planning areas, such as the greater downtown, including the Plan area, policies for which are contained in the Downtown Plan, an area plan within the *General Plan*.

The Transit Center District Plan is intended to develop a rezoning proposal that increases the amount of allowable development in the transit-rich downtown core, while at the same time improving public amenities, modifying the system of streets and circulation to meet the needs and goals of a dense transit-oriented district, providing additional open space, and implementing policies to preserve existing historic structures and to promote sustainability. A primary goal of the proposed urban design controls is to enhance the downtown skyline, while relating the proposed structures to the surrounding mid- and low-rise residential and commercial neighborhoods. In general, these objectives of the draft Plan are founded upon the policy direction of the *General Plan.*

A conflict between a proposed project and a *General Plan* policy does not, in itself, indicate a significant effect on the environment within the context of the California Environmental Quality Act (CEQA). Any physical environmental impacts that could result from such conflicts are analyzed in this EIR. In general, potential conflicts with the *General Plan* are considered by the decisions-makers (normally the Planning Commission) independently of the environmental review process. Thus, in addition to considering inconsistencies that affect environmental issues, the Planning Commission considers other potential inconsistencies with the *General Plan*, independently of the environmental review process, as part of the decision to approve or disapprove a proposed project. Any potential conflict not identified in this environmental document would be considered in that context and would not alter the physical environmental effects of the draft Plan and proposed Transit Tower that are analyzed in this EIR.

As noted, the Plan area is contained within the boundaries of the Downtown Plan, an area plan within the *General Plan*. In an area plan, "the more general policies in the *General Plan* elements are made more precise as they relate to specific parts of the city."[44] Therefore, the policies in the Downtown Plan are those that are most applicable to the draft Plan. As directed by the state CEQA Guidelines (Sec. 15125(d)), potential conflicts with Downtown Plan policies are discussed below. Additional *General Plan* policies with which the proposed Plan could conflict are discussed following the Downtown Plan. This section is not intended to provide a comprehensive analysis of *General Plan* consistency: in particular, this section is

44 Introduction to the *General Plan*.

not intended to, and does not, identify policies that the draft Plan would support. Staff report(s) for Planning Commission and Board of Supervisors action(s) on the draft Plan will contain a complete analysis of *General Plan* consistency.

Downtown Plan

The Plan area is entirely within the area covered by the Downtown Plan, an area plan within the *General Plan*. The aim of the Downtown Plan is to encourage business activity and promote economic growth downtown, as the City's and region's premier center, while improving the quality of place and providing necessary supporting amenities. Centered on Market Street, the Plan covers an area roughly bounded by Van Ness Avenue to the west, Steuart Street to the east, Folsom Street to the south, and the northern edge of the Financial District to the north.

The Downtown Plan contains objectives and policies that address the following issues: provision of space for commerce, housing, and open space; preservation of the past; urban form; and movement to, from, and within the downtown area (transportation). The Downtown Plan was intended to maintain a compact downtown core and direct growth to areas with developable space and easy transit accessibility so that downtown would "encompass a compact mix of activities, historical values, and distinctive architecture and urban forms that engender a special excitement reflective of a world city" (Downtown Plan, Introduction [p. II.1.1 of printed version]). The Downtown Plan regulates growth in the downtown, centered in the Financial District, through height limits and FARs (floor area ratios).

The Downtown Plan grew out of an awareness of the public concern in the mid-to-late 20th century over the degree of change occurring downtown—and of the often conflicting civic objectives between fostering a vital economy and retaining the urban patterns and structures which collectively form the physical essence of San Francisco. One of the fundamental concepts embodied within the Downtown Plan is to expand the City's downtown office core south from its traditional locus north of Market Street, in a way that "protects the fine scale and rich mix of uses in Chinatown, Jackson Square, Kearny Street, Union Square, Mid-Market, North of Market-Tenderloin, and the hotel-entertainment area near Mason Street." Thus, the Downtown Plan states, "Major office towers can be constructed on sites remaining in the financial core north and south of Market and in an expanded area south of Market centered on the Transbay Bus Terminal." The rezoning that accompanied adoption of the Downtown Plan established the City's greatest height limits (450 to 550 feet) in proximity to the then-extant Transbay Terminal.[45] As noted in Chapter II, Project Description, height limits in the Plan area range from 30 to 550 feet. The Transit Tower project site, although in the center of this area of expansive height limits, currently has a *Planning Code*-permitted height of 30 feet.[46]

[45] Subsequent rezoning has expanded the area of height limits of 400 to 550 feet to locations along the north side of Folsom Street, where the Embarcadero Freeway once ran, and certain locations on Rincon Hill.

[46] The Transbay Design for Development document, published in 2003 in support of the adopted Transbay Redevelopment Plan, proposed a 550-foot-tall Transit Tower. However, the *Planning Code* height limit for the site has not been increased as of Spring 2011.

In 1986, shortly after the Downtown Plan was adopted by the Board of Supervisors (1985), San Francisco voters approved Proposition M, the Accountable Planning Initiative, that, among other things, established a limit of 950,000 square feet of office that can be approved in each annual period ending in mid-October. Of that total, 75,000 square feet is reserved for smaller buildings of between 25,000 and 49,999 square feet. (See further discussion of Proposition M, including the eight priority policies established by the measure, on p. 71.)

The draft Plan and the Transit Tower would be generally consistent with the Downtown Plan's stated goal of encouraging expansion of the downtown office core in the general vicinity of the former Transbay Terminal (planned new Transit Center) while avoiding "undesirable consequences which cannot be mitigated" (Policy 1.1). However, given that the draft Plan would permit and encourage the development of several towers much taller than any buildings heretofore developed in San Francisco, the proposed Plan could potentially conflict, on some levels, with the following objectives and policies of the Downtown Plan that speak to adverse effects of large-scale development:

Policy 1.1: Encourage development which produces substantial net benefits and minimizes undesirable consequences. Discourage development which has substantial undesirable consequences which cannot be mitigated.

Policy 2.1 Encourage prime downtown office activities to grow as long as undesirable consequences of such growth can be controlled.

The "undesirable consequences" discussed in the text accompanying Policy 2.1 (and also referenced in Policy 1.1) include impacts related to out-of-scale office development on neighborhood character; loss of historical resources; increased shading of streets and publicly accessible open space; increased pedestrian-level winds; increased traffic and parking demand, pollutant emissions, and energy use; overburdened public transit; increased traffic noise; increased pressure on housing supply resulting from increased employment; and conversion of housing, retail, and service commercial space to office space. Physical effects related to each of these issues are analyzed in the applicable sections of Chapter IV. This EIR identifies significant, unavoidable impacts in the areas of historical resources (potential adverse effects on buildings identified as historical resources under CEQA, and on one or more local historic district and/or historic districts eligible for listing in the California Register of Historical Resources; see Section IV.D), traffic (degradation in the level of service at certain intersections, increased transit occupancy and transit delay, a shortfall of freight loading spaces, and construction impacts; see Section IV.E), air quality (potential health risk due to exposure to diesel particulate matter and fine particulates [$PM_{2.5}$] emitted by operation of existing stationary sources and during construction; see Section IV.G), and shadow (addition of new shadow to Recreation and Park Department properties; see Section IV.J). Other impacts were found to be less than significant, in some cases with mitigation, including those related to aesthetics and visual quality, wind, transit, parking, and pedestrian and bicycle conditions, energy, noise, and population and housing. In terms of policy consistency, as noted in Chapter II, Project Description, the proposed Plan would include amendments to the Downtown Plan that would eliminate maximum floor area ratios and increase height limits in certain areas, as well as to *Planning Code* height and bulk requirements that implement the Downtown Plan.

Other Downtown Plan policies with which the draft Plan and/or the Transit Tower could conflict are identified below.

Policy 10.5: Address the need for human comfort in the design of open spaces by minimizing wind and maximizing sunshine.

Objective 14: Create and maintain a comfortable pedestrian environment.

Policy 14.2: Promote building forms that will minimize the creation of surface winds near the base of buildings.

Wind impacts are analyzed in Section IV.H, and shadow impacts are analyzed in Section IV.I.

Objective 12: Conserve resources that provide continuity with San Francisco's past.

Policy 12.1: Preserve notable landmarks and areas of historic, architectural, or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Policy 12.3: Design new buildings to respect the character of older development nearby.

Policy 13.2 Foster sculpturing of building form to create less overpowering buildings and more interesting building tops, particularly the tops of towers.

Policy 13.4 Maintain separation between buildings to preserve light and air and prevent excessive bulk.

As described in Section IV.D, Cultural Resources, the proposed Plan area includes three historic districts and more than 100 individual historical resources. As further discussed in Section IV.D., although the draft Plan proposed additional protection for certain historical resources in the area, implementation of the proposed Plan could adversely affect one or more of these districts and/or individual resources. The Transit Tower would have no direct effect on historical resources, as the tower site is vacant following demolition of the Transbay Terminal. Historical resources impacts are fully analyzed in Section IV.D.

Objective 6: Within acceptable levels of density, provide space for future office, retail, hotel, service and related uses in Downtown San Francisco.

Policy 13.1: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing and proposed development.

Objective 15: Create a building form that is visually interesting and harmonizes with surrounding buildings.

Policy 15.2: Assure that new buildings contribute to the visual unity of the city.

Effects on aesthetics and visual quality are analyzed in Section IV.B.

Objective 17: Develop transit as the primary mode of travel to and from downtown.

Objective 18: Ensure that the number of auto trips to and from downtown will not be detrimental to the growth or amenity of downtown.

Objective 20: Provide for the efficient, convenient and comfortable movement of people and goods, transit vehicles and automobiles within the downtown.

Objective 21: Improve facilities for freight deliveries and business services.

Policy 21.1: Provide off-street facilities for freight loading and service vehicles on the site of new buildings sufficient to meet the demands generated by the intended uses. Seek opportunities to create new [loading spaces in] existing buildings.

As set forth in Chapter II, Project Description, the draft Plan seeks to increase the concentration of development in proximity to the City's greatest concentration of public transit. However, as stated in Section IV.E, Transportation, by 2030, growth in the Plan area and elsewhere in San Francisco would result in public transit service operating in excess of capacity on several Muni corridors, the BART Transbay Tube corridor, AC Transit Transbay service, and Golden Gate Transit buses, absent increased service levels beyond those currently projected. At the same time, the analysis in Section IV.E indicates that the vast majority of intersections would operate at unacceptable levels of service, making travel by private auto difficult and causing delays for transit service on surface streets, including Muni lines and Golden Gate Transit and SamTrans buses. Additionally, the analysis in Section IV.E indicates that peak demand for off-street freight loading spaces is unlikely to be met in the Plan area. Because the on-street loading supply would likely be insufficient to meet overflow demand, unmet loading demand could result in double-parking, congestion, and adverse effects on transit, bicycles, and traffic.

Other Area Plans

The Plan area is adjacent on the southwest to the area covered by the East SoMa Plan, adopted in 2009 as part of the Eastern Neighborhoods Community Plans and Rezoning project, and on the south to the area covered by the Rincon Hill Plan, adopted in 2005. However, because the Plan area is not within either of those planning areas, their consistency is not generally applicable to the Plan area.

The Rincon Hill Plan calls for, among other things, the enhancement of Folsom Street "into a walkable neighborhood center to serve the Rincon Hill and Transbay neighborhoods" (Rincon Hill Plan Objective 1.3, with ground-floor neighborhood-serving retail stores. The Rincon Hill Plan includes only the southern frontage of Folsom Street; the northern frontage is within the Transit Center District Plan area. However, the portion of Folsom Street that is adjacent to the Rincon Hill Plan area (east of Essex Street) is within Zone 1 of the adopted Transbay Redevelopment Area, where the draft Transit Center District Plan proposes no changes to land use controls. Because the Zone 1 controls are consistent with the Rincon Hill Plan, the draft Transit Center District Plan would likewise be consistent with the Rincon Hill Plan. In terms of pedestrian improvements, both the Rincon Hill Plan and the draft Transit Center District Plan envision enhancements to Main, Beale, and Spear Streets to improve pedestrian travel, with widened sidewalks and additional landscaping. Therefore, the draft Plan is consistent with the Rincon Hill Plan in this regard, as well. The Transit Tower would be several blocks from the Rincon Hill Plan and East SoMa Plan areas and would not conflict with those plans.

Other General Plan Policies

Air Quality Element

Policy 3.5 Continue existing growth management policies in the city and give consideration to the overall air quality impacts of new development including its impact on the local and regional transportation system in the permit review process. Ensure that growth will not outpace improvements to transit or the circulation system.

As described in Section IV.E, growth pursuant to the proposed Plan, along with cumulative growth downtown, would result in Muni ridership that would exceed capacity at certain screenlines on certain corridors, and BART ridership that would exceed system capacity for travel to and from the East Bay. AC Transit and Golden Gate Transit bus ridership would also exceed capacity. In addition, most intersections in the Plan area are projected to operate at unacceptable levels of service.

Housing Element

The 2009 Housing Element, as adopted by the Planning Commission in March 2011 and by the Board of Supervisors on June 21, 2011, contains objectives and policies "intended to address the State's objectives and the City's most pressing housing issues: identifying adequate housing sites, conserving and improving existing housing, providing equal housing opportunities, facilitating permanently affordable housing, removing government constraints to the construction and rehabilitation of housing, maintaining the unique and diverse character of San Francisco's neighborhoods, balancing housing construction with community infrastructure, and sustainability."[47] The following policies relate to housing supply, especially the supply of affordable housing and housing for persons with varying special needs.

Objective 1 Identify and make available for development adequate sites to meet the City's housing needs, especially permanently affordable housing.

Policy 1.1 Plan for the full range of housing needs in the City and County of San Francisco, especially affordable housing.

Policy 1.8 Promote mixed use development, and include housing, particularly permanently affordable housing, in new commercial, institutional or other single use development projects.

Objective 4 Foster a housing stock that meets the needs of all residents across lifecycles.

Policy 4.1 Develop new housing, and encourage the remodeling of existing housing, for families with children.

Policy 4.5 Ensure that new permanently affordable housing is located in all of the City's neighborhoods, and encourage integrated neighborhoods, with a diversity of unit types provided at a range of income levels.

47 *San Francisco General Plan* Housing Element, adopted by Planning Commission, March 2011, Part II, p. 5. http://housingelement2009.sfplanning.org/docs/Housing_Element_Part_II_Objectives_and_Policies_CPC_Adopted.pdf

The draft Plan seeks to achieve a target that 70 percent of the built floor space in the district be devoted to office use. Although this would expressly limit the amount of housing (and other non-office uses) that could be developed in the Plan area, the proposed Plan would not conflict with the Housing Element's directives regarding provision of an adequate number of housing units, because the proposed Plan seeks to ensure that an adequate amount of office space to accommodate future employment growth be provided within a relatively small amount of land in the area of downtown proximate to the greatest array of transit services. The proposed Plan aims to accommodate a high concentration of office development within this southern portion of the Downtown office district while also recognizing that existing residential developments exist at various locations within the Plan area (particularly the southwest portion) and other high-density residential uses are already approved along the southern edge of the Plan area (approximately 2,700 units along Folsom Street, within Zone 1 of the Transbay Redevelopment Plan area), as well as within the Rincon Hill Plan area to the south. It is recognized that a high-density, heavily urbanized location such as the Transit Center District Plan area has not historically been a location of choice for many residents, particularly families with children, and that, therefore, some policy direction in the Housing Element that seeks to provide complete neighborhoods with a wide range of services for residents might be less applicable to portions of the Plan area than to other districts of San Francisco. This is, in part, because nearly all of the existing and anticipated housing in the Plan area is and will be provided in relatively taller buildings than elsewhere in San Francisco, limiting to some degree the desirability of these units to households seeking a less central-city-oriented community. Moreover, the greater height limits, both existing and proposed, increase the cost of housing, both due to the higher land cost and the higher cost of high-rise construction, relative to other districts, although these increases are offset to some degree by the greater housing density that can be achieved; these factors make non-subsidized housing in the Plan area unlikely to meet the Housing Element's affordability goals. The Housing Element states that about 66,000 new housing units could be built in San Francisco under existing zoning, including 3,500 units remaining to be built in the Mission Bay Redevelopment Areas. (Another 7,600 units could be built on Treasure Island and on the former Hunters Point naval base.) Of this total, about 10 percent could potentially be built in the downtown (C-3) use districts, including the Plan area and Rincon Hill to the south.[48] The draft Plan would increase this downtown housing potential by only about 12 percent, or about 800 units, because, as noted, the Plan's focus is on making sufficient land available primarily for office use, to accommodate forecast employment. Because it represents a relatively small percentage of projected Citywide housing growth, the loss of this 800-unit increment, were the draft Plan to be disapproved, would not jeopardize the City's ability to meet its share of regional housing demand, as forecast in the Regional Housing Needs Allocation administered by the Association of Bay Area Governments.

Nevertheless, to the extent that the draft Plan would permit housing and accommodate the retention of existing housing units, such policy direction in the Housing Element must be considered applicable and, within the constraints of the high-density housing that would be developed in the Plan area, the Plan would not be substantially inconsistent with the Housing Element. The Transit Tower, as an office

[48] Housing Element, March 2011, Part I, p. 63. http://housingelement2009.sfplanning.org/docs/Housing_Element_Part_I_Data_Needs_Assmt_CPC_Adopted.pdf.

building, would not conflict with Housing Element. The tower developer would pay the housing fees required of office development citywide under Section 413.1 et seq., of the *Planning Code*, the Jobs-Housing Linkage Program.

Urban Design Element

The Urban Design Element is concerned with the physical character and environment of the city with respect to development and preservation. The Urban Design Element addresses issues related to City Pattern, Conservation, Major New Development and Neighborhood Environment. The proposed Plan draws from principles set forth in the Urban Design Element's discussion of Major New Development. These and other objectives and policies are discussed below.

Objective 1: Emphasis of the characteristic pattern which gives to the city and its neighborhoods an image, a sense of purpose, and a means of orientation.

Policy 1.1: Recognize and protect major views in the city, with particular attention to those of open space and water.

Policy 1.3: Recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts.

Policy 1.6: Make centers of activity more prominent through design of street features and by other means.

Objective 2: Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding.

Policy 2.6: Respect the character of older development nearby in the design of new buildings.

Objective 3: Moderation of major new development to complement the city pattern, the resources to be conserved, and the neighborhood environment.

Policy 3.2 Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance.

Policy 3.4: Promote building forms that will respect and improve the integrity of open spaces and other public areas.

Policy 3.5: Relate the height of buildings to important attributes of the city pattern and to the height and character of existing development.

Policy 3.6: Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction.

The proposed Plan would permit a limited number of towers up to 1,000 feet in height (and potentially greater than 1,000 feet with the inclusion of non-occupiable, sculptural elements). Although such development could potentially conflict with one or more the above-listed objectives and policies, particularly with respect to the Transit Tower, which would be the tallest building in the Plan area, the proposed Plan draws from the Urban Design Element's call to concentrate tall buildings in centers of activity such as downtown, as long as such development is carefully planned and executed. Text accompanying Policy 3.5 of the Urban Design Element states:

> In areas of growth where tall buildings are considered through comprehensive planning efforts, such tall buildings should be grouped and sculpted to form discrete skyline forms that do not muddle the clarity and identity of the city's characteristic hills and skyline. Where multiple tall buildings are contemplated in areas of flat topography near other strong skyline forms, such as on the southern edge of the downtown "mound," they should be adequately spaced and slender to ensure that they are set apart from the overall physical form of the downtown and allow some views of the city, hills, the Bay Bridge, and other elements to permeate through the district.

The Urban Design Element classifies certain streets in terms of their importance as visual resources as well as quality of street views that are available from vantage points along those streets. In the project vicinity, Market Street, which runs along the northern edge of the Plan area, is characterized as a street containing "Street View of Important Building and Street That Defines City Form." No other streets within the Plan area are characterized as streets important to urban design and views. Additionally, long stretches of Mission, Howard, and Folsom Streets, including segments within the Plan area, are characterized by the *General Plan* as having "average" quality of views, with views along Mission, Howard, and Folsom Streets between First and Third Streets characterized as having "good" quality of street views. No other street segments are specifically characterized by the *General Plan* in terms of view quality along those streets.

As noted above, one of the objectives of the proposed Plan is to further the Downtown Plan, which strives to expand downtown southward into formerly industrial and low-rise areas around the Transit Center. By its very nature, the draft Transit Center District Plan would encourage development on a limited number of sites that would be taller than the maximum building heights currently permitted. The proposed Plan would require placement and massing of such very tall buildings to conform to principles intended to be consistent with the objectives and policies contained in the Urban Design Element. (See also Section IV.B, Aesthetics, for a discussion of physical environmental impacts with respect to aesthetics and views.)

Recreation and Open Space Element

Policy 2.3 Preserve sunlight in public open spaces. (The same text is contained in Policy 1.6 of the May 2009 draft Recreation and Open Space Element, which is being prepared to update the existing Recreation and Open Space Element.)

Implementation of the draft Plan and development of the Transit Tower would result in the addition of new shadow to several parks under the jurisdiction of the Recreation and Park Department, as well as to other public open spaces and to certain publicly accessible, privately owned open spaces. This issue is discussed in detail in Section IV.J.

B. Other Plans

Environmental plans and policies are those, like the *Bay Area 2010 Clean Air Plan*, which directly address environmental issues and/or contain targets or standards that must be met in order to preserve or improve characteristics of the City's physical environment. Neither the draft Plan nor the proposed

Transit Tower project would obviously or substantially conflict with any such adopted environmental plan or policy. (Consistency with clean air plans is discussed further in Section IV.G, Air Quality.)

Transbay Redevelopment Plan

The existing Transbay Redevelopment Area is roughly bounded by Mission Street, Second Street, Main Street, and Folsom Street, with a southwesterly extension to Second and Harrison Streets. The main objectives of the Transbay Redevelopment Plan, adopted in June of 2005, are to replace the outmoded (and now-demolished) Transbay Terminal and revitalize the vacant and underutilized properties that characterize the remainder of the Redevelopment Plan area. The Transbay Redevelopment Plan contains the following goals: Create a pedestrian-oriented urban environment that encourages walking as a primary transportation mode within the Plan area; encourage the use of alternative modes of transportation by future area residents, workers, and visitors and support the new Transbay Transit Center (new terminal) as a major hub while still providing local vehicular access; create a livable urban community with prime access to downtown and the waterfront, and well-designed streets, open space and retail areas; establish the area as both a gateway to the central city and a unique transit-oriented neighborhood in San Francisco; develop a new downtown neighborhood to help address the city's and the region's housing crisis, support regional transit use, and provide financial support to the future Transit Center, including access ramps and a temporary terminal facility, and Caltrain Downtown Extension; enhance linkage between the new Transit Center and the Financial District through visitor accommodations and commercial development that supports the new terminal; and create a state of the art multi-modal facility that is an integral part of the surrounding commercial and residential neighborhood. As noted in the introduction to this section, the Planning Department and Planning Commission have responsibility for planning, zoning, and project approvals within Zone 2 of the Redevelopment Plan area, pursuant to a delegation agreement between the Department and the San Francisco Redevelopment Agency, while the Redevelopment Agency controls planning activities and approvals within Zone 1 of the Redevelopment Plan area (along Folsom Street, between Main and Beale Streets south of the line of Natoma Street, and the area extending to Second and Harrison Streets). The draft Transit Center District Plan would not conflict with the overall goals of the Redevelopment Plan, but would instead complement implementation of the Redevelopment Plan, which calls for development of some 2,700 housing units along Folsom Street, by encouraging high-intensity employment—primarily office space—in the area surrounding the planned new Transit Center.

The Climate Action Plan

In February 2002, the San Francisco Board of Supervisors passed the *Greenhouse Gas Emissions Reduction Resolution* (Number 158-02) committing the City and County of San Francisco to a greenhouse gas (GHG) emissions reductions goal of 20 percent below 1990 levels by the year 2012. The resolution also directs the San Francisco Department of the Environment, the San Francisco Public Utilities Commission, and other appropriate City agencies to complete and coordinate an analysis and planning of a local action plan targeting GHG emission reduction activities. In September 2004, the Department of the Environment and the Public Utilities Commission published the *Climate Action Plan for San Francisco: Local Actions to Reduce*

Greenhouse Emissions. The *Climate Action Plan* examines the causes of global climate change and human activities that contribute to global warming and provides projections of climate change impacts on California and San Francisco from recent scientific reports; presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets; describes recommended emissions reduction actions in the key target sectors – transportation, energy efficiency, renewable energy, and solid waste management – to meet stated goals by 2012; and presents next steps required over the near term to implement the Plan. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Plan, and many of the actions require further development and commitment of resources, the Plan serves as a blueprint for GHG emission reductions, and several actions are now in progress.

The *Climate Action Plan* cites an array of potential environmental impacts to San Francisco from climate change, including rising sea levels which could threaten coastal wetlands, infrastructure, and property; increased storm activity that could increase beach erosion and cliff undercutting; warmer temperatures that could result in more frequent El Niño storms causing more rain than snow in the Sierras, reducing snow pack that is an important source of the region's water supply; decreased summer runoff and warming ocean temperatures that could affect salinity, water circulation, and nutrients in the Bay, potentially altering Bay ecosystems; as well as other possible effects to food supply and the viability of the state's agricultural system; possible public health effects related to degraded air quality and changes in disease vectors; as well as other social and economic impacts.

The Plan presents estimates of San Francisco's baseline GHG emissions inventory and reduction targets. Noting that burning fossil fuels in vehicles and for energy use in buildings and facilities are the major contributors to San Francisco's GHG emissions, the Plan includes GHG reduction strategies such as targeting emission reductions from fossil fuel use in cars, power plants and commercial buildings, developing renewable energy technologies like solar, wind, fuel cells and tidal power, and expanding residential and commercial recycling programs. According to the Plan, achieving these goals will require the cooperation of a number of different city agencies. An analysis of potential effects on global warming and GHGs, and consistency with the *Climate Action Plan*, is presented in Section IV.H, Greenhouse Gas Emissions.

San Francisco Bicycle Plan

In August 2009, the Board of Supervisors approved the San Francisco Bicycle Plan. The Bicycle Plan includes a citywide bicycle transportation plan (comprised of a "Policy Framework" and a "Network Improvement" document) and implementation of specific bicycle improvements identified within the Plan. The draft Bicycle Plan includes objectives and identifies policy changes that would enhance the City's bike-ability. It also describes the existing bicycle route network (a series of interconnected streets in which bicycling is encouraged), and identifies gaps within the citywide bicycle route network that require improvement. The Bicycle Plan updates the 1997 San Francisco Bicycle Plan. The Final Environmental Impact Report for the Bicycle Plan assessed a total of 56 short-term and long-term bicycle improvement projects. In the Transit Center District Plan area, the Bicycle Plan EIR evaluated a project calling for new

bicycle lanes on Second Street, involving removal of one traffic lane in each direction on Second Street between Market and King Streets, along with some curbside parking, and the creation of bicycle lanes in each direction. Left turns would be prohibited for cars and trucks at most intersections. This specific improvement was removed from the list of initial projects by the Municipal Transportation Agency (MTA) Board of Directors when it initially approved the Bicycle Plan in June 2009 (the version of the Plan approved by the Supervisors), to permit further study and community discussion. Following a series of community meetings in 2009 – 2010, MTA is working with Planning and Public Works staff on bicycle improvements, pedestrian bulbs, and paving plans for Second Street and anticipates having a preferred plan available for community review in 2012, with construction of bicycle lanes and other streetscape improvements anticipated to be completed by 2013.[49] As stated in Chapter II, Project Description, the draft Transit Center District Plan assumes that Second Street will be improved as set forth in the Bicycle Plan. Additionally, the Plan would encourage bicycle use by making other streetscape improvements and requiring increased bicycle parking in new developments, including the Transit Tower, which would be considered for approval under the Plan. Therefore, neither the draft Plan nor the Transit Tower appears to conflict with the Bicycle Plan.

Streetscapes Master Planning

The City of San Francisco in December 2010 adopted a Better Streets Plan, with the aim of creating a unified set of standards, guidelines, and implementation strategies to govern how the City designs, builds, and maintains public streets and rights-of-way. The main focus of the Better Streets Plan is upon the pedestrian environment and on the most appropriate design for allowing streets to be used as public space. The Better Streets Plan "provides a blueprint for the future of San Francisco's pedestrian environment," and responds to the "Better Streets Policy" adopted by the Board of Supervisors in 2006. The Plan sets forth goals, objectives, policies, and guidelines aimed at achieving "a great pedestrian environment," based on the premise that streets should be memorable, support diverse public life, vibrant places for commerce, promote human use and comfort, promote healthy lifestyles, safe, create convenient connections, ecologically sustainable, accessible, and attractive, inviting, and well-cared for (the "10 Elements of Better Streets). The Plan also includes a chapter on the approach to streetscape design, guides to street designs and streetscape element, and a final chapter describing implementation.[50] The draft Transit Center District Plan includes enhancements to the public realm, focusing on the pedestrian environment, and thus does not appear to conflict with the Better Streets Plan. The Transit Tower, likewise, would include pedestrian improvements, including widened sidewalks adjacent to the tower and a new open space, Mission Square, immediately east of the tower.

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49 James Shahamiri, Assistant Engineer, San Francisco Municipal Transportation Agency, personal communication, March 11, 2011.

50 San Francisco Planning Department, *Better Streets Plan*, adopted by the Board of Supervisors and the Mayor, December 2010. Available at: http://www.sf-planning.org/ftp/BetterStreets/proposals.htm#Final_Plan.

Downtown Streetscape Plan

The Downtown Streetscape Plan was adopted by the Planning Commission in 1995 to implement the Downtown Pedestrian Network that is called for in Objective 22 of the Downtown Plan. The Downtown Streetscape Plan has three goals: to provide a coordinated, comprehensive design vision for the Downtown Pedestrian Network; to provide standards and guidelines for the placement of streetscape elements by both the public and private sectors; and to provide a framework for future capital projects funded by dedicated sales tax revenue and privately funded to meet downtown open space requirements, as well as for projects funded by public-private partnerships. The Downtown Streetscape Plan presents a hierarchy of design concepts for streets and alleys of varying importance, including, in the Plan area, Mission Street (a Special Street), Second and Beale Streets (Second Level Streets), and Minna, Natoma, and Ecker Streets and Shaw Alley (Walk Through Alleys). The draft Plan would implement streetscape improvements on the Plan area streets identified in the Downtown Streetscape Plan, and would extend the Ecker-Shaw pedestrian connection south to Folsom Street.

Transit First Policy

The City of San Francisco's Transit First policy, adopted by the Board of Supervisors in 1973, was developed in response to the damaging impacts over previous decades of freeways on the city's urban character. The policy is aimed at restoring balance to a transportation system long dominated by the automobile, and improving overall mobility for residents and visitors whose reliance chiefly on the automobile would result in severe transportation deficiencies. It encourages multi-modalism, the use of transit and other alternatives to the single-occupant vehicle as modes of transportation, and gives priority to the maintenance and expansion of the local transit system and the improvement of regional transit coordination.

The following ten principles constitute the City's Transit First policy:

1. To ensure quality of life and economic health in San Francisco, the primary objective of the transportation system must be the safe and efficient movement of people and goods.

2. Public transit, including taxis and vanpools, is an economically and environmentally sound alternative to transportation by individual automobiles. Within San Francisco, travel by public transit, by bicycle and on foot must be an attractive alternative to travel by private automobile.

3. Decisions regarding the use of limited public street and sidewalk space shall encourage the use of public rights of way by pedestrians, bicyclists, and public transit, and shall strive to reduce and improve public health and safety.

4. Transit policy improvements, such as designated transit lanes and streets and improved signalization, shall be made to expedite the movement of public transit vehicles (including taxis and vanpools) and to improve public safety.

5. Pedestrian areas shall be enhanced wherever possible to improve the safety and comfort of pedestrians and to encourage travel by foot.

6. Bicycling shall be promoted by encouraging safe streets for riding, convenient access to transit, bicycle lanes, and secure bicycle parking.

7. Parking policies for areas well served by public transit shall be designed to encourage travel by public transit and alternative transportation.

8. New transportation investment should be allocated to meet the demand for public transit generated by new public and private commercial and residential developments.

9. The ability of the City and County of San Francisco to reduce traffic congestion depends on the adequacy of regional public transportation. The City and County shall promote the use of regional mass transit and the continued development of an integrated, reliable, regional public transportation system.

10. The City and County shall encourage innovative solutions to meet public transportation needs wherever possible and where the provision of such service will not adversely affect the service provided by the Municipal Railway. (Added November 1999.)

One of the fundamental principles of the draft Transit Center District Plan is to encourage density of employment uses, particularly office use, in an area with the highest transit capacity in the City. The draft Plan would thus encourage use of transit and alternative transportation modes, and would also increase proximity of jobs to housing within the City. These factors would be expected to help minimize single-person auto travel in the future, which would be consistent with the intent of the Transit First Policy.

Section IV.E, Transportation, analyzes potential transportation impacts of the draft Plan and the Transit Tower, including possible impacts on alternative transportation modes. In general, however, it is apparent that the draft Plan's emphasis on compact development proximate to a high level of transit service, along with pedestrian and bicycle improvements, would be consistent with the Transit First Policy.

C. Planning Code (Zoning)

The *Planning Code*, which incorporates by reference the City Zoning Maps, governs land uses, densities and configuration of buildings within San Francisco. Permits to construct new buildings or to alter or demolish existing ones may not be issued unless the proposed project conforms to the Planning Code or an exception is granted pursuant to provisions of the Planning Code.

The proposed Plan would make alterations to the *Planning Code*, as described in Chapter II, Project Description. Principally, the Plan would rezone the bulk of the Plan area to the C-3-O (SD) use district, with the exception of Zone 1 of the Transbay Redevelopment Plan, which would not change, and existing P Districts, which would likewise remain. The draft Plan also proposes to increase allowable height limits on selected parcels (see Figure 3, p. 14).

The proposed Plan would eliminate the maximum floor area ratio (FAR) and to place limits on the amount of non-commercial development in the core of the Plan area, in order to ensure adequate land is

available for expansion of office use. The draft Plan also proposes a minimum FAR of 9:1 on larger sites; seeks to encourage continuous consumer retail uses on key street frontages; a requirement for sculpting of tall building forms through upper-story setbacks and horizontal modulation of street walls; and widened sidewalks along certain streets through increased building setbacks.

Planning Code Section 295

Section 295 of the Planning Code, the Sunlight Ordinance, was adopted through voter approval of Proposition K in November 1994 to protect certain public open spaces from shadowing by new structures. Section 295 generally prohibits, unless an exception is granted, new or renovated structures greater than 40 feet in height from shading property under the jurisdiction of, or designated to be acquired by, the Recreation and Park Commission, during the period from one hour after sunrise to one hour before sunset on any day of the year. Section 295(b) states that the Planning Commission, following a public hearing, "shall disapprove" any project governed by this section that would have an "adverse effect" due to shading of a park subject to Section 295, "unless it is determined that the impact would be insignificant." The Planning Commission's decision under Section 295 cannot be made "until the general manager of the Recreation and Park Department in consultation with the Recreation and Park Commission has had an opportunity to review and comment to the City Planning Commission upon the proposed project."In practice, therefore, Section 295 acts as a kind of overlay that further limits heights and/or shapes of certain buildings around protected parks; the Section 295 limit is in addition to the height limits in the Height and Bulk districts.

Privately-owned open spaces, including any open spaces that are required under the Planning Code as part of an individual development proposal, are not subject to Section 295.

Section 295 is applicable to the analysis of shadow impacts in Section IV.I of this EIR.

Planning Code Section 146

Planning Code Section 146(a), applicable to certain streets in the C-3 zoning districts, requires that buildings and additions fit within an envelope defined by a plane sloping away from the street at a prescribed angle above a prescribed height "in order to maintain direct sunlight on public sidewalks in certain downtown areas during critical periods of use." In the Plan area, Section 146(a) applies to the west side of New Montgomery and Second Streets, specifying that a building be within an envelope that slopes away from the street at an angle of 62 degrees beginning at 132 feet above grade. Section 146(a) also applies to the south side of Market Street west of Second Street, where the required angle is 50 degrees, beginning 119 feet above the street. Section 146(a) also applies to portions of Bush, Sutter, Post, Geary, O'Farrell, Ellis, Powell, Stockton, and Kearny Streets and Grant Avenue. Under Section 146(b), an exception to the foregoing may be granted, pursuant to the procedures of Section 309, Permit Review in C-3 Districts, if no new shadow is created, or if "the shadow created by the penetration of the plane is deemed insignificant because of the limited extent or duration of the shadow or because of the limited public use of the shadowed space." Section 146(c) states that, on other streets in the C-3 districts, "New buildings and additions to existing buildings shall be shaped, if it can be done without

creating an unattractive design and without unduly restricting the development potential of the site in question, so as to reduce substantial shadow impacts on public sidewalks." A determination of compliance with Section 146(c) is made as part of the Section 309 project consideration process.

Planning Code Section 147

Planning Code Section 147, applicable to the C-3, RSD, SLR, SLI, or SSO zoning districts, where height limits are greater than 40 feet, requires that all new development and additions to existing structures where the height exceeds 50 feet must be shaped to minimize shadow on public plazas or other publicly accessible open spaces other than those protected by Section 295, "in accordance with the guidelines of good design and without unduly restricting the development potential of the property." The following factors must be taken into account in determining compliance with this criterion: the amount of area shadowed, the duration of the shadow, and the importance of sunlight to the type of open space being shadowed. A determination of compliance with Section 147 is made as part of the Section 309 project consideration process. Section 147 is applicable to the analysis of shadow impacts in Section IV.I of this EIR.

Planning Code Section 309

Planning Code Section 309, Permit Review in C-3 Districts, governs projects in the C-3 (Downtown) use districts. This section requires a public hearing before the Planning Commission to consider all projects in C-3 districts greater than 50,000 square feet in size or 75 feet in height. Section 309 permits the Commission to grant exceptions to certain *Planning Code* standards, including the setback and rear yard requirements of Sections 132.1 and 134(d); the ground-level wind current requirements of Section 148; the sunlight to public sidewalk requirement of Section 146; the limitation on residential accessory parking of Section 151.1(e); the requirement of independently accessible parking spaces of Section 155(c); the limitation on curb cuts for parking access of Section 155(r); the limitations on above-grade residential accessory parking of Section 155(s); the freight loading and service vehicle space requirements of Section 161(h); the off-street tour bus loading space requirements of Section 162; the height limits for vertical extensions of Section 260(b)(1)(G) and for upper tower extensions of Section 263.7; the height limits in the 80-130F and 80-130X Height and Bulk Districts of Section 263.6 and in the 200-400S Height and Bulk District of Section 263.8 (neither applicable in the Plan area); and the bulk requirements of Sections 270 and 272. Section 309 requires a public hearing before the Planning Commission for any such exceptions requested by a project sponsor. Section 309 also permits the imposition of certain conditions in regard to such matters as a project's siting and design; project effects on views and view corridors, shadow, wind, street walls; parking, traffic and transit effects; energy consumption; pedestrian environment; street trees, landscaping, and sidewalks; the quality of the living environment of residential units, including unit size and open space; aspects of project design that "have significant adverse environmental consequences"; historical resources in conservation districts; and other matters related to a project's "unique or unusual location, environment, topography or other circumstances."

The proposed Transit Tower would be subject to review and approval under Section 309.

Planning Code Section 321

Section 321 implements the City's annual limit on office construction, which is set at 950,000 square feet per calendar year, with a subset of 75,000 square feet reserved for buildings smaller than 50,000 square feet. The limit applies to all office space citywide, not just downtown. Buildings smaller than 25,000 square feet are excepted; however, Redevelopment Agency projects are included, as are projects within San Francisco that are under the jurisdiction the State of California and federal agencies, including the Presidio Trust and National Park Service. Square footage not allocated during any given year is added to the overall allocation for succeeding years.

As of November 30, 2010, the Planning Department inventory of office space showed 3.35 million square feet of space available for large projects (those 50,000 square feet and larger), with an additional 1.23 million square feet available for smaller projects (25,000 to 49,999 square feet).[51] Since the November 2010 update was issued, one large building has been approved Downtown, at 350 Mission Street (Case No. 2006.1524). This building was approved February 10, 2011, and was allocated 335,000 square feet of office space. Also in 2011, another 200,000 square feet was allocated to the Alexandria District in Mission Bay, and 100,000 square feet was allocated to Treasure Island. In June 2011, the Planning Commission revoked previous approvals for an office building at 524 Howard Street, adding 202,000 square feet back to the large building inventory.[52] As of September 1, 2011, therefore, the large building inventory is approximately 3.1 million square feet, or about 3.5 times the annual large building allocation of 875,000 square feet.

The large building inventory reached a maximum of just over 4 million square feet available at the start of the 1997-98 allocation period, in October 1997. The greatest amount of space allocated in any period was 2.18 million square feet, in 1999-2000. As of summer 2011, the Planning Department has environmental or other applications on file for more office space than the 3.1 million square feet currently available. The largest projects on file include the Transit Tower (approximately 1.3 million square feet), a mixed-use project at 50 First Street (Case No. 2006.1523E; approximately 1.06 million square feet; within the Plan area), a mixed-use building at 181 Fremont Street (Case No. 2007.0456E; approximately 414,000 square feet; also within the Plan area), and a medical office building proposed as part of the California Pacific Medical Center project at Van Ness Avenue and Geary Street (Case No. 2005.0555E; approximately 195,000 square feet). An additional 875,000 square feet space will be added to the available inventory each October.

If during a particular year large office projects come before the Planning Commission for approval of more office space than is available, the Commission must compare the proposed projects and approve those that "promote the public welfare, convenience and necessity," based on criteria that include:

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51 San Francisco Planning Department, "Office Development Annual Limitation (Annual Limit) Program Update," November 30, 2010. Allocations in square feet of gross floor area, as defined in *Planning Code* Sec. 102.9 Available at: http://www.sf-planning.org/ftp/files/publications_reports/Office_Allocation_Stats_11-30-10.pdf; reviewed March 13, 2011.

52 This revocation is pending an appeal before the Board of Supervisors.

- maintaining a balance between economic growth, on the one hand, and housing, transportation and public services, on the other;
- projects' contribution to, and effects on, the objectives and policies of the *General Plan*;
- design quality;
- suitability of each project for its location, and any location-specific effects;
- the anticipated uses of each project, "in light of employment opportunities to be provided, needs of existing businesses, and the available supply of space suitable for such anticipated uses";
- the extent to a project "will be owned or occupied by a single entity"; and
- the use, if any, of transferrable development rights to assist in preservation of existing historic structures (*Planning Code* Sec. 321(b)).

This competitive approval process, dubbed the "beauty contest" by many observers, has not been employed since the early years of the annual limit, in the mid-1980s. At that time, the annual limit for large buildings was 400,000 square feet, having been reduced by 475,000 per year by voter initiative (Proposition M of 1986, codified as *Planning Code* Sec. 321.1), with that amount to be deducted annually from the allocation until all buildings approved between November 1984 (adoption of the Downtown Plan by the Planning Commission) and November 1986 had either received building permits or their approvals expired. It was not until the 1997 – 98 approval period that the backlog of approvals issued in the immediate aftermath of the Downtown Plan adoption was cleared and the annual large building allocation restored to 875,000 square feet.

The approximately 6.2 million square feet of office space (5.4 million square feet, considering approved projects) assumed to be developed in the Plan area over the next 20 years (see Growth Assumptions contained in Section IV.C, Population, Housing, Employment, and Business Activity) represents about six years of the annual limit's large building allocation.[53] Therefore, while other projects outside the Plan area, such as in the Mission Bay South Redevelopment Area, would be anticipated to draw down the office space allocation to some degree, given the existing size of the available inventory and the near-term outlook for a less rapid pace of office development than has sometimes been the case since adoption of the Downtown Plan, it is not anticipated that the office development annual limit would affect the schedule of development that would otherwise take place in the Plan area, at least for the foreseeable future.

In contrast to the large office allocation, the inventory available for smaller buildings is more than 16 times the annual allocation of 75,000 square feet. The small building inventory has increased in all but two years since the annual limit took effect in 1985.

The proposed Transit Tower would be subject to review and approval under Section 321.

53 Two of the projects in the Plan area (222 Second Street and 350 Mission Street), totaling about 800,000 square feet, are already approved and have received their office square footage allocations. Therefore, the net additional space would be about 5.4 million square feet.

Reflective Glass (Planning Commission Resolution 9212)

Planning Commission Resolution No. 9212 (1981) established a pair of guidelines for reviewing and acting on proposed building projects. The first guideline states that clear, untinted glass should be used at and near the street level. The second guideline states that mirrored, highly reflective, or densely tinted glass should not be used except as an architectural or decorative element. By prohibiting mirrored or reflective glass, this resolution serves to limit glare.

Resolution 9212 is applicable to the analysis of visual quality in Section IV.C of this EIR.

Exceptions to Planning Code Bulk, Wind, and Shadow Requirements

As noted above, *Planning Code* Section 309, Permit Review in C-3 Districts, allows the Planning Commission to grant exceptions to certain *Planning Code* standards. Review of Planning Department records and Planning Commission minutes revealed that there were more than 30 cases involving exceptions from Planning Code requirements for ground level winds (Section 148) and building bulk (Section 270) that were granted since the Downtown Plan and accompanying zoning regulations were approved. About 27 of these buildings have been constructed, including most major downtown buildings built since the adoption of the Downtown Plan. Another project granted an exception (Trinity Plaza, at Eighth and Market Streets) is under construction in phases. *Planning Code* Section 146(c), which states that new buildings and building additions shall be shaped "so as to reduce substantial shadow impacts on public sidewalks in the C-3 Districts" [other than on specified streets that are governed by another *Code* section], if this can be accomplished "without creating an unattractive design and without unduly restricting the development potential of the site in question." Determinations are made with respect to compliance with this requirement as part of the Section 309 downtown project review process. Planning Department records reveal at least two projects that have been granted exceptions with respect to the Code's wind and bulk provisions have also been specifically determined to be in compliance with the Section 146(c) requirement, including the Millennium residential tower, across Fremont Street from the Transit Tower site, and the office building at 555 Mission Street.

With regard to wind (Section 148), in particular, the vast majority of projects involving high-rise buildings that have been approved since adoption of the Downtown Plan have required, and have been granted, an exception to the *Planning Code* wind requirement that, "When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements." This is because existing winds at many locations in downtown San Francisco exceed both the comfort criterion of 7 miles per hour (mph) in public seating areas and the comfort criterion of 11 mph in areas of substantial pedestrian use (generally, sidewalks), and it is generally not feasible to design a new building that would reduce existing wind speeds such that the these criteria would be met, or, in many instances, to avoid creating a certain number of new exceedances.

Developed projects in the Plan area that were granted exceptions to *Planning Code* wind, shadow, and/or bulk requirements, pursuant to Section 309, include office buildings at 555 and 560 Mission Street, 55 and

101 Second Street, 199 and 215 Fremont Street, and the three office buildings of Foundry Square at First and Howard Street; the Millennium residential tower at Fremont and Mission Streets and another residential building at 199 New Montgomery Street; the Courtyard-Marriott Hotel at Second and Folsom Streets; and the Museum of Modern Art parking garage on Minna Street.

Regarding the granting of exceptions to *Planning Code* requirements under Section 309 generally, this is a policy decision that is made by the Planning Commission on a case-by-case basis. To the extent that the granting of such exceptions would result in physical impacts, those impacts are analyzed in this EIR. The fact that a project would require one or more exceptions to *Planning Code* requirements does not, in itself, indicate that the project would have a significant physical effect on the environment.

Accountable Planning Initiative

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the *Planning Code* to establish eight Priority Policies. These policies are: (1) preservation and enhancement of neighborhood-serving retail uses; (2) protection of neighborhood character (discussed in Section IV.A, Land Use); (3) preservation and enhancement of affordable housing (Section IV.C, Population and Housing); (4) discouragement of commuter automobiles (Section IV.E, Transportation); (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; (6) maximization of earthquake preparedness (Questions 7a –7d, Geology and Soils, in Section IV.O, Geology, Soils, and Seismicity); (7) landmark and historic building preservation (Section IV.D, Cultural Resources); and (8) protection of open space (Questions 3a and c, Recreation, in Section IV.J, Recreation and Public Space, as well as Section IV.H, Wind, and Section IV,I, Shadow). The Priority Policies, which provide general policies and objectives to guide certain land use decisions, contain some policies that relate to physical environmental issues. Prior to issuing a permit for any project that 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 that requires a finding of consistency with the *General Plan*, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. In evaluating *General Plan* consistency of the project and reviewing the building permit application for the proposed project, the Planning Commission and/or Planning Department would make the necessary findings of consistency with the Priority Policies.

The staff report for the Planning Commission will analyze the project's consistency with *General Plan* policies and zoning, and will discuss in detail any exceptions requested or modifications required.

CHAPTER IV
Environmental Setting, Impacts, and Mitigation Measures

Analysis Assumptions

This EIR analyzes potential environmental effects associated with the proposed Transit Center District Plan (November 2009 draft; the "draft Plan") and Transit Tower. As described in Chapter II, Project Description, the proposed Transit Tower would be a 61-story, 1,070-foot-tall (including sculptural element) building containing approximately 1.3 million square feet of office space and about 16,500 square feet of retail space. Analysis of physical impacts of implementation of the draft Plan is based upon assumptions regarding potential development within the Plan area. These assumptions were formulated by the Planning Department for development that could occur at locations in the Plan area where increased height limits are proposed (see Figure 3, Existing and Proposed Height Limits, p. 14), as well as on several so-called "soft sites" (sites where existing development is at a substantially lesser intensity than is permitted, and which are therefore assumed to be redeveloped at a greater intensity in the future). The sites where development is assumed include several for which specific project applications are on file with the Planning Department, as described in the Developer-Proposed Scenario, p. 47. However, for the analysis of the draft Plan, assumptions prepared by the Planning Department were used, rather than specific projects, because it cannot be assumed that a specific development application will be approved. It is noted, however, that projects on two sites in the Plan area have been approved since the draft Plan was published in 2009: a 26-story (350-foot-tall), 430,650-square-foot office building at 222 Second Street, in 2010, and a 24-story (375-foot-tall), 356,000 square feet office building at 350 Mission Street, in 2011; the latter site is analyzed at a height of 700 feet under the draft Plan, while the former is analyzed as approved, consistent with the draft Plan.

The Plan area sites where development is assumed are shown in **Figure 14**, and the development assumptions used in the transportation analysis prepared in support of this EIR are listed in **Table 3**. The total development assumed in the Plan area between 2005 (the base year for the analysis because it was the most recent full set of data available when the draft Plan was developed) amounts to approximately 6,100 new households (about 9,470 residents) and about 7 million square feet of commercial space, 90 percent of which would be office space, with most of the remainder being hotel space and also including about 100,000 square feet of retail space; total employment would increase by about 29,300, of which 24,800 (85 percent) would be office jobs. Of the growth in the Plan area forecast by 2030, about one-third of the office space, 60 percent of the residential units, and 80 percent of the hotel rooms would be



SOURCE: San Francisco Planning Department, AECOM

Figure 14
Development Sites

TABLE 3
PLAN AREA DEVELOPMENT ASSUMPTIONS

	Location/Address (Block / Lots) [a]	Height Limit Existing	Height Limit Proposed	Development Assumptions
1	41 Tehama Street (3736 / 74-78A)	200	400	276 dwelling units, GFR
2	181 Fremont Street (3719 / 10,11)	350	700	424,000 sf office, 61 dwelling units, GFR
3	50 1st Street (3708 / 6,7,9-12,55)	550	850	1,160,000 sf office, 165 dwelling units, 330 hotel rooms, GFR
4	350 Mission Street (3710, Lot 017)	550	700	471,000 sf office, 67 dwelling units, 135 hotel rooms, GFR
5	201 Second Street (3736 / 94-98)	350	350	297,000 sf office, GFR
6	TJPA "Parcel F" (3721 /15A)	450	750	670,000 sf office, 96 dwelling units, 191 hotel rooms, GFR
7	Transit Tower (3720 / 1) [b]	550	1000	1,526,000 sf office, GFR
8	Golden Gate University (3708 / 98)	550	700	726,000 sf office, 104 dwelling units, 208 hotel rooms, GFR
9	222 2nd Street (3735 / 63)	350	350	439,000 sf office, GFR
10	Palace Hotel Tower (3707 / 52-SW crnr.)	300	600	449 dwelling units, GFR
11	524 Howard Street (3721 / 13 -15)	450	450	535,000 sf office, GFR
12	543 Howard Street (3736 /111)	85	85	58 dwelling units, GFR
13	TJPA "Parcel M" (3718 / 27 N. ptn.)	n/a	85	90,000 sf office, GFR
15	176 Second St. (3722 / 17)	150	150	22 dwelling units, GFR
16	661 – 667 Howard Street (3735/ 39-40)	250	250	175,000 sf office, GFR
17	648 – 660 Howard Street (3722 / 11,12,14, 23,24,26)	250	350	394,000 sf office, GFR

[a] Numbers in left-hand column keyed to Figure 14
[b] Plan analysis assumes a larger development at the Transit Tower site than the actual building program on file.
sf – square feet
GFR – ground-floor retail space
Note: Table does not include existing building space to be demolished (approximately 775,000 square feet total, not all of which is occupied). There is no site #14.

SOURCE: San Francisco Planning Department

attributable to the increment of additional growth that would be allowed under the increased height limits and elimination of floor-area ratio maximums proposed in the draft Plan.[54]

It is noted that the development program for the Transit Tower site assumed in the analysis of the draft Plan and shown in Table 3 is greater than the actual Transit Tower building program currently proposed by the TJPA, because the transportation analysis was undertaken based on preliminary assumptions

54 The analysis of cumulative impacts includes additional development elsewhere in the region and the City, including several specific projects or development sites near the western boundary of the Plan area, such as the proposed expansion of the San Francisco Museum of Modern Art; renovation of the Aronson (Mercantile) Building at 86 Third Street/700 Mission Street and an adjacent proposed residential tower that would also house the Mexican Museum; and potential expansion of Moscone Convention Center, including a new hotel and office space, at the northeast corner of Third and Folsom Streets. Consideration of these project will occur regardless of Plan approval.

concerning the Transit Tower. This means that the quantitative analysis of impacts from the Tower, such as traffic and transit impacts, is conservative. However, the Plan analysis remains valid.

Citywide Growth

As described more fully in Section IV.C, Population and Housing, Business Activity, and Employment, p. 176, the Planning Department forecasts that San Francisco's household population[55] will reach approximately 912,000 by 2030, an increase of some 132,500 residents from the 2005 total of 779,500.[56] Employment in 2005 totaled approximately 552,000. The Department forecasts employment growth of 241,300 additional jobs by 2030. Of this potential increase in employment, office jobs are forecast to represent one-half of the total, followed by retail/entertainment and production, distribution, and repair at 11 percent each, medical/health services at 8 percent, and hotel jobs at 4 percent. Employment growth in the Plan area is forecast to make up 21 percent of the citywide increase in office jobs and 25 percent of the citywide growth in hotel employment. The Plan area would also accommodate about 7 percent of citywide population growth.

55 Household population excludes about 2.5 percent of the City's total population that lives in what the U.S. Census calls "group quarters," including institutions (jails, nursing homes, etc.), college dormitories, group homes, religious quarters, and the like.

56 Consistent with recent trends, this incremental growth is anticipated to occur in relatively smaller households; that is, growth would occur in households that would be smaller than the average household size in 2000 of 2.3 persons per household.

A. Land Use

This section describes the existing land uses and zoning in the Plan area. It compares existing land uses to land use changes anticipated under the proposed project and describes the nature and magnitude of the potential changes.

Environmental Setting

Project Location and Vicinity

San Francisco's Downtown neighborhood functions as the densely developed center of commerce and employment for the City as well as for the nine county Bay Area. The Downtown, as defined by the C-3 use district, extends along both sides of Market Street from San Francisco Bay to Van Ness Avenue, extending as far north as Washington Street and south to Folsom Street; in common parlance, many refer to "downtown" as the area between Van Ness Avenue and the Bay, south of approximately Broadway. Development within the Downtown is governed by the policies in the 1985 Downtown Plan (an area plan contained within the *General Plan*, see Chapter III, Compatibility with Existing Plans and Zoning). As the eastern subset of the Downtown area, the Financial District is often divided along Market Street into north and south components.[57] The Plan area, roughly bounded by Market Street, Steuart Street, Folsom Street and Third Street, consists of approximately 145 acres in the southern portion of the Financial District. The Plan area is centered on the site of the new Transit Center currently under construction and surrounded by several neighborhoods including Rincon Hill, Yerba Buena Center, the eastern portion of the South of Market neighborhood (SoMa), and the northern Financial District. Much of the southern edge of the Plan area, along the north side of Folsom Street, consists of vacant land formerly occupied by elevated freeway ramps (discussed below under "Existing Land Uses") in the Plan area.

The western portion of the Plan area, like the South of Market neighborhoods generally, is characterized by a street grid that is fundamentally different from the area north of Market Street (and elsewhere in San Francisco) and that results in blocks that are more than two-and-one-half times the size of north-of-Market blocks. Blocks west of First Street generally measure 825 by 550 feet (east-west dimension by north-south dimension), compared to a typical north-of-Market block at 412.5 by 275 feet. East of First Street, the east-west dimension of the Plan area blocks decrease to 275 feet (north-south remains the same, at 550 feet), and even these blocks are larger than north-of-Market blocks. The blocks south of Market Street, combined with the wide streets—many of which carry one-way traffic—accommodated light industrial and service uses, including auto- and truck-oriented uses, throughout much of the 20th century. At the same time, the historical land uses, along with the scale of these blocks and the long distance between intersections, have made for less pedestrian- and bicycle-friendly streets than in many neighborhoods. This is notwithstanding the mid-block streets (often referred to as "alleys") that divide many south-of-Market blocks; although some, particularly in the western portion of SoMa, contain a high

[57] Consistent with San Francisco practice, Market Street and streets parallel to Market Street are considered east-west streets. For example, Folsom and Mission Streets are considered to run east-west while Second and Third Streets are considered to run north-south.

concentration of residential units, many, particularly to the east, including the Plan area, function largely as back entrances to buildings that face the major streets.

Moreover, beginning with construction of the Transbay Terminal in 1939, substantial portions of the Plan area have been devoted to transportation infrastructure. The Transbay Terminal was linked to the Bay Bridge by an elevated loop that originally carried Key System trains and later AC Transit buses. When the Embarcadero Freeway was completed in 1959, it was linked to the Bay Bridge by a series of ramps known as the Terminal Separator Structure, which also included vehicle on- and off-ramps at Main and Beale Streets and on Folsom Street. Together with the Transbay Terminal bus loop, the Terminal Separator Structure occupied the northern frontage of Folsom Street between Essex Street and Spear Street, where the Embarcadero Freeway turned north. The Main/Beale ramps occupied most of the area between those two streets, from Folsom Street north to Mission Street. The effect of the combined Terminal Separator Structure and the Transbay Terminal bus loop was to isolate the area within the loop and to effectively separate the areas north and south of the elevated freeway. Additionally, the Main/Beale ramps served as a psychological barrier to pedestrians along the south side of Mission Street, where the ramps touched down.[58] Most of these former freeway parcels and a portion of the area once occupied by the eastern half of the bus loop are now within Zone 1 of the adopted Transbay Redevelopment Plan.

Rincon Hill, a twelve-block area abutting the Plan area south of Folsom Street, is characterized by an emerging mixed-use neighborhood. Once dominated by industrial uses, this area has experienced redevelopment over the last 25 years in the form of rehabilitated industrial buildings to house residential uses and newly constructed large-scale residential towers. Since 2005, development has been guided by an updated Rincon Hill Plan that seeks to transform Rincon Hill into a mixed-use downtown neighborhood accommodating high-density housing and associated services and amenities.

Extending from Market Street to Harrison Street and from Hawthorne Street to Fourth Street, the 87-acre Yerba Buena Center (YBC) neighborhood overlaps the easternmost portion of the Plan area. Development in the YBC area, under a Redevelopment Plan that terminated in 2011, includes the Moscone Center convention and meeting facilities, Yerba Buena Gardens and Center for the Arts, several prominent museums including the San Francisco Museum of Modern Art, the Four Seasons and Marriott hotels, the Metreon retail and entertainment center, a Children's Garden, grocery store, and more than 2,500 residential units.

Further east and south of the Plan area, the East SoMa neighborhood abuts the Plan area's southwest corner. East SoMa is occupied by a mix of land uses, including offices, wholesale and retail establishments, entertainment venues, and residential and live-work units, often located within the same block. Many of the buildings that line the major streets offer small office or light industrial space (often described as "production, distribution, and repair," or PDR space). Housing units are located in primarily two to four story buildings that line the small alleys of the residential enclave districts, as well as in newer, larger buildings on some of the major streets. Residential uses in East SoMa also include higher-

[58] The building at 201 Mission Street, when constructed in 1983, included a pedestrian overcrossing over Beale Street and its primary lobby was at the mezzanine level where the overcrossing ended.

end residential buildings in South Beach, live/work lofts, and affordable housing, such as single-room-occupancy hotels. As a part of the Eastern Neighborhoods planning effort, the East SoMa Plan, adopted in early 2009, encourages the retention of space for existing businesses and residential uses, while allowing space for new development, especially affordable housing, to be built.

Historically, San Francisco's Financial District was contained north of the Plan area, primarily across Market Street. This northern portion of the Financial District is characterized by the intensity and compactness of its development. Land use consists primarily of high-rise structures occupied by commercial office uses and associated ground-floor retail. As described in the 1985 Downtown Plan, the Financial District spills across Market Street to the south, encompassing the Plan area and sharing a border with the Rincon Hill Plan area along Folsom Street.

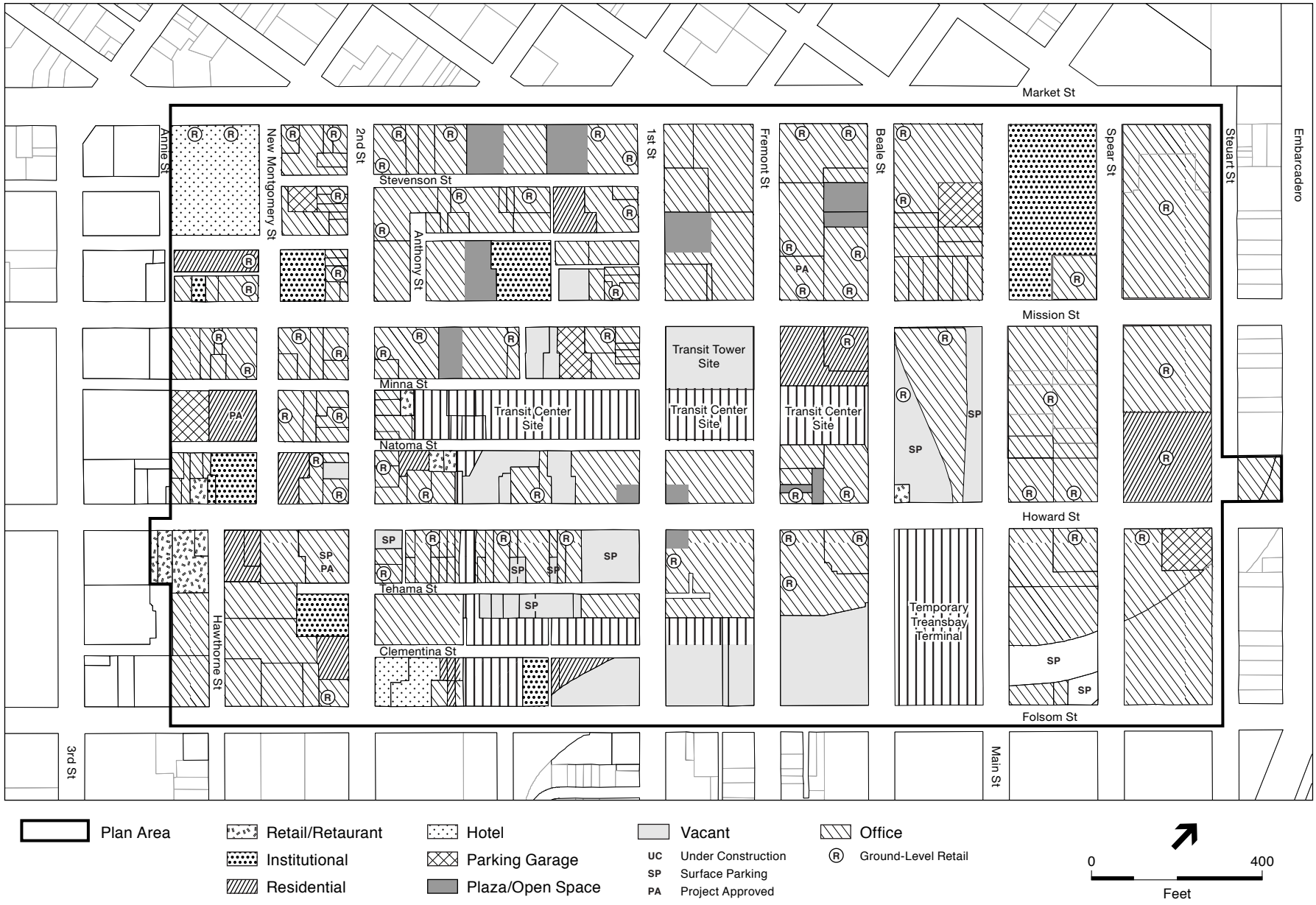
Further west of the Plan area, on the north and south sides of Market Street, land uses include large-scale destination retail. Union Square, which is the core of San Francisco's shopping district, lies approximately one-quarter mile west of the Plan area's northwest corner.

Overall, the majority of the City's new large-scale office and residential uses have been planned and developed in San Francisco's greater Downtown neighborhoods as described above. Since the mid-1980s, development has also included new visitor, hotel and retail uses establishing the greater Downtown area as an entertainment and tourist destination. Similarly, new cultural and institutional uses have expanded within the Downtown.

Transit Center District Plan Area

Existing Land Uses

Development patterns in the Plan area reflect its proximity to the historic Financial District to the north, the Bay Bridge and I-80 off-ramps, the former Transbay Terminal, and the redevelopment of Rincon Hill. As illustrated by **Figure 15**, development in the Plan area overwhelmingly comprises office use. Most office buildings contain ground-floor retail (including restaurant) space, in a pattern typical of much of downtown San Francisco. The Plan area also has several residential buildings, along with institutional uses such as Golden Gate University, the Academy of Art University, the consulate of Mexico on Folsom Street, and the headquarters of the Pacific Coast Marine Firemen, Oilers, and Watertenders and Wipers Association (Marine Firemen's Union) on Second Street. The Plan area includes the Palace Hotel at Market and New Montgomery, the Courtyard Marriott hotel at Second and Folsom Streets, and the smaller Harbor Court and Griffon hotels on Steuart Street near the Embarcadero, with several other hotels just west of the Plan area. There is also a relatively extensive portion of the Plan area that is devoted to transportation infrastructure, including the location of the former Transbay Terminal (and new Transit Center), the existing Temporary Transbay Terminal, and on- and off-ramps that connect to the Bay Bridge. There are scattered light industrial uses and surface parking lots. A large part of the southern portion of the Plan area, along Folsom Street, consists of vacant land that is the former location



SOURCE: ESA, 2008

Case No. 2007.0558E: Transit Center Plan . 207439

Figure 15
Land Use

of the "Terminal Separator Structure" of ramps that connected the Bay Bridge to the now-demolished Embarcadero Freeway and Transbay Terminal. This area, which generally coincides with Zone 1 of the Transbay Redevelopment Plan, is approved for primarily residential development with ground-floor retail uses fronting on Folsom Street, as well as open space. Public open space in the Plan area consists entirely of privately owned publicly accessible open spaces (sometimes known as POPOS) that have been developed in conjunction with office towers built over approximately the last 40 years. These open spaces include both outdoor gardens and plazas as well as indoor atria-greenhouse spaces. There are no public parks as such within the Plan area, although South Park, Justin Herman Plaza, and Union Square are located a few blocks away (within one-third to one-half mile), as are Yerba Buena Gardens, Rincon Park and the Embarcadero Promenade.

The Plan area contains more than 18 million square feet of office space, more than one-fifth of the total office space in the greater Downtown and about 18 percent of the citywide total of just over 100 million square feet.[59] Most of the office space is in high-rise towers built since 1980, although there is a concentration of older, early 20th century office buildings in and around the New Montgomery-Second Street Conservation District, near the Plan area's western edge. Office use occupies more than 60 percent of the developable land (non-street acreage) in the Plan area, and an even greater percentage of the building floor area, given that most office space is in towers taller than buildings that are devoted to other uses.

Although the Plan area has experienced growth in residential units in recent years, residential uses occupy a very small proportion of the land in Plan area—about 3.5 percent of the developable land, according to the Planning Department Land Use database. Most residential units are in buildings newly constructed for residential use since 2000; there are also a handful of older office and other commercial buildings that have been converted to residential use, including the newest such project, at One Ecker Street, a former ice house converted to 51 residential units in 2010. The largest potential such conversion is the former Pacific Telephone & Telegraph building at 140 New Montgomery Street, approved for conversion to residential use (175 units, including adjacent new construction) in 2008; to date, however, no construction has occurred. The largest of the new residential developments in the Plan area are the 60-story Millennium Tower (approximately 420 units) at 301 Mission Street, completed in 2008; the apartments at Rincon Center, a pair of 25-story towers built in 1989 that contain approximately 320 units; a 24-story tower at One Hawthorne Street (approximately 190 units), completed in 2010; a 16-story building at 199 New Montgomery Street (approximately 170 units; 2004); and a 17-story building at 246 Second Street (about 90 units; 2000). There are also large residential buildings just west and south of the Plan area, including a recently completed (2009) 21-story building at 631 Folsom Street (known as "Blu") and several larger projects within the Yerba Buena Center Redevelopment Area (the residential portion of the St. Regis tower and the 40-story Paramount, both at Third and Mission Streets, and two mid-rise buildings at Third and Folsom Streets, St. Francis Place and Museum Parc).

[59] Seifel Associates, "Downtown San Francisco: Market Demand, Growth Projections, and Capacity Analysis." May 2008; p. II-9. Available on the Transit Center District Plan webpage (reviewed January 8, 2011) at: http://www.sf-planning.org/ftp/CDG/docs/transit_center/R_TransitCenter_051308_Final.pdf.

With the exception of the Palace Hotel between New Montgomery and Annie Streets, large parcels along Market Street contain mostly high-rise office buildings. This pattern of high-rise office buildings extends from Market Street southward along Main Street nearly to Folsom Street. Much of the land in the southern portion of the Plan area is occupied by the site of the new Transit Center, now under construction, and associated freeway ramps. South of Mission Street and east of First Street, large parcels of vacant land or surface parking reflect the path of the former Terminal Separator Structure and Embarcadero Freeway and their associated off-ramps, now demolished.

A broader mix of uses characterize the blocks west of First Street. Although many of these smaller parcels are occupied by office uses in older buildings, they also house residential and other uses. Vacant land, often used for surface parking, is notably present throughout this area west of First Street and south of Mission Street. Between Market and Howard Streets, the Second/New Montgomery Streets corridor is characterized by historic office buildings, with ground-floor retail. Although there are a few high-rise structures, mid-rise buildings (generally, three to eight stories) predominate. A similar pattern of office over retail and restaurant uses prevails on New Montgomery Street between Market and Howard Streets. Land uses are somewhat more varied on Howard Street, with a mixture of office uses—in some cases occupying former industrial or warehouse-type buildings—and remaining PDR uses, residential and live-work buildings.

There are no hospitals or pre-college educational institutions in the Plan area. The Plan area does contain several licensed children's day care centers, including facilities at the Pacific Gas & Electric Co. building (77 Beale Street; child-care located at the corner of Mission and Main Streets) and the U.S. Environmental Protection Agency building (75 Hawthorne Street; facility located in adjacent building at 95 Hawthorne), and in office buildings at 342 Howard Street, 221 Main Street, and (just outside the Plan area) 303 Second Street and 2 Harrison Street.

Transit Tower Project Site

Existing Land Uses

As described in the Chapter III, Project Description, this EIR analyzes the environmental impacts associated with developing the Transit Tower on a project-specific level. The Transit Tower project site is on the south side of Mission Street between Fremont and First Streets (see Figure 8 in Chapter III, Project Description, p. 39). The site is approximately 50,000 square feet in size and was last used as the Transbay Terminal passenger waiting and loading and Muni drop-off/layover area. As of early 2011, the terminal building has been demolished, along with the associated vehicle ramps that allowed bus access to the former terminal's loading area, and construction of the new Transit Center is under way. The Transit Tower portion of the former Transbay Terminal site is now vacant. The site is flat.

Buildings in the immediate vicinity exhibit a variety of heights, building styles, ages and uses although, as described above, land uses consist primarily of office space above ground-floor retail stores. An approximately 24-story office tower (100 First Street) is located west of the project site, across First Street. To the north, two office buildings occupy the north side Mission Street frontage across the street from the

project site. At the northeast corner of Mission and Fremont Streets is the 43-story tall Fremont Center at 50 Fremont Street (the tallest office building in the Plan area). On the northwest corner of Mission and First Streets is 440 – 450 Mission Street, an older five-story office building with retail below. An alleyway separating these two buildings runs perpendicular to the project site. Directly across Fremont Street, east of the project site, is the new Millennium Tower at 301 Mission Street. This 58-story, 645-foot-tall residential tower occupies the southeast corner of Mission and Fremont Streets. This project consists of the tower and the associated 12-story residential and amenity building on the southwest corner of Mission and Beale Streets. The Millennium Tower is the tallest existing building in the Plan area. In February 2011, an approximately 355-foot-tall office tower was approved at 350 Mission Street (Case No. 2006.1524E; Final EIR certified February 10, 2011), diagonally across the intersection of Mission and Fremont Streets from the Transit Tower site.

Impact Analysis

Significance Criteria

The proposed project would have a significant effect on land use if it would:

- Physically divide an established community; or
- Have a substantial adverse impact on the existing character of the vicinity.

A third criterion for evaluation of potential significant impacts that is contained in the Planning Department's CEQA checklist is: Would the project 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? Potential inconsistencies with applicable land use plans and policies are discussed in Chapter III. However, a conflict with a *General Plan* or other policy does not, in itself, indicate that a project would have a significant physical effect on the environment within the context of the California Environmental Quality Act (CEQA). Instead, this criterion is intended to ensure that the physical impacts of such conflicts are evaluated for their potential effect on the environment. That is, an affirmative response to the foregoing question means that the consequences of any such conflict must be considered to determine whether such a conflict could cause a substantial adverse physical change that might be considered significant. The physical environmental impacts that could result from such conflicts are analyzed in the applicable environmental topic sections this EIR. These include, in particular, the analysis of aesthetics, traffic and transportation, noise, air quality, wind, and shadow.

As noted, potential inconsistencies with applicable land use plans and policies are discussed in Chapter III, Compatibility with Existing Plans and Zoning. Potential policy conflicts are considered by the applicable decision-making body independently of the environmental review process. Thus, in addition to considering inconsistencies that affect environmental issues, the Planning Commission, Board of Supervisors, or other approving body considers other potential policy inconsistencies, independently of the environmental review process, as part of the decision to approve or disapprove a proposed project, including the draft Transit Center District Plan and proposed Transit Tower. Any potential conflict not

identified in this environmental document would be considered in that context and would not alter the physical environmental effects that are analyzed in this EIR.

Transit Center District Plan

Impact LU-1: Implementation of the draft Plan would not physically divide an existing community. (Less than Significant)

The draft Plan is proposed as a regulatory program, not a physical development project. The Plan policies and implementing change in the *Planning Code* would not create any new physical barriers in the Plan area. There are no major planned roadways, such as freeways, attributable to the proposed project that would disrupt or divide the Plan area or individual neighborhoods or subareas.

The proposed Plan would allow for construction of the tallest building in San Francisco—the 1,000-foot Transit Tower—as well as several other buildings that would be among the City's tallest. These buildings would be developed within the existing block configuration and would not alter the Plan area's street grid. Moreover, the new uses called for in the Plan would continue and intensify the existing land use pattern of the Plan area. As discussed in the Setting, the existing land use in the Plan area consists largely of office space. Consequently, the project would not physically disrupt or divide an established community in any direct sense. Although the Plan would allow for several very tall buildings to be built, such development would not alter the patterns of moving about the area, nor physically interfere with interaction between existing or future uses of the Plan area or its residents and employees. The Plan would, however, indirectly affect established communities by altering the land use characteristics of the Plan area, and this is discussed below.

Mitigation: None required.

Impact LU-2: The draft Plan would not substantially alter the existing character of the Plan area. (Less than Significant)

Changes in Plan area character would not be caused by the zoning itself, but by projects—including changes in the use of existing buildings, additions, new construction, and demolition—that could occur on individual sites within the Plan area after Plan adoption and rezoning, if applicable. However, because zoning establishes which land uses are permitted, prohibited, or limited in each district, and also establishes maximum building height and bulk, it determines how much land and potential building space is available in the city for each type of use.

The draft Plan would extend the C-3-O (SD) use district northward to encompass the area generally defined by Market, Steuart, Natoma, and Annie Streets. In so doing, the draft Plan would increase the land area eligible to develop with increased density through the transfer of development rights from other sites. The new zoning would replace existing C-3-O district—where there is less flexibility with

respect to transfer of development rights—as well as a small area of the existing C-3-S district along Hawthorne Street and between Folsom, Second, and Tehama Streets, in the southwest corner of the Plan area. Where the C-3-O (SD) replaces the C-3-S district, controls would allow for more office development.

Around the new Transit Center, the boundary of the Public use district would be shifted slightly to allow for redevelopment of the Transit Center and its ramps and to recognize the removal of some former Bay Bridge vehicle ramps. The proposed Transit Tower site would be rezoned to C-3-O (SD). The area zoned Transbay-DTR, within Zone 1 of the Transbay Redevelopment Plan area, would remain unchanged, except for a small shift to C-3-O (SD) along Clementina Street.

In addition to changes to the underlying use districts, the draft Plan would include additional policies and land use controls in the form of a commercial/office subdistrict. Additional controls within this subdistrict would apply to large opportunity sites within the area bounded roughly by Market, Beale, Clementina, Tehama and a line midway between Second and New Montgomery Streets. With the intention of achieving an overall ratio of no less than 70 percent office space within the larger Plan area, the subdistrict would limit the amount of allowable non-office uses on these opportunity sites by requiring a minimum ratio of commercial to non-commercial (e.g. residential, hotel, cultural) uses. Specifically, as stated on p. 19 of the November 2009 Draft Plan, "On development sites larger than 15,000 square feet within a prescribed sub-area of the C-3-O (SD) district, new construction greater than 6:1 FAR would be required to have at least three square feet of commercial [office] space for every one square foot of residential, hotel, or cultural space." The proposed limitation on non-office space within the core of the Plan area, centered on the new Transit Center, would continue and intensify the prevailing use within this sub-area. Therefore, the proposed requirement that larger sites be developed primarily with office space would not be anticipated to result in substantial adverse change in the character of the Plan area. (Zone 1 of the adopted Transbay Redevelopment Plan, however, permits substantial residential development, generally along the north side of Folsom Street.)

To maximize the potential for the Plan area to accommodate future job growth, the Plan also proposes a minimum level of development—a FAR of at least 9:1—on sites larger than 15,000 square feet. In addition, the proposed Plan seeks to encourage continuous consumer retail uses on key street frontages, and maximize the diversity of businesses on the ground floor to create lively destination commercial areas. Finally, the draft Plan proposes increases in height limits on a number of development opportunity sites within the Plan area, as shown in Figure 3, p. 14 in the Project Description, and elimination of the maximum floor area ratio of 18:1 in the C-3-O (SD) district; instead, building height and bulk controls would govern development density.

The combination of all of these proposed use district and height limit changes would encourage increased density and the construction of larger and, in select instances, substantially taller structures than currently exist within the Plan area, and would also promote a high concentration of office development. In total, the draft Plan anticipates the addition of approximately 6.35 million square feet of office space to the Plan area over the next approximately 20 years, which is some 2.2 million square feet more than could be permitted under existing zoning and height controls. However, because the Plan area already contains

predominantly office uses—more than 18 million square feet—within a dense urban area, the implementation of the draft Plan would intensify the existing character of the Plan area but would not fundamentally alter it. While the increased scale of development would be noticeable in terms of new large developments and more crowded streets and sidewalks, these changes would occur gradually over time, as approvals are granted and funding becomes available to implement individual development projects on sites throughout the Plan area. Based on the above, the proposed changes would not be characterized as significant or adverse, in terms of their effects on the character of the Plan area.

In addition to office uses, over time the Plan area would experience an increase in residential units (approximately 1,300), hotel rooms (approximately 1,000), and retail uses (86,000 square feet). This would create a mix of new uses, both at and above the ground level, although office uses would be maintained as the predominant land use. However, all of these uses currently exist in the Plan area as complements to the primary office use of the neighborhood, and therefore the character of the district is unlikely to change substantially as a result of this intensification of existing land uses.

It is important to note that some subareas within the Plan area would experience less noticeable change. For instance, blocks east of Main Street are largely built out and the draft Plan does not target them for major new development (i.e., no opportunity sites have been identified within this area). The character of these blocks would remain largely intact, although they may experience higher levels of pedestrian and vehicle activity along with the rest of the Plan area. Similarly, blocks west of Second Street, which contain older, more moderately-scaled buildings, including those in the New Montgomery-Second Street Conservation District, would also experience a lesser degree of change. While some new development within this subarea may lead to greater densities and building heights, new structures would be generally mid-rise in scale, in compliance with the lower height limits, and would not greatly impact the overall character of these areas. Thus, the draft Plan would not result in significant adverse impacts within these subareas.

Other changes to typical building heights and styles that are expected with the increase in residential development are described in Section IV.B, Aesthetics, and include taller buildings of contemporary design with features such as curtain glass walls, unadorned facades, and a regular pattern of fenestration.

Overall, while the expected land use changes may alter the existing character of several discrete subareas in the Plan area, the changes would not be considered substantial, even if some observers in certain subareas might find them to be adverse, because, as noted, the same land use pattern would prevail as under existing conditions. Moreover, in many instances, the proposed changes, such as pedestrian realm improvements, could serve to enhance the streetscape and the overall character of the neighborhood, by attracting services and directing public improvements to address existing deficiencies as well as new neighborhood needs. For all of the reasons discussed above, the implementation of the draft Plan would result in less-than-significant impacts to the land use character of the Plan area.

Mitigation: None required.

Transit Tower

Impact LU-3: The implementation of the Transit Tower project would neither divide an existing community nor substantially alter the existing character of the Plan area. (Less than Significant)

The Transit Tower, a planned 61-story, approximately 1,070 foot tall office building, would be located north of and adjacent to the new Transit Center on the south side of Mission Street between Fremont and First Streets. Under the proposed project, the Transit Tower would encompass approximately 1.35 million square feet of office space and about 16,500 square feet of retail space. Once constructed, it would become the most densely developed parcel within the City, built on a lot that, until recently, was occupied by the loading area in front of the Transbay Terminal. At completion, the Transbay Tower would alter the land use character of its vicinity, but not to a substantial degree, in that the building would provide office and associated retail uses in the same fashion as the majority of buildings in the area. Under existing conditions, there are approximately 10 million square feet of office space within about one block of the Transit Tower site and, in this context, the project's addition of 1.35 million square feet of office space would not result in a noticeable change in the types of activity in the immediate neighborhood. While the new structure would greatly intensify the land uses at the project site and introduce a high level of pedestrian activity to the site itself, the change would not be substantial in the context of the immediate vicinity or the larger Plan area.

Most of the tower floors would be occupied by office uses; however, retail uses would be provided on the lower levels, including the ground level. Although the character of land uses experienced by the pedestrians would be different from how the site is perceived today, and how it was perceived when occupied by the former Transbay Terminal forecourt (now demolished), the ground-floor character of the Transit Tower would be consistent with other ground-level retails uses that can be found throughout the immediate vicinity and the Plan area. Thus, at the ground level, the proposed changes would be noticeable but would not be considered adverse.

The Transit Tower would be developed within the existing street grid, and thus would not divide the community. The building, including rooftop sculptural element, would be more than 400 feet taller than the tallest existing buildings in the vicinity. This greater height, while readily apparent to anyone looking up, would not be expected to physically divide the community or adversely affect the character of the area, because most pedestrians, bicyclists, and drivers—most of those who could see the top of the building upon observation—are not anticipated to spend a large amount of time looking up as they travel through the neighborhood, for the simple reason that most persons moving through the area must pay attention to their path of travel.

Because the Transit Tower project would continue the types of uses that already predominate within the Plan area, its construction is not likely to adversely affect the overall land use character of the project site and its immediate surroundings. For this reason, this impact is considered less than significant.

Mitigation: None required.

Cumulative Impacts

Impact C-LU: The draft Plan, including the Transit Tower, along with other cumulative development, would neither divide an existing community nor substantially alter the existing character of the Plan area. (Less than Significant)

Other cumulative development in the vicinity, described in the introduction to Chapter IV would combine with the draft Transit Center District Plan, including the proposed Transit Tower, to result in further changes in land use in the Plan area and vicinity. In particular, approved development within Zone 1 of the Transbay Redevelopment Plan would add more than 3,000 additional dwelling units to the Plan area, mostly in residential towers along Folsom Street. Retail space would be provided at the ground level. Some 4,000 residential units are approved in the Rincon Hill Plan area. Together, these residential units in the Transbay Redevelopment Plan (Zone 1) area and in Rincon Hill would create a high-density residential neighborhood on the edge of the greater downtown. Additional nearby development, such as a proposed new residential tower that would also accommodate the Mexican Museum at the northwest corner of Third and Mission Streets, just west of the Plan area, would further the goal of creating a high-density, mixed-use neighborhood focused on, and located near, the Transit Center.

The new Transit Center structure will extend from Beale Street west to just east of Second Street, between Minna and Natoma Streets. It will thus cover an area slightly larger than the area occupied by the former Transbay Terminal, which ended near Shaw Alley. The new Transit Center, at approximately 70 feet in height (the approximate equivalent of a five-story office building or six-story residential building), will also be taller than the old Transbay Terminal, which had a 50-foot-tall center section (between First and Fremont Streets) that was flanked by 40-foot-tall wings to the east and west. The new Transit Center will extend three blocks east-to-west within the Plan area and will be situated in much the same manner as was the old Transbay Terminal although, as with the old terminal, both vehicular and pedestrian traffic would be able to pass beneath the Transit Center on First and Fremont Streets. Despite the additional height of the Transit Center compared to the former Transbay Terminal, the effect in terms of physical division would be comparable to the condition that existed for some 70 years, until the Transbay Terminal was demolished beginning in 2010. Arguably, the new Transit Center's extensive use of glazing and multiple pedestrian openings on the ground floor would result in a much "lighter" and more welcoming building that would reduce the effect of physical "blockage" at street level. Hence, to the extent that the Transit Center will create physical division, neither the draft Transit Center District Plan nor the Transit Tower would make any meaningful contribution to this condition or make it worse, because neither the Plan nor the Transit Tower would result in any physical division of the community, as described further under Impacts LU-1 and LU-3, above. Conversely, the draft Plan is in part intended to physically and functionally integrate the Transit Center with the surrounding area.

Exceptions to Planning Code Bulk, Wind, and Shadow Requirements

As noted in Chapter II, Compatibility with Existing Policies and Plans, *Planning Code* Section 309, Permit Review in C-3 Districts, allows the Planning Commission to grant exceptions to certain *Planning Code* standards. Review of Planning Department records and Planning Commission minutes revealed that

there were more than 30 cases involving exceptions from Planning Code requirements for ground level winds (Section 148) and building bulk (Section 270) that were granted since the Downtown Plan and accompanying zoning regulations were approved. About 27 of these buildings have been constructed, including most major downtown buildings built since the adoption of the Downtown Plan. Another project granted an exception (Trinity Plaza, at Eighth and Market Streets) is under construction in phases. *Planning Code* Section 146(c), which states that new buildings and building additions shall be shaped "so as to reduce substantial shadow impacts on public sidewalks in the C-3 Districts" [other than on specified streets that are governed by another *Code* section], if this can be accomplished "without creating an unattractive design and without unduly restricting the development potential of the site in question." Determinations are made with respect to compliance with this requirement as part of the Section 309 downtown project review process. Planning Department records reveal at least two projects that have been granted exceptions with respect to the Code's wind and bulk provisions have also been specifically determined to be in compliance with the Section 146(c) requirement, including the Millennium residential tower, across Fremont Street from the Transit Tower site, and the office building at 555 Mission Street.

With regard to wind (Section 148), in particular, the vast majority of projects involving high-rise buildings that have been approved since adoption of the Downtown Plan have required, and have been granted, an exception to the *Planning Code* wind requirement that, "When preexisting ambient wind speeds exceed the comfort level, or when a proposed building or addition may cause ambient wind speeds to exceed the comfort level, the building shall be designed to reduce the ambient wind speeds to meet the requirements." This is because existing winds at many locations in downtown San Francisco exceed both the comfort criterion of 7 miles per hour (mph) in public seating areas and the comfort criterion of 11 mph in areas of substantial pedestrian use (generally, sidewalks), and it is generally not feasible to design a new building that would reduce existing wind speeds such that the these criteria would be met, or, in many instances, to avoid creating a certain number of new exceedances.

In terms of cumulative effects related to compliance with Section 146, the effect of each potential project's shadow is evaluated by Planning Department staff, with the conclusions presented in the proposed approval motion that was presented to the Planning Commission and then reviewed and, for those projects approved by the Commission, consented to by the Commission as part of the findings required under Planning Code Section 309, Permit Review in C-3 Districts. In general, findings have indicated that, with respect to determinations under Section 146(c), as well as exceptions to Section 146(a), which governs specific streets (including only Second and New Montgomery Streets in the Plan area), approvals were granted when a project did not result in substantial new shadow on sidewalks and streets. That is, shadow from any individual project, including the proposed Transit Tower, would (or does, in the case of existing buildings) cover a relatively small area of sidewalk and/or street, for a relatively short duration. The Downtown Plan EIR of 1984 acknowledged that assumed development could result in several hours of sunlight being eliminated in the winter at a particular sidewalk location, but found that several hours of existing sunlight would often remain during spring, fall, and summer. Moreover, much of the activity on Downtown sidewalks consists of routine travel from one place to another that is unlikely to be adversely affected by incremental new shadow, as opposed to recreational activity. Finally, to the extent

that a project that exceeds the *Planning Code* bulk limits is responsible for additional shadow, compared to a compliant building, the bulk exceptions are likely to be made for the building's upper tower, where bulk requirements are more stringent. This means that potential shadow impacts of such a bulk exception are likely to be more distant from the building's location (because shadow from a taller building extends much farther than shadow from a short building). As the distance from a building increases, so too does the chance that this building's shadow on a distant site is intercepted by shadow from a building closer to the distant site, even if the closer building is shorter than the building in question. Thus, the impact would not appear to "substantially affect the usability of other existing publicly accessible open space or outdoor recreation facilities or other public areas" (the criterion for an effect under CEQA), and the cumulative exceptions granted do not appear to warrant a conclusion that such exceptions could combine to result in a cumulative significant impact with respect to shadow on Downtown sidewalks.

Beyond effects on ground-level winds and shadow, building bulk affects visual impacts as well. However, a comparison of views of the Downtown from Potrero Hill (one showing 2008 conditions, and another showing long-term projected development as assumed in the Downtown Plan EIR) shows that, in general, development in the Downtown has resulted in a configuration of the Downtown skyline that is comparable to that forecast in the Downtown Plan EIR, despite the fact that, as noted above, more than two dozen buildings have been built without full compliance with the Downtown Plan bulk controls. Full compliance with the bulk controls would have resulted in a relatively minor change, compared to now-existing conditions, in the sculpting of the top of newer buildings, particularly with regard to the rooftop cupola-like elements. However, it does not appear that development that has proceeded since adoption of the Downtown Plan has resulted in substantially different building bulks than was anticipated in the Downtown Plan EIR.

Developed projects in the Plan area that were granted exceptions to *Planning Code* wind, shadow, and/or bulk requirements, pursuant to Section 309, include office buildings at 555 and 560 Mission Street, 55 and 101 Second Street, 199 and 215 Fremont Street, and the three office buildings of Foundry Square at First and Howard Street; the Millennium residential tower at Fremont and Mission Streets and another residential building at 199 New Montgomery Street; the Courtyard-Marriott Hotel at Second and Folsom Streets; and the Museum of Modern Art parking garage on Minna Street.

Regarding the granting of exceptions to *Planning Code* requirements under Section 309 generally, this is a policy decision that is made by the Planning Commission on a case-by-case basis. To the extent that the granting of such exceptions would result in physical impacts, those impacts are analyzed in this EIR. The fact that a project would require one or more exceptions to *Planning Code* requirements does not, in itself, indicate that the project would have a significant physical effect on the environment.

In summary, the draft Plan and Transit Tower would, in combination with other nearby development, contribute to an intensification of land use in the greater Downtown, but would not result in adverse effects with respect to the character of the Plan area and vicinity, nor would such development physically divide an existing community.

Mitigation: None required.

B. Aesthetics

This section describes existing visual conditions in the Transit Center District Plan area and analyzes the potential for the draft Plan to affect those conditions. This section focuses primarily on the visual character of the Plan area, views of the Plan area from public vantage points throughout the city, and light and glare issues. This section specifically analyzes the physical changes proposed by the Plan as described in the Project Description. This section also describes and analyzes the potential visual impacts associated with implementing the development of the Transit Tower project, located on Mission Street, between Fremont and First Streets. Photographs and visual simulations (photomontages) are included in this section to supplement the analysis of the existing visual character of the Plan area and the individual Transit Tower project.

Environmental Setting

Transit Center District Plan Area

Visual Character

The Plan area covers approximately 145 acres and is surrounded by the Northern Financial District, Rincon Hill, and East SOMA neighborhoods, with The Embarcadero waterfront abutting the Plan area to the east. The boundaries of the District are roughly Market Street to the north, Steuart Street to the east, Folsom Street to the south, and a line to the east of Third Street to the west. The visual setting of the Plan area is varied, reflecting the visual characteristics of its natural and built elements, including the topography, street grid, elevated freeway segments, individual buildings and blocks, vacant and underutilized lots and public open spaces. However, it is possible to describe some general characteristics that establish the Plan area's visual setting.

The Plan area's topography is at a gradual but slight incline, ranging from an elevation of zero, SFD,[60] along the Plan area's eastern portion near the waterfront to a crest of between about 25 and 40 feet, SFD, near the Plan area's western boundary (just east of Third Street). Such gradual inclines are not easily perceptible to the eye and most of the area appears relatively flat to a typical pedestrian. There are no hills or valleys of note within the Plan area, although Rincon Hill begins its rise to about 100 feet in the southern portion of the Plan area.

The type and distribution of land uses and building types within the Plan area also contribute to its visual character. The Plan area is made up largely of office and retail uses, although it also contains a limited amount of residential, light industrial, cultural/institutional/educational, and public uses, as well as vacant/underutilized lots and surface parking lots. The office uses exist within a variety of structures, from the recently converted single-story former industrial buildings to early 20th Century mid-rise office buildings clad in masonry to the more modern glass-encased office towers. Many contain retail and

[60] SFD, or San Francisco City Datum, establishes the City's zero point for surveying purposes at approximately 8 feet above mean sea level.

dining uses on the ground level, such as shops, restaurants, cafes, and bars. The prevalence of high-rise towers north of Minna Street visually defines this portion of the Plan area. The towers are consistent with the area's functions as the southern extension of City's business center, which continues from the North Financial District, north of Market Street.

A number of residential towers, including the Millennium Tower at Fremont and Mission Streets in the eastern portion of the Plan area and One Hawthorne, 199 New Montgomery, and 246 Second Street in the western part of the Plan area, have also been constructed within the last 20 years, as have several smaller residential development and conversion projects. In terms of visual character, the newer residential towers appear similar to the other high-rise buildings in the area, employing extended silhouettes and façade materials (such as glass) that are similar to the office towers, albeit with lesser floor-to-floor heights.

Several subareas within the Plan area establish a departure from the built-up vertically-oriented character of the Plan area and contribute a different set of visual attributes to the Plan area. One of them is the area defined by the series of on- and off-ramps that linked the Bay Bridge to the former Transbay Terminal and to surrounding streets, as well as the site of the former terminal itself. This area, bounded generally by Mission, Beale, Folsom, and Essex Streets, was the subject of prior environmental review and is encompassed within the adopted Transbay Redevelopment Plan. In particular, the area within the looping elevated ramps that carried buses to and from the Transbay Terminal has experienced very limited new development even as some surrounding blocks were redeveloped beginning in the 1970s and 1980s with office towers built to the east, on Main and Spear Streets, and continuing in the 1990s and 2000s with office and residential high-rise development to the west, on and near Second Street. The other enclave that departs from the vertical quality of the Plan area is the area containing the New Montgomery-Second Street Conservation District and the Second and Howard National Register Districts. These areas, located within the western portion of the Plan area, contain a more moderately scaled development pattern, consisting mostly of two to 8 story buildings constructed in the early 20th Century. Both of these enclaves are discussed further below.

The remaining transportation infrastructure, associated with both Bay Bridge vehicle ramps and the former Transbay Terminal ramps, also influences the visual character of the Plan area by creating strong visual boundaries and voids within the neighborhood. Several blocks and streets, particularly those surrounding the new Transit Center, are interrupted by vehicular overpasses. Furthermore, the Plan area is proximate to the I-80 freeway and its Bay Bridge on-ramps. Proximity to freeways and concentrated amounts of office space within the Plan area contribute to streets that are often congested with vehicles, bicycles, and pedestrians, particularly during the a.m. and p.m. peak hours. The moving traffic, as well as heavily used sidewalks, add to the intensified urban nature of the Plan area. Surface parking lots, often filled to capacity during weekdays, as well as open spaces through the Plan area create voids between the visually dominant high-rise structures.

In general, although this neighborhood contains a high proportion of the City's high-rise buildings, the area as a whole lacks a high degree of visual definition or coherence beyond that of a very dense,

vertically built neighborhood with some of moderately developed subareas. The existing visual character of the Plan area is, therefore, mostly defined by its location and prevailing urban form; the geometry and scale of its street grid and surrounding transportation infrastructure; and variety of building types, including early 20th century masonry buildings and contemporary office and residential towers. The following section describes visual quality of the Plan area in greater detail.

Streets and Street Pattern

The large scale of streets and blocks contributes to the visual character of the Plan area. The Plan area abuts Market Street to the north, which acts as a seam between the street grids to its north and south. The orientation of the streets is abruptly offset by 45 degrees along Market Street. This shift, in combination with the fact that most of the blocks to the south of Market are nearly four times as large as those the north of Market Street, creates a wholly different grid system south of Market.

Within the Plan area, blocks west of First Street are the largest (825 feet by 550 feet), while blocks to the east of First Street measure 275 feet by 550 feet. Most of the larger blocks west of First Street are broken up by mid-block, east-west and/or north-south alleys,[61] reducing their perceived length at the street level.

The primary north-south oriented streets, such as Steuart, Spear, Main, Beale, Fremont, First, Second, and New Montgomery, are relatively wide (right-of-way of 82.5 feet, except New Montgomery, which is about 70 feet wide) and accommodate up to four lanes of traffic (in addition to one or two parking lanes). These streets, with the exception of Second Street, carry one-way traffic through the Plan area, connecting it to the surrounding roadways, including some that connect directly to the north of Market streets and some that connect to the nearby freeways and the Bay Bridge. The primary east-west oriented streets, Mission, Howard and Folsom Streets, are also 82.5 feet wide, while Market Street has a 120-foot right-of-way. While Market and Mission Streets carry two-way traffic, Howard and Folsom Streets operate as one-way streets for most of their length. All of the streets within the Plan area convey a highly urbanized feel, consisting of generally regular sidewalks and intersections, overhead utility wires, and often heavy flows of traffic (see **Figure 16**). Some sidewalks and publicly accessible open spaces contain street trees, although in general, the Plan area is limited in pedestrian amenities along the sidewalks.

Market and Mission Streets are used by a variety of public transportation modes (i.e., buses, trolleys, Muni Metro, etc.) that help to infuse the sidewalks with a high level of pedestrian activity. Most other major Plan area streets, however, are dominated primarily by cars, and experience a reduced volume of pedestrian activity. The density of development, usability of the streets by pedestrians—including pedestrian-oriented uses at street level, such as ground-floor retail—and the availability of public transit within the northern part of the Plan area contribute to its visual quality, resulting in a more vibrant urban quality at the street level than displayed by the streets in the southern part of the Plan area. These streets,

61 The term "alley" is used to denote minor streets between the multi-lane major streets in the Plan area. Although most are not technically alleys as defined in the Planning Code (by which an alley is a right-of-way less than 30 feet), these minor mid-block streets are commonly referred to as such, and are distinguished from the major streets by their relatively narrow widths.









View corridors within the Plan Area are dominated by paved surfaces and urban features. Most views to the north terminate with North of Market buildings.

SOURCE: ESA

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 16
View Corridors

with less density of development, generally convey a character dominated by cars rather than pedestrians, and also have less of a pedestrian orientation of ground-floor uses.

In addition to heavily trafficked major streets, the Plan area also contains a number of narrow alleys, some in the north-south direction but most in the east-west orientation. These alleys, described in more detail below, are generally one-way streets that carry one or two lanes of traffic, with additional one or two lanes designated for parking. The alleys that intersect the primary street grid convey a smaller scale, although most do not provide any pedestrian amenities and, as a result, do not experience heavy pedestrian use. Many alleys provide access to service entrances and garages for uses oriented primarily on the major streets, which sometimes present a blank doorway at street level (see **Figure 17**).

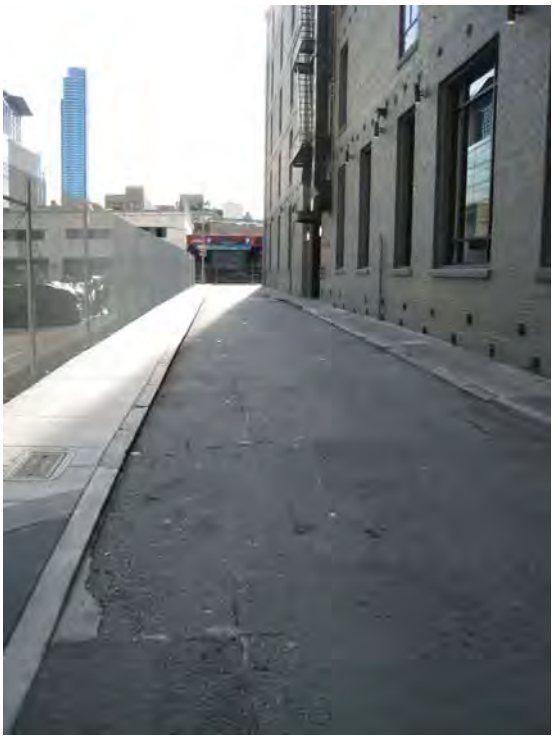
As noted above, the Plan area contains several off- and on-ramps, which connect the Plan area to the nearby freeways and the Bay Bridge. These ramps emphasize transportation-related attributes associated with the Plan area as well as obscure views to the Bay and to Rincon Hill, creating dark and cramped spaces underneath. While several lots underneath the ramps contain surface parking uses, others are vacant and appear neglected. These vehicular overpasses are visible from various vantage points within the Plan area and exist as unadorned angular concrete structures, most suspended between about 15 and 20 feet above the street grade (see **Figure 18**).

Buildings and Streetscapes

As discussed above, office uses predominate within the Plan area, although other land uses, such as residential, commercial, entertainment, educational, and public uses can also be found throughout this neighborhood. Although the Plan area contains buildings of different types and sizes to accommodate the multitude of land uses, the visual character of the Plan area (particularly in the northern subarea), is dominated by modern skyscrapers. This is how the Plan area is generally perceived in the region and what makes it recognizable in long-range views of the city (discussed in greater detail below).

The northern portion of the Plan area (north of approximately Minna Street, extending to Howard Street in the east) operates as a continuation of the North Financial District. Although the block sizes and orientations differ from areas just north of Market Street, the northern portion of the Plan area is similar to it in building scale and development pattern. Like the Northern Financial District, the northern portion of the Plan area contains a concentrated number of high-rise structures, interspersed with early 20th century historic buildings, parking lots, and privately owned, publicly accessible open spaces (POPOS) (see **Figure 19**). As noted above, the northern subarea contains a mix of ground-floor commercial establishments that attract heavy pedestrian use and result in a high level of activity at the street level. Along Market Street, rows of modern high-rise structures along both sides form an "urban canyon," which terminates at the Ferry Building just beyond the Plan area's easternmost edge (at the waterfront).

While building setbacks, articulation, façade materials, and architectural details emphasize the individuality of the buildings along Market and Mission Streets, the large-scale development pattern itself, which conveys a dense urban atmosphere, is the dominant feature that defines these streets as a whole. Many of the skyscrapers contain a podium with one or two towers that range in height to 600 feet.



Shaw Alley



Anthony Alley



Natoma Street



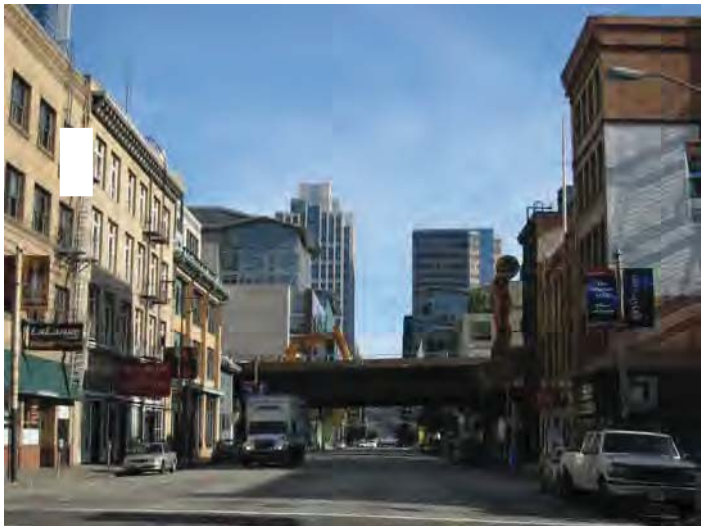
Clementina Street

The Plan Area contains a number of narrow streets and alleyways, which vary in abutting land uses and the number of travel lanes but are generally consistent in that most lack vegetation or other pedestrian amenities and receive little sunshine.

SOURCE: ESA

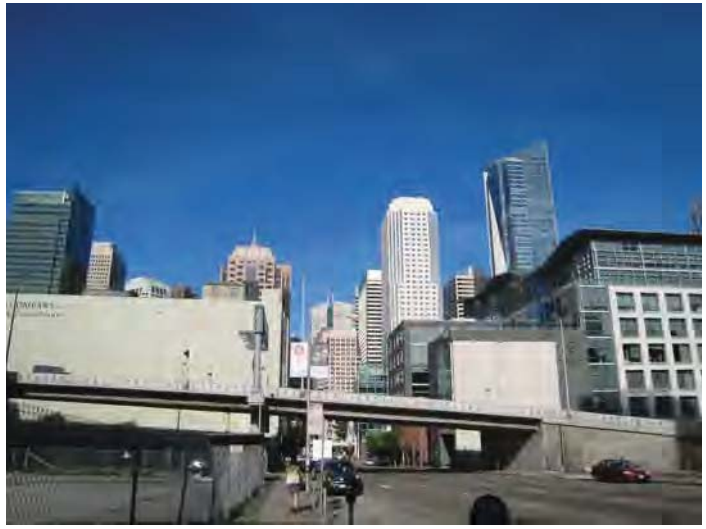
Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 17
View of Alleys









Freeway segments, which are associated either with the former Transbay Terminal or with the nearby freeways (and the Bay Bridge), can be seen from various vantage points throughout the Plan Area. In most locations, they tend to obscure the views along the major corridors and create visual edges within the Plan Area.

SOURCE: ESA

Figure 18
View of Freeways









The Plan Area contains a number of publicly-accessible public plazas, most of which are affiliated with one of more of the adjacent high-rise office towers. Most contains large areas of paved surfaces as well as some streets furniture (such as benches) and planter landscaping.

SOURCE: ESA

Figure 19
View of Open Spaces and Public Plazas

In terms of materials, a large number of buildings utilize glass and steel curtain walls, resulting in many areas containing transparent and/or reflective surfaces. Concrete and masonry facades can also be found within the Plan area; some residential towers have balconies. **Figure 20** contains photographs of some of the contemporary structures within the Plan area.

In terms of height, the skyscrapers along Market Street range in height from about 300 to nearly 600 feet, while those along Mission Street range in height from about 400 to 650 feet. Although the high-rise structures are most numerous within the northern subarea, some also punctuate other subareas further south, particularly in the eastern portion of the Plan area, along Main and Spear Streets, and along Third Street, just outside the western Plan area boundary.

The New Montgomery-Second Conservation District and the Second and Howard National Register District, each located in the western portion of the Plan area, represent a departure from the pattern of almost continuous large-scale development in the northern part of the Plan area. These visually distinctive enclaves contain a mid-rise collection of historic structures, most ranging in height from two to six stories, although some along New Montgomery Street are taller, up to 15 stories and more. In terms of design, the majority are masonry commercial office or light industrial buildings constructed or reconstructed between 1906 and 1929. Within these districts, visual importance is given to architectural detail, particularly on office buildings, in the form of horizontal elements such as cornices and belt courses, vertical columns, colonnades, and arches, and rustication of the masonry, which gives the appearance of large blocks of stone. Loft industrial buildings typically have limited detail, primarily in the cornice and window surrounds. The historic buildings tend to activate the street level and, owing to a large number of storefronts, restaurants, cafes, bars, and other entertainment-related uses, results in a high level of pedestrian activity. In general, these historic corridors retain a more human scale than other portions of the Plan area, owing to a reduced building scale and high level of street activity (see **Figure 21**).

As discussed above, the other subarea that interrupts the otherwise large-scale development pattern in the area is the former Transbay Terminal and adjacent area to the south, especially the area defined by the one-time looping bus ramps to and from the Bay Bridge. The terminal once extended over Fremont and First Streets above the street level, forming two vehicular/pedestrian tunnels on either side of the main structure, which were dark and relatively unattractive. The development pattern south of Minna Street, within the former loop of the bus ramps and along Folsom Street where the ramps to the Embarcadero Freeway once existed, is greatly reduced in scale as compared to that north of Minna Street. No substantial new development occurred in this area until the construction of the office tower at 301 Howard Street (at Fremont) in 1987, and it was 13 years before the building across Howard Street, at 199 Fremont Street, was built. In general, building heights in this subarea drop off substantially and the area is dominated by a mix of low- and mid-rise older building stock, some of which has been renovated, with newer buildings, including mid-rise office, hotel, and residential uses, mostly east and west of the former ramps.

The Plan area also contains a number of vacant lots, surface parking lots, and other underutilized parcels, some of which are bordered by cyclone fencing to limit public access. They infuse industrial character









The Plan Area contains a concentration of modern structures, including both high-rise office towers and mid-rise commercial buildings. Many employ the use of glass and industrial details, such as metal casement windows. Some also incorporate multiple façade textures, upper story set-backs, and angled rooflines, effects that differentiate these buildings and create a sense of visual interest along the primary facades.

SOURCE: ESA

Figure 20
Views of Contemporary Structures within the Plan Area









The Plan Area contains two historic districts, the New Montgomery-Second Conservation District and the Second and Howard National Register Districts. These enclaves contain buildings that were constructed in early 20th Century, most of which range from two to six stories in height. The historic districts convey a more moderate pattern of development than is found throughout the northern portion of the Plan Area. The mix of building heights, architectural styles, colors and buildings materials, as well as pedestrian activity at the ground level all adds a sense of vibrancy and vitality to this portion of the Plan Area.

SOURCE: ESA

Figure 21
Views of Historic Districts

into the Plan area and, when sited next to buildings several stories tall, expose the adjacent buildings' side walls, some of which contain murals or commercially-scaled signage (see **Figure 22**).

Visual and Scenic Resources

The Plan area lacks topographic relief and does not possess individual natural landscape features with high scenic resource value. With limited exceptions, the Plan area likewise does not contain built features with high scenic resource value, nor does it contain a visually remarkable diversity of vegetation.

The Urban Design Element of the *San Francisco General Plan* classifies some streets in terms of their importance as visual resources as well as quality of street views that are available from vantage points along those streets. In the project vicinity, Market Street, which runs along the northern edge of the Plan area, is characterized as a street containing "Street View of Important Building and Street That Defines City Form." No other streets within the Plan area are characterized as streets important to urban design and views. Additionally, long stretches of Mission, Howard, and Folsom Streets, including segments within the Plan area, are characterized by the *General Plan* as having "average" quality of views, with views along Mission, Howard, and Folsom Streets between First and Third Streets characterized as having "good" quality of street views. No other street segments are specifically characterized by the *General Plan* in terms of view quality along those streets.

The Plan area contains a number of notable buildings although, as a whole, does not possess what would normally be termed "high scenic quality." As discussed above, the transformation of much of the Plan area into a southerly extension of the financial district is reflected in the large number of skyscrapers built along Mission and Market Streets. While many are comparable to one another in terms of massing, façade materials, and architectural details, several contain distinct visual attributes either at the street level or which can be perceived in long-range views. Those that draw attention at the street level include buildings such as the Federal Reserve Building (Market Street, between Spear and Main Streets), a large concrete-clad building that gradually sets back above the podium level and contains a pedestrian arcade along the ground story, extending partially into the sidewalk. Another is the Palace Hotel (Market and New Montgomery Streets), a historic landmark hotel that contains a high degree of ornamentation along its main facades. Other visually notable buildings erected in early 20th century include the Pacific Telephone & Telegraph Building at 134-40 New Montgomery (vacant and approved for conversion to residential use), the Philips & Van Orden Building at 234 First Street, the Matson Building at 215 Market, the PG & E Building at 245 Market Street, and the William Volker Building at 625 Howard Street. Other older buildings that add visual interest to the streetscape are those within the aforementioned New Montgomery-Second Conservation District and the Second and Howard National Register Districts.

Of the modern buildings, many contain contemporary features and massing such as unadorned facades, glass curtain walls external skeleton detailing, and a regular pattern of fenestration. Examples of those than stand out in views of the Plan area include the Millennium Tower at Mission and Fremont Streets, 101 Second Street, 555 Mission Street, and 560 Mission Street. The Plan area also contains examples of Postmodern development with masonry and glass facades and less monolithic massing, along with



Parking lots and underutilized spaces contrast sharply with the built environment within the Plan Area, due to the abrupt change in scale and the general lack of activity within the areas.

SOURCE: ESA

Figure 22
View of Parking Lots and Underutilized Spaces

relatively greater ornamentation, including the Gap Building at 2 Folsom Street, 101 First Street, and the office tower at 199 Fremont Street.

In addition to the many buildings that define the visual character of the Plan area, the publicly accessible open spaces and plazas also offer visual interest at the ground level, many containing landscaping and art installations that draw the eye and contribute to the Plan area a sense of cultural enrichment.

Views

This discussion of publicly accessible views of and through the Plan area is supplemented by photographs of existing conditions that are presented in **Figures 27 – 49**, in the analysis of project impacts. The representative views described in this section are included on the Viewpoint Location Map (**Figure 26**, p. 118).

Views from Within the Plan Area

Availability of public views within the Plan area depends on the subarea from which those views are observed. For example, although the Plan area affords views of the Bay Bridge from points along its eastern edge, close to the waterfront (see **Figure 23**), these types of long-range views are generally obstructed by intervening development from other portions of the Plan area. The relative unavailability of long-range public views from much of the Plan area is underscored by its relatively flat topography and numerous overhead freeway ramps that further diminish visibility into the neighboring areas, particularly when viewed at the street level.

Views along the north-south-oriented streets provide views of the tall buildings of the Northern Financial District north of Market Street (see **Figure 24**) and Rincon Hill neighborhood to the south. Some east-west streets provide views toward the Yerba Buena Center area and the East SoMa neighborhood. Views within the Plan area are otherwise limited to shorter-range views, such as streetscapes, building architectural elements, and intermittent street-level views into the alleyways.

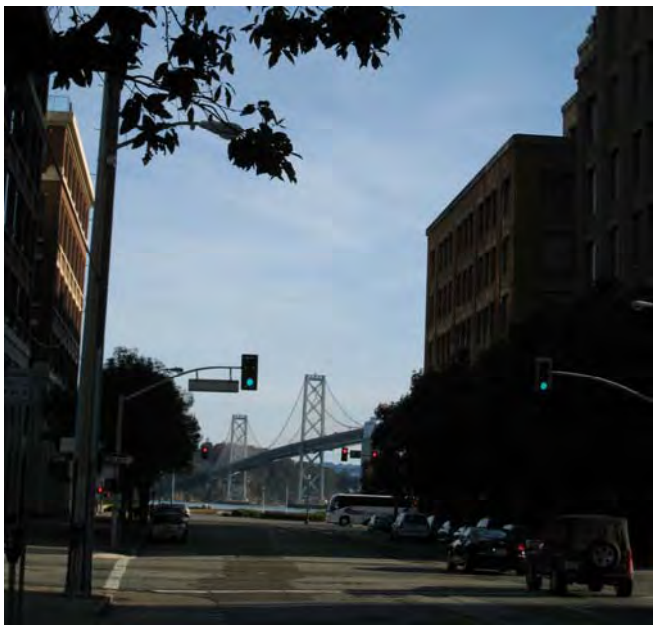
Views of the Plan Area from Surrounding Vantage Points

The Plan area is visible from a variety of vantage points throughout and even outside of the City, due to its location near the eastern edge of the City and the open expanse of the San Francisco Bay and the preponderance of high-rise buildings within its boundary, which can be seen from miles away. As discussed below, views from the Bay, Treasure Island, the Bay Bridge and Interstates 80 and 280 offer the best unobstructed long-range views of the Plan area. View corridors presented in the discussion below are described by physical elements such as buildings that guide lines of sight and control view directions available to pedestrians and motorists. View corridors include the total field of vision visible from a specific vantage point. Public view corridors are areas in which views are available from publicly accessible viewpoints, such as from city streets, bridges, freeways, parks, and other public spaces.

As illustrated in **Figures 27A – 30A**, pp. 121 - 127, the Plan area is visible from just outside and west of its western boundary, represented by four vantage points – the intersections of Geary and Stockton Streets, Fifth and Mission Streets, and Post and Leavenworth Streets, and from Yerba Buena Gardens, near Third



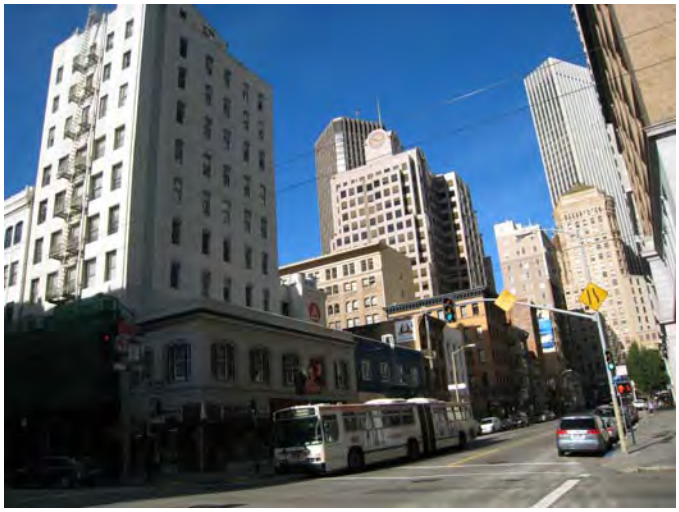


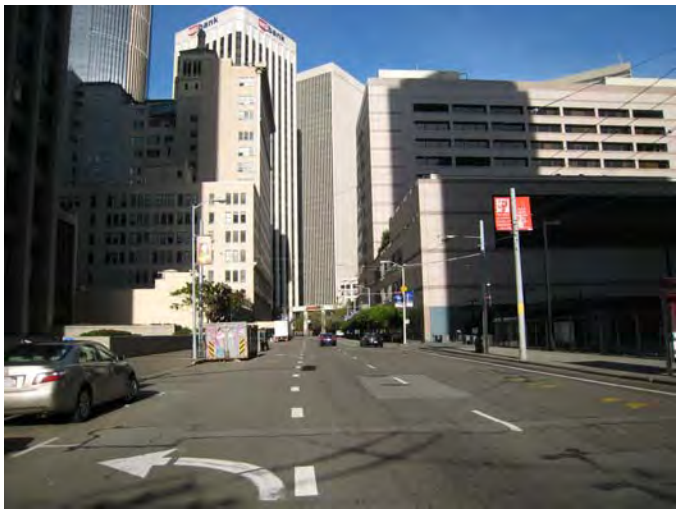
SOURCE: ESA

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 23
Views of Bay Bridge











Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: ESA

Figure 24
Views of North Financial District

and Mission Streets. From all four of these vantage points, the Plan area appears heavily urbanized and substantially built out, with a mix of buildings, ranging in height and style, dominating most easterly views. View points from Geary and Stockton, Fifth and Mission and Post and Leavenworth Street intersections provide only limited views of the Plan area, as much of it is blocked by intervening development, including the St. Francis Hotel (in the view from Post and Leavenworth Streets) and the St. Regis Hotel (in the view from Fifth and Mission Streets). These obstructed views from these locations are typical for the shorter range views experienced from outside of the Plan area. The shift in the streets grid from north to south of Market Street also makes it difficult to see into the Plan area from north of Market Street.

Views from Yerba Buena Gardens are dominated by the Yerba Buena Gardens landscaping in the foreground with the distinctive western San Francisco Museum of Modern Art façade just beyond. The St. Regis Hotel, the Pacific Telephone Building (within the Plan area), and the W Hotel can be seen rising above these low-rise features, blending into the jumble of high-rise forms and colors just beyond and blocking views of the sky. As from viewpoints described above, the views from Yerba Buena Gardens are dominated by urban streetscapes, with building scale generally increasing from the foreground toward the background (Plan area).

In views of the Plan area from vantage points further southwest, buildings in the Plan area generally blend in with the surrounding development. This is illustrated in views from Alamo Square and from the corner of Market and Octavia Streets. The foreground view from Alamo Square is dominated by the famous "Painted Ladies," located just beyond the park lawns. Beyond these, the panoramic view of the northeastern portion of San Francisco reveals the Financial District and the Plan area as an assortment of structures of various sizes, shapes and colors. The Plan area is not dominant in this view. Rather, the Transamerica Pyramid, the Bank of America tower, and St. Mary's Cathedral draw the eye more due to either their shape, color or proximity to Alamo Square and because they are at the edge of/outside the downtown area.

The Plan area is visible in dynamic northerly views from U.S. Highway 101 (northbound) and I-280 (at Sixth Street), as well as from Potrero Hill, a neighborhood located between these freeway segments farther south, approximately two miles from the Plan area. From farther away, northeasterly views of the Plan area can be experienced from Twin Peaks, Dolores Park and Portola Drive (located between approximately two-and-one-half and four miles of the Plan area). All of these vantage points offer clear observations into the Plan area, although as in views described above, the Plan area is largely indistinguishable from the immediately adjacent Northern Financial District, defined primarily by its location. This is especially apparent in the view from Twin Peaks, with Market Street demarcating the northern and southern portions of the Financial District. In all of these views, the Plan area is an integral part of the City's downtown skyline, which can be characterized as a dense cluster of high-rise buildings in the downtown core that tapers off to lower scaled development at its periphery. This compact urban form, the downtown "mound," which is neither smooth nor uniform, visually denotes the downtown as the center of commerce, access and activity. A range of building heights in the downtown creates gaps, peaks, dips and inconsistencies within this pattern, allowing taller buildings and building tops stand out

in profile against the sky. The tension between conformity and variety in the skyline results in a readable and recognizable image for San Francisco, and includes familiar landmarks such as the Transamerica Pyramid, the Bank of America Tower and the more recently constructed One Rincon building, sited apart from the "mound."

Southerly views into the Plan area are available from Telegraph Hill, located about a mile north of the Plan area. In this view, the dominant features include the Transamerica Pyramid building in the center of the scenery as well as the Bay Bridge in the left of the view (see **Figure 35A**, p. 147[62]). The Bank of America Tower as well as the twin spires of the 345 California Street building also project within the generally irregular pattern of development. The high-rise structures vary in height and shape and form a landscape that lacks uniformity or cohesion. Although some buildings in the Plan area are visible from this vantage point, most are obscured by closer intervening north-of-Market high-rises.

Views from Treasure Island and along the Bay Bridge offer perhaps some of the most iconic views of the San Francisco skyline. Comparatively low buildings along the waterfront allow visibility into the downtown and Plan area and contribute to the pattern of tapering heights from hilltops to water. The downtown rises above and just beyond the waterfront, appearing as an intricate wall of staggered building heights, forms and sizes. Since the structures appear as one mass, buildings in the Plan area cannot readily be discerned from these perspectives except by location (e.g., south of the Ferry Building in the view from Treasure Island).

Views from Aquatic Park offer views toward the Plan area from the city's northern waterfront. However, the downtown "mound" effect is less obvious from this perspective, due to the competing foreground topography of Telegraph Hill and Russian Hill as well as other dominant features along the shoreline. The Plan area is, therefore, not easily visible from Aquatic Park.

Light and Glare

Sources of light and glare around the Plan area are generally limited to the interior and exterior lights of buildings and lighting visible through windows, parking lots, and city streets. These sources of light are typical of those in a developed urban area. In addition, cars and trucks traveling to, from and within the Plan area represent a source of glare.

Because Downtown, including the Plan area, includes the City's greatest concentration of tall buildings, it likewise presents the greatest intensity of night lighting sources, and lighted high-rise buildings can be seen from long distances away.

62 This photograph was taken from atop the concrete wall that surrounds the Coit Tower parking lot in order to be able to see above the tall hedges planted there.

Impacts and Mitigation Measures

Significance Criteria

The proposed project would have a significant effect on visual quality if it would:

- Have a substantial adverse effect on a scenic vista;
- 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;
- Substantially degrade the existing visual character or quality of the site and its surroundings; or
- 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 significance determination is based on consideration of the extent of change related to project visibility from key public vantage points, as well as the degree of visual contrast and compatibility in scale and character between proposed project elements and the existing surroundings, and the sensitivity of the affected view.

The analysis of the Draft Plan's effect on the Plan area's visual character or quality focuses on how the existing aesthetic quality in the area could change based on design elements proposed in the Draft Plan. The analysis considers the Draft Plan's proposed neighborhood design objectives and policies, which would guide building massing, articulation, height, and ground-floor treatment. The analysis also considers the Plan's proposed improvements to the public realm, including provisions concerning pedestrian environment and circulation, public open space and privately owned publicly accessible open space.

The analysis of the Plan's effects on views considers the various towers proposed and anticipated throughout the Plan area, including the Transit Tower, in relation to topography, siting and separation, and the Plan's proposed requirements concerning height, bulk, and sculpting. Concurrently, the discussion of views also includes an analysis of changes to San Francisco's urban form, specifically in the context of changes to the downtown skyline. Discussion of potential changes to public views is accompanied by a series of visual simulations taken from several viewpoints.

Transit Center District Plan

Visual Character and Scenic Resources

Impact AE-1: The draft Plan would alter the height and bulk limits within the Plan area, allowing for a number of high-rise buildings to be constructed over time. This would alter the visual character of the Plan area but would not adversely affect scenic resources. (Less than Significant)

When the San Francisco Urban Design Plan was published in May 1971 (it was adopted in modified form as the Urban Design Element of the *Master Plan*—now the *General Plan*—in August of that year), the Transamerica Pyramid was just being completed, the Bank of America building was two years old, and the Planning Commission had, eight months earlier, approved a 550-foot office tower for U.S. Steel Corporation, to be constructed on Port property, where decaying piers extended into the Bay between the

Ferry Building and the Bay Bridge, near the southeast corner of the Plan area. In addition to the Bank of America building, some 20 other high-rise buildings had been constructed in the decade before the Urban Design Plan was published, and nearly two dozen more were planned.[63] The Urban Design Plan declared, "Major new buildings of extraordinary height and bulk have been opposed and criticized for their effects upon the skyline, topography and views, their overwhelming appearance and lack of harmony, and the disruption of their immediate surroundings."[64] This statement was accompanied by an illustration of the new Bank of America tower (see **Figure 25**).

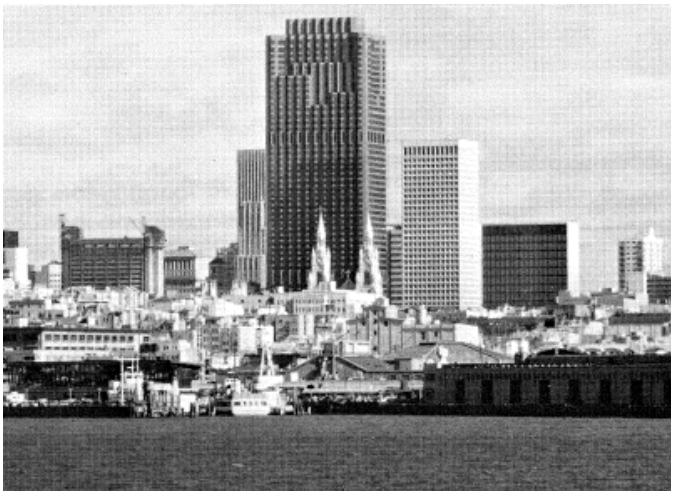


Figure 25
Bank of America Building seen from Fisherman's Wharf, as depicted in the *San Francisco Urban Design Plan* (1971)
Note: A telephoto lens was evidently used for this photograph.

As described in Chapter III, Compatibility with Existing Zoning and Plans, the adopted *General Plan* Urban Design Element contains discussions on, and objectives and policies relevant to, City Pattern, Conservation, Major New Development and Neighborhood Environment. In the introduction to the section on City Pattern, the Urban Design Element states:

> BUILDINGS AND STRUCTURES and clusters of them, which reflect the character of districts and centers for activity, provide reference points for human orientation, and may add to (but can detract from) topography and views. Some buildings and structures, such as the Golden Gate and Bay Bridges, Coit Tower, the Palace of Fine Arts and City College, stand out as single features of community importance, while elsewhere the dominant pattern of man's development is a light-toned texture of separate shapes blended and articulated over the landscape.

Policy 1.3 of the Urban Design Element states, "Recognize that buildings, when seen together, produce a total effect that characterizes the city and its districts." The accompanying text recommends that the pattern of buildings "should emphasize the topographic form of the city and the importance of centers of activity." Policy 1.8 states, "Increase the visibility of major destination areas and other points for orientation."

In the wake of the high-rise building boom of the 1960s, the Urban Design Element cautioned against further development that did not acknowledge its context. Objective 3, under the section on Major New

63 New York Times, "High Skyline Opposed on Coast," October 26, 1970. The U.S. Steel project was ultimately rejected by the Board of Supervisors.

64 San Francisco Planning Department, *The Urban Design Plan for the Comprehensive Plan of San Francisco*, May 1971. This document is available for review at the Planning Department, 1650 Mission Street, Suite 400.

Development, calls for "Moderation of major new development to complement the city pattern, the resources to be conserved, and the neighborhood environment." This section of the element advocates that taller (but not "extremely massive") buildings be sited on hills to emphasize the natural topography and that building heights decrease in locations closer to the Bay. A fundamental principle for major new development is that "Clustering of larger, taller buildings at important activity centers (such as major transit stations) can visually express the functional importance of these centers."

Policies related to Major New Development are intended to achieve harmony in visual relationships between new and old, by avoiding "extreme contrasts" in color, shape and other characteristics (perhaps a critique of the Transamerica Pyramid); achieving high-quality design for prominent buildings; creating buildings that respect the integrity of public spaces; and relating building height to "important attributes of the city pattern and to the height and character of existing development" (Policies 3.2 through 3.5). Text accompanying Policy 3.5 states:

> Tall buildings should be clustered downtown and at other centers of activity to promote the efficiency of commerce, to mark important transit facilities and to avoid unnecessary encroachment upon other areas of the city. Such buildings should also occur at points of high accessibility, such as rapid transit stations in larger commercial areas and in areas that are within walking distance of the downtown's major centers of employment. In these areas, building height should taper down toward the edges to provide gradual transitions to other areas.
>
> In areas of growth where tall buildings are considered through comprehensive planning efforts, such tall buildings should be grouped and sculpted to form discrete skyline forms that do not muddle the clarity and identity of the city's characteristic hills and skyline. Where multiple tall buildings are contemplated in areas of flat topography near other strong skyline forms, such as on the southern edge of the downtown "mound," they should be adequately spaced and slender to ensure that they are set apart from the overall physical form of the downtown and allow some views of the city, hills, the Bay Bridge, and other elements to permeate through the district.

The Downtown Plan that followed the Urban Design Element a decade and a half later sought, ultimately with success, to shift the center of the downtown Financial District southward, towards what is now proposed as the Transit Center District Plan area, as well as to preserve historic buildings, protect nearby housing and increase the housing supply for office workers and others, and provide for open space downtown. In its recently published review of the Downtown Plan's first 25 years, the Planning Department notes that most new development downtown has occurred south of Market Street, as directed by the Downtown Plan. Thus, the Downtown Plan has helped to direct the expansion of Downtown office buildings to the area around the Transbay Transit Terminal and the new Transit Center, as the Plan intended.

The Urban Design Element also emphasizes the role that landscaping and lighting can play in helping to define the city pattern. Policy 1.4 states, "Protect and promote large-scale landscaping and open space that define districts and topography"; Policy 1.5 states, "Emphasize the special nature of each district through distinctive landscaping and other features"; and Policy 1.6 states, "Make centers of activity more prominent through design of street features and by other means."

This analysis of impacts on visual character draws on the Urban Design Element, with a focus on the height and massing of potential new buildings and their effect on the City's skyline.

The draft Transit Center District Plan would allow for construction of the tallest building in San Francisco—the 1,070-foot Transit Tower—as well as several other buildings that would be among the City's tallest. The increases in height limits proposed in the Plan would permit a total of six towers of 600 feet or more, all of which would exceed the current maximum height limit of 550 feet. By comparison, the Transamerica Pyramid is 853 feet tall and the Bank of America Building, 779 feet tall. Only one other existing buildings exceeds 600 feet at its rooftop height—the Millennium Tower, with a roof height of 645 feet, the maximum permitted in the 550-foot height zone with permitted 10 percent extension for certain buildings that do not occupy their entire site.[65,66] The One Rincon Hill building is approximately 605 feet tall at its highest point, but appears taller because it is located at a higher elevation than other downtown buildings.

The Plan would also result in the removal of some visual elements with neutral or low aesthetic value, including surface parking lots and, in some cases, low-rise (sometimes underutilized industrial-type) buildings, and their replacement with new structures, mostly high-rise office, residential, and hotel towers, which would be substantially greater in height. Such physical changes would be implemented as a result of the revisions to the zoning and height and bulk districts at various parcels throughout the Plan area. In allowing greater development intensity on the vacant and underutilized parcels, with several new high-rise buildings, the draft Plan would reshape the built form of the Plan area, creating a concentration of very tall buildings in the vicinity of the new Transit Center and symbolically shifting the focus of the City's downtown. Under the Plan, heights on the downtown skyline would transition from the Transit Tower as the tallest feature to the gradually shorter forms in the surrounding area.

Some increases in height limits would be relatively modest, for example increasing from 200 feet to 250 feet on parcels between Clementina and Folsom Streets, from Second to Essex Streets, and increasing from 350 feet to 400 feet on parcels along the south side of Tehama Street, mid-block between First Street and Second Street. In other areas, the proposed changes would be more substantial, for example

65 The Millennium Tower is 645 feet to the top of its rooftop sculptural element.

66 *Planning Code* Section 263.9 allows a building to have additional height up to 10 percent in excess of the height limit if the bulk of the building's "upper tower" (approximately the upper one-third) is reduced by a percentage specified in Section 271, compared to the bulk that would result from a vertical extension of the lower tower. As a condition of the additional height, the Planning Commission must find, pursuant to the Section 309 approval process, that "the upper tower volume is distributed in a way that will add significantly to the sense of slenderness of the building and to the visual interest to the termination of the building, and that the added height will improve the appearance of the sky-line when viewed from a distance, will not adversely affect light and air to adjacent properties, and will not add significant shadows to public open spaces."

increasing from 550 feet to 850 feet on the parcels on the west side of First Street between Stevenson Street and Elim Alley, from 450 feet to 750 feet on the north side of Howard Street between east of Second Street, and from 350 feet to 700 feet on the east side of Fremont Street between Mission and Howard Streets. The greatest increase in height limit would be on the south side of Mission Street between First and Fremont Streets, where the height limit would increase from 30 feet to 1,000 feet to accommodate the proposed Transit Tower.[67] In addition to increasing the maximum height limit beyond the downtown's current maximum permitted heights, the greater height limits in the Plan area, which are generally limited to areas north of Minna Street, would be extended to areas further south under the draft Plan. As noted above, proposed height and bulk districts would allow buildings up to 750 feet in height along Howard Street and up to 700 feet in height along Fremont Street north of Howard Street.

As noted, new, taller towers would be permitted at several specific locations under the proposed increases in height and bulk limits. These high-rises, when developed, would be distributed from north of Mission Street to south of Howard Street. However, no change would occur east of Main Street, leaving the blocks closest to the Embarcadero, already densely built out with an earlier generation of high-rises, most less than 300 feet tall, essentially undisturbed. In the southern portions of the Plan area, the proposed height designations would be limited to between 300 and 550 feet, with the intended effect of gradually reducing the urban forms in order to provide a visual break in the transition to the concentration of tall buildings in the Rincon Hill neighborhood further south which, combined with a 100-foot topographical rise, is intended to create a secondary "mound" on the skyline, emphasizing the elevation of Rincon Hill. Overall, the changes proposed would accelerate the type of development that has been occurring within the Plan area over several decades, encouraging an even denser urban neighborhood than currently exists, containing a larger number of taller buildings, interspersed with designated areas of open space and preserving enclaves of moderately scaled older commercial buildings in and around existing historic districts.

Consistent with the Urban Design Element, the draft Plan would allow for the City's tallest building, the proposed Transit Tower, to be built adjacent to the new Transit Center, thereby "mark[ing] important transit facilities." Around the Transit Tower would be clustered additional tall buildings, "sculpted to form discrete skyline forms that do not muddle the clarity and identity of the city's characteristic hills and skyline."[68] The height controls and setback and massing requirements in the draft Plan are intended to ensure that these new buildings would be "adequately spaced and slender to ensure that they are set apart from the overall physical form of the downtown and allow some views of the city, hills, the Bay Bridge, and other elements to permeate through the district."

It is noted that physical changes (i.e., development of specific opportunity sites) would be expected to be incremental and occur gradually over time, as individual project sponsors find opportunities and financing to implement their projects. It is also the case that, while the Plan area currently permits the

67 Although the approved Transbay Redevelopment Plan and associated EIR/EIS anticipated a 550-foot-tall tower at this location, the height limit on the site once occupied by the bus and taxi loading area in front of the former Transbay Terminal was never changed and is currently 30 feet.

68 Text accompanying Policy 3.5 of the *General Plan* Urban Design Element.

tallest buildings in San Francisco, all parcels are not built to maximum height and bulk limits. The height limits proposed by the draft Plan would provide a greater incentive than the existing limits for redevelopment of certain specific sites within the Plan area. As a result, some new buildings could be noticeably taller than the adjacent remaining structures that are not redeveloped. Some observers may perceive the proposed area-wide changes to be dramatic, as new buildings would in many areas be several hundred feet taller than adjacent development. However, while the character of the Plan Are would be altered, it would not necessarily be detrimental in terms of visual quality for the reasons discussed below.

As articulated in the draft Plan, the implementation of the proposed project would result in changes both to the cityscape (the overall City appearance, including the skyline) and on the ground level. In general, development pursuant to the draft Plan would increase the height of selected sites within the Downtown, amplifying the peaks in the City's skyline and culminating with the construction of the tallest building in the City, the Transit Tower. This would reinforce the patterns already in place, but would nevertheless result in visible and demonstrable changes to the Plan area. At the ground level, there would be a perceptible change in both pedestrian and vehicular activity, owing to the introduction of greater density development and some lessening of sunlight at certain times of day, depending on location relative to new tower(s). However, while these changes would be noticeable, they would not necessarily be considered adverse, as they would serve to intensify the existing pattern of closely spaced high-rise buildings that is characteristic of the San Francisco Financial District. Thus, while the overall appearance of the Plan area would changes as a result of the proposed project, the overall visual character would remain generally consistent with current development patterns.

Because the Plan area would allow for the construction of several of the tallest buildings in the City, the massing and design of the towers would be controlled to achieve maximum visual access to sun and sky. To this end, the draft Plan sets forth guidelines that would require the new skyscrapers to be separated and massing of upper stories to be reduced to minimize the "urban canyon" effect and provide visual access to the sky, views and sunlight. Furthermore, the towers would be differentiated in height, with height transitions proposed in increments of about 150 feet. As stated in the draft Plan, height limits would be regulated both at podium and tower levels. In addition, lower portions of the buildings would be articulated along the first two stories to maintain a distinctive streetwall and engage the pedestrian at the ground level. Base elements, discernable from the tower form, as well as upper-story setbacks and articulations and horizontal breaks, would be required to define the street realm. These requirements articulated in the draft Plan are intended to "maximize building envelope and density in the Plan area within the bounds of urban form and livability objectives of the *San Francisco General Plan*" and "create an elegant downtown skyline, building on existing policy to craft a distinct downtown 'hill' form, with its apex at the transit center, and tapering in all directions" (November 2009 Draft Plan, Objectives 2.1 and 2.2). These regulations would not preclude the substantial changes that would occur at individual development sites within the Plan area. However, although future buildings within the Plan area would generally be larger than existing buildings, increases in building height would not, in themselves, result in an adverse

change in regard to visual quality. As discussed throughout this section and in the Land Use section, the Plan area contains a sizable number of high-rise buildings, ranging in height up to about 600 feet.

Moreover, the cluster of new development contemplated in the draft Plan would "reflect the character" of the Transit Center District as a transit-oriented, high-density employment and transportation center, and would "provide reference points for human orientation," both within the Plan area and from points beyond.

The draft Plan also proposes substantial improvements to the public realm that would complement the proposed transportation infrastructure. These include widening of selected sidewalks, establishing new mid-block crossings at key locations, and enhancing alleys as pedestrian spaces. In addition, as under current conditions, new publicly accessible open spaces would be a required component of new development, and would create pedestrian-friendly spaces throughout the Plan area. Area-wide landscaping improvements would also be undertaken along the public rights-of-ways, adding rows of street trees and other greenery to areas where there is currently little vegetation. The proposed public realm improvements would follow the Urban Design Element's direction to use landscaping and other treatments to help define and "emphasize the special nature of each district" and to "make centers of activity more prominent."

The Plan area's greatest visual changes would occur within one to two blocks of the Transit Center. This would come about as a result of the new Transit Center (currently under construction) and the proposed Transit Tower and other anticipated high-rise buildings on the adjacent blocks. Although the former Transbay Terminal functioned as a transportation hub at this location for decades, the new Transit Center, along with increased bus, train, car, and pedestrian traffic on (and, assuming the Caltrain downtown extension and high-speed rail, below) the surrounding blocks, would result in increased levels of pedestrian activity, further underscoring the Transit's Center's function as a regional focus. In addition, the fairly "open" feeling that is currently conveyed in this area would be substantially altered by the implementation of the Transit Tower and the anticipated 350 Mission and 50 First Street projects. While the changes at these individual project sites would be substantial, they would not be demonstrably adverse since they would represent a continuation, albeit in a more intensified form, of the types of uses that have historically existed in this area and a continuation of the types of development that already exist on the surrounding blocks. The site where the Transit Tower would be developed formerly served as bus and taxi loading areas for the Transbay Terminal, but it is currently vacant. the change from that use to a high-rise building would not typically be considered adverse. Finally, some of the openness would remain with development of the proposed Mission Square park east of the Transit Tower, as well as the planned City Park atop the Transit Center (see discussion of Transit Tower impacts under Impact AE-5, below).

Of the existing subareas within the Plan area, less change would occur within the New Montgomery-Second Street Conservation District and the Second and Howard National Register District, where building height limits would be maintained at existing limits and existing historic preservation policies continued in force in an expanded area to protect the older building stock that predominates along these

streets. To ensure that new structures constructed within much of this area are consistent in massing with the existing historic structures, the draft Plan would require that new structures be built out to property line and that, for buildings taller than 85 feet (except on New Montgomery Street), a setback of at least 15 feet be incorporated above about 50- to 85-foot heights. As such, with the exception of public realm improvements such as the proposed intensification of landscaping and despite any new development that may occur in these areas in the future, the existing visual character in these subareas would be largely maintained.

As reiterated throughout this discussion, while the draft Plan would result in aesthetic changes within the Transit Center District Plan area due to the construction of new buildings, the adaptive reuse of historically significant buildings, and an overall intensification of urban uses, such changes would not necessarily be considered adverse. Future uses and building designs would be developed pursuant to the City's *General Plan* and a set of urban design controls and guidelines proposed by the Draft Plan as discussed in Chapter II, Project Description, and Chapter III.A, Land Use, Plans and Policies. At the same time, the development of certain arguably unsightly vacant parcels and surface parking lots, the anticipated provision of new open space(s), and area-wide streetscaping improvements could enhance the visual quality of the area.

In terms of visual and scenic resources, the draft Plan calls for intensification of existing types of development and uses in the Plan area, within the existing street grid and, to a large extent, without displacing or destroying existing built features. Although some historic architectural resources would be adversely affected by development due to implementation of the draft Plan (see Section IV.D, Cultural Resources), the draft Plan does not envision substantial disruption of the existing built environment. No natural scenic resources would be affected. Accordingly, the draft Plan would result in less-than-significant impacts on scenic resources.

Although visual quality is subjective, it can reasonably be concluded, based on the foregoing, that the implementation of the draft Plan would not result in a substantial, demonstrable negative aesthetic effect on the existing visual character or quality of the area and its surroundings, nor would the draft Plan result in substantial adverse effects on visual or scenic resources.

Mitigation: None required.

Views

The Urban Design Element section on Major New Development does not seek to prohibit tall buildings, but rather urges caution in their design and placement. "Exceptional height can have either positive or negative effects upon the city pattern and the nearby environment. A building that is well designed in itself will help to reinforce the city's form if it is well placed, but the same building at the wrong location can be utterly disruptive," the Element states.

The Urban Design Element finds that properly placed tall buildings "can enhance the topographic form and existing skyline of the city," can "orient the traveler," and can "define districts and centers of activity." All of this can be achieved without blocking views, the Element declares, if building height is considered in the context of "appropriate established patterns of building height and scale, seeking for the most part to follow and reinforce those patterns," and if building bulk is evaluated based on "the existing scale of development" and "the effects of topographic form in exposing building sites to widespread view," since apparent bulk results from the amount of a building's wall surface that is visible, and the degree to which the structure extends above its surroundings.

Policy 1.1 of the Urban Design Element is: "Recognize and protect major views in the city, with particular attention to those of open space and water." The text accompanying this policy states:

> Views contribute immeasurably to the quality of the city and to the lives of its residents. Protection should be given to major views whenever it is feasible, with special attention to the characteristic views of open space and water that reflect the natural setting of the city and give a colorful and refreshing contrast to man's development.

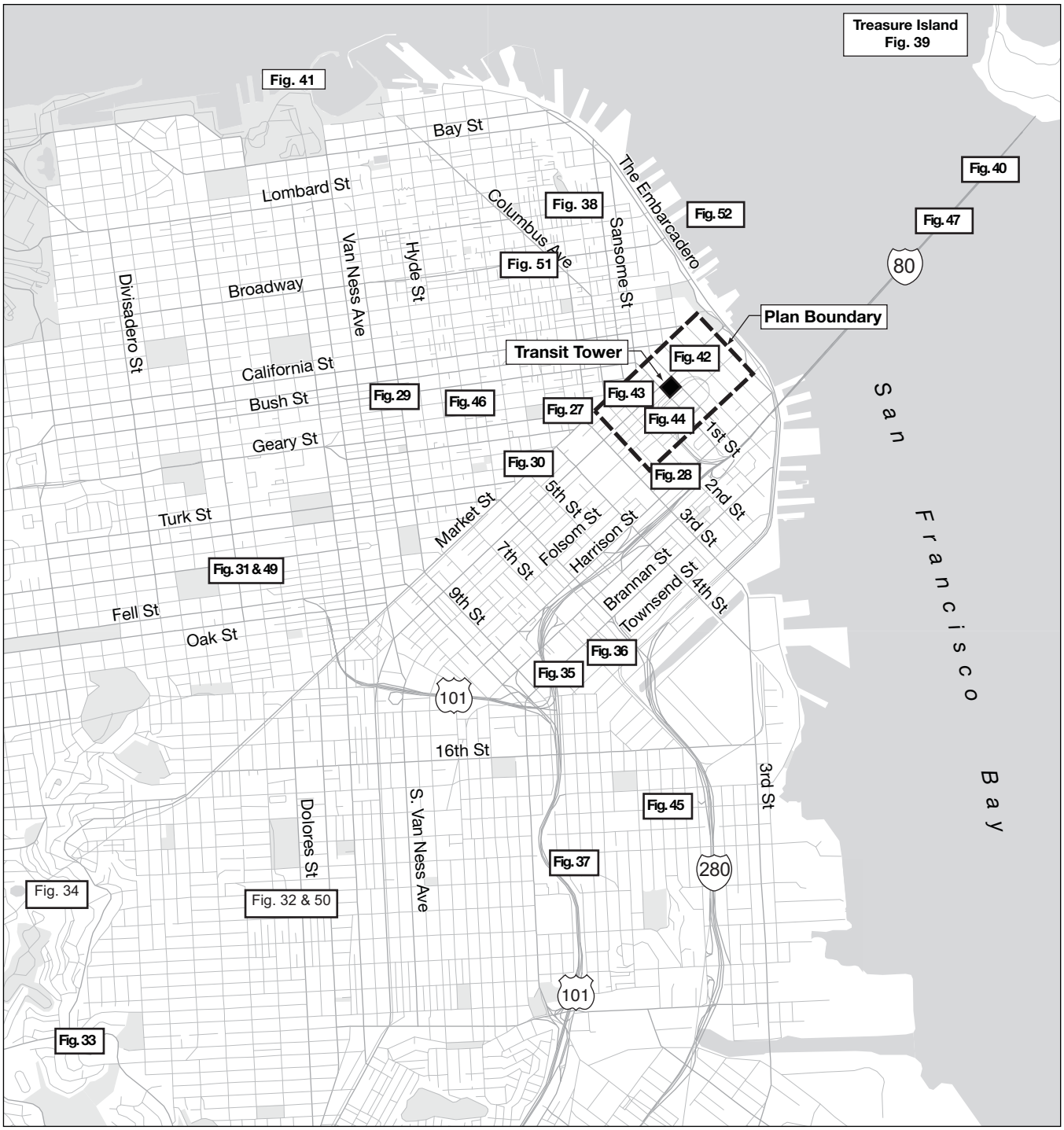
The text also states that "visibility of open spaces, especially those on hilltops, should be maintained."

One of the Fundamental Principles for Conservation set forth by the Urban Design Element concerns the protection of views, particularly long-range views emblematic of the City: "Blocking, construction or other impairment of pleasing street views of the Bay or Ocean, distant hills, or other parts of the city can destroy an important characteristic of the unique setting and quality of the city."

As stated above under Impact AE-1, the text accompanying Urban Design Element Policy 3.5 states that tall buildings in the southern part of downtown—that is, the Plan area—should be "adequately spaced and slender to ensure that they are set apart from the overall physical form of the downtown and allow some views of the city, hills, the Bay Bridge, and other elements to permeate through the district."

This analysis of impacts on views of and through the Plan area draws on the Urban Design Element, with a focus on critical views of San Francisco Bay and the City's hills. The analysis assesses photomontages from the viewpoints depicted in **Figure 26**. Each photomontage in **Figures 27 – 41** is presented with the accompanying photograph of existing conditions from the same viewpoint. For the reader's benefit in comparing effects on views, each paired photograph and photomontage is also accompanied by photomontages from the same viewpoint that depict the cumulative development scenario, discussed in Impact C-AE, p. 172, and the No Project Alternative (Alternative A, including cumulative development, discussed in Chapter VI, p. 662).

Implementation of the Transit Center District Plan would result in visual and aesthetic changes within the Plan area and could alter the way it is perceived from certain public vantage points. Changes to public views would be associated primarily with development of new high-rise buildings that would be enabled by changes to height and bulk districts. Changes to the overall development pattern within the



0 2000
Feet

SOURCE: Square One Productions; ESA

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Figure 26
Viewpoint Location Map

Plan area (i.e., how the new buildings relate to each other when viewed from outside the Plan area) would also affect public views.

Existing views, both within and across the Plan area, would be altered with development that could occur under the draft Plan. Depending on which projects ultimately get approved and developed, the Plan area could result in the development of a combination of about six to 15 high-rise office, hotel, and residential towers, some of which are already approved and not yet constructed, along with other shorter buildings. While the discussion below takes a conservative approach by assuming that all of the proposed structures would be developed, in reality, the magnitude of the effects of the draft Plan on public views would vary greatly, depending on the combination of projects that ultimately are constructed. Figure 14, p. 73, indicates the locations of potential opportunity sites assumed in this analysis, while the text on p. 47 of the Project Description describes buildings that have been proposed by individual developers and that are assumed as part of the overall buildout of the Plan area.

The visual simulations illustrating changes to the urban form that would occur as a result of the draft Plan are shown on pp. 121 – 154 of this section. These simulations present the height and general massing of proposed and potential allowable development, but do not illustrate fenestration (windows) or cladding materials, nor do they represent in detail the massing that is proposed for projects with applications on file with the Planning Department, other than the current design of the proposed Transit Tower. This level of analysis is appropriate for a program EIR such as this document.

Within these figures, the blue color represents development sites within the Plan area, including the proposed Transit Tower, other sites for which applications have been filed, and opportunity sites with no application filed. Green indicates anticipated cumulative development on sites that are outside the Plan area. Gray represents projects that have been approved at either a programmatic or project level, both on Rincon Hill and in the Transbay Redevelopment Area, along Folsom Street. It is noted that the massing models depicted in the visual simulations do not necessarily represent potential future projects that would comply with all bulk controls under the draft Plan, and therefore present a conservative assessment of potential visual effects, because Code-compliant projects would generally be sculpted so as to be somewhat less bulky at their upper levels than the massing models depicted. As noted in Chapter III, Compatibility With Existing Zoning and Plans, p. 70, many projects approved since the Downtown Plan was adopted—including most in the Plan area—have requested and been granted exceptions to the bulk requirements of the *Planning Code*. Therefore, it can be anticipated that at least some sponsors of future projects would make similar requests.

As analyzed in the following discussion, the most obvious changes to Plan area views from almost all directions would be the general amplification of the southern portion of the existing downtown "mound" that characterizes the cluster of high-rises on either side of Market Street and the increase in the number and height of high-rise forms on the skyline, reducing the gaps that exist between the buildings and limiting some views of the sky.

As noted above, according to the Urban Design Element, Market Street, along the northern edge of the Plan area, is characterized as a street containing "Street View of Important Building and Street That Defines City Form" and segments of Mission, Howard, and Folsom Streets within the Plan area are characterized as having either "average" or "good" qualities of views. Because the draft Plan would channel most of the development to the south of Market Street, views along Market Street would remain similar to the existing conditions, and Market Street's characterization as a "Street View of Important Building and Street That Defines City Form" would be maintained. Furthermore, future development within the Plan area would also not be expected to alter the characterization of Mission, Howard, and Folsom Streets as having "average" or "good" quality of views, for reasons discussed in greater detail below. Based on this, the classification of streets according to their importance as visual resources or quality of street views (as articulated by the Urban Design Element) would not change as a result of the proposed project.

Moreover, the buildings that could be built pursuant to the draft Plan would not, except in limited instances, result in blockage of Bay views or views of the City's hills, identified in the Urban Design Element as among the most critical views to be safeguarded, nor would Plan area buildings detract from the topographic forms established by the City's hills. Therefore, although aesthetic impacts are inherently subjective, this EIR concludes that the proposed Transit Center District Plan, as described in the Project Description and shown in the visual simulations based on assumptions set forth in Section 4.0, would not have a substantial adverse effect on scenic vistas from short-range and mid-range viewpoints. However, because development pursuant to the draft Plan would, when viewed from certain long-range viewpoints, substantially alter important view in a manner that conflicts with some policies in the *General Plan*, this analysis concludes, conservatively, that this change would be **significant and unavoidable**. Changes to selected views from short-range and mid-range vantage points are described in detail in Impact AE-2, below, while changes to long-range views throughout and just outside of the city are described in Impact AE-3. Blockage of certain scenic vistas, from cumulative development, is discussed under Impact C-AE, p. 172.

Impact AE-2: The draft Plan would alter the public views of the Plan area from short-range and mid-range vantage points as well as alter views into the surrounding neighborhoods from within the Plan area. (Less than Significant)

As seen in **Figures 27A – 30A**, views of the Transit Center District from areas just outside the Plan area, at Geary and Stockton, Fifth and Mission Streets, Post and Leavenworth Streets, and from Yerba Buena Gardens would change as compared to existing conditions. From Geary and Stockton, the change attributable to the Draft Plan would be views of upper stories of the Transit Tower as well as other proposed and potential nearby office towers. Relatively small portions of these towers would be visible behind the existing buildings and the view corridor down Geary Street would remain relatively unobstructed. The proposed Transit Tower would also be newly visible from Mission Street between Fourth and Fifth Streets. Although much of its podium would be obstructed by the St. Regis tower and other intervening buildings, the Transit Tower would nevertheless constitute a major visual feature in the background. Although the new buildings would add vertical elements to this viewshed, such a change



Existing



Plan

SOURCE: Square One Productions

Figure 27A
Visual Simulations: Geary and Stockton Streets



Cumulative



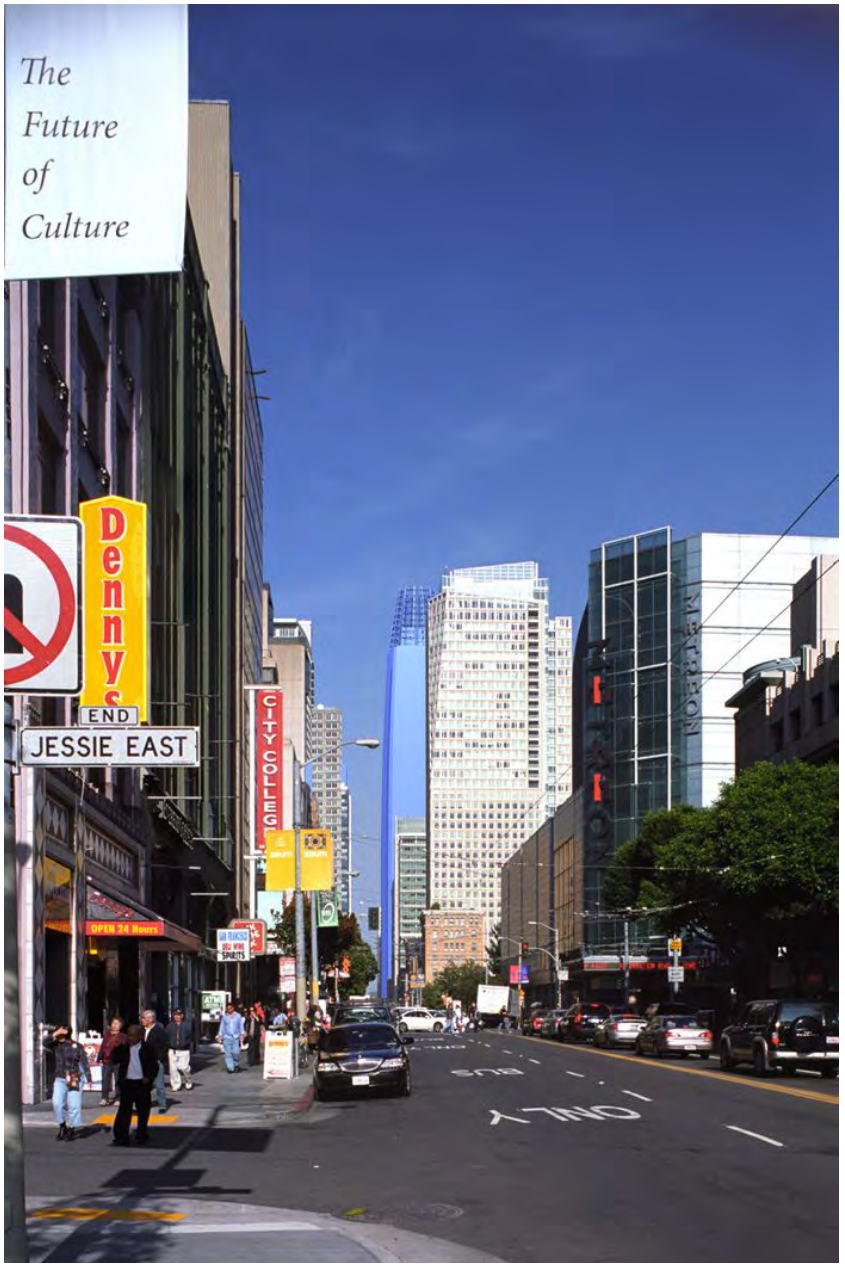
No Project plus Cumulative

SOURCE: Square One Productions

Figure 27B
Visual Simulations: Geary and Stockton Streets



Existing

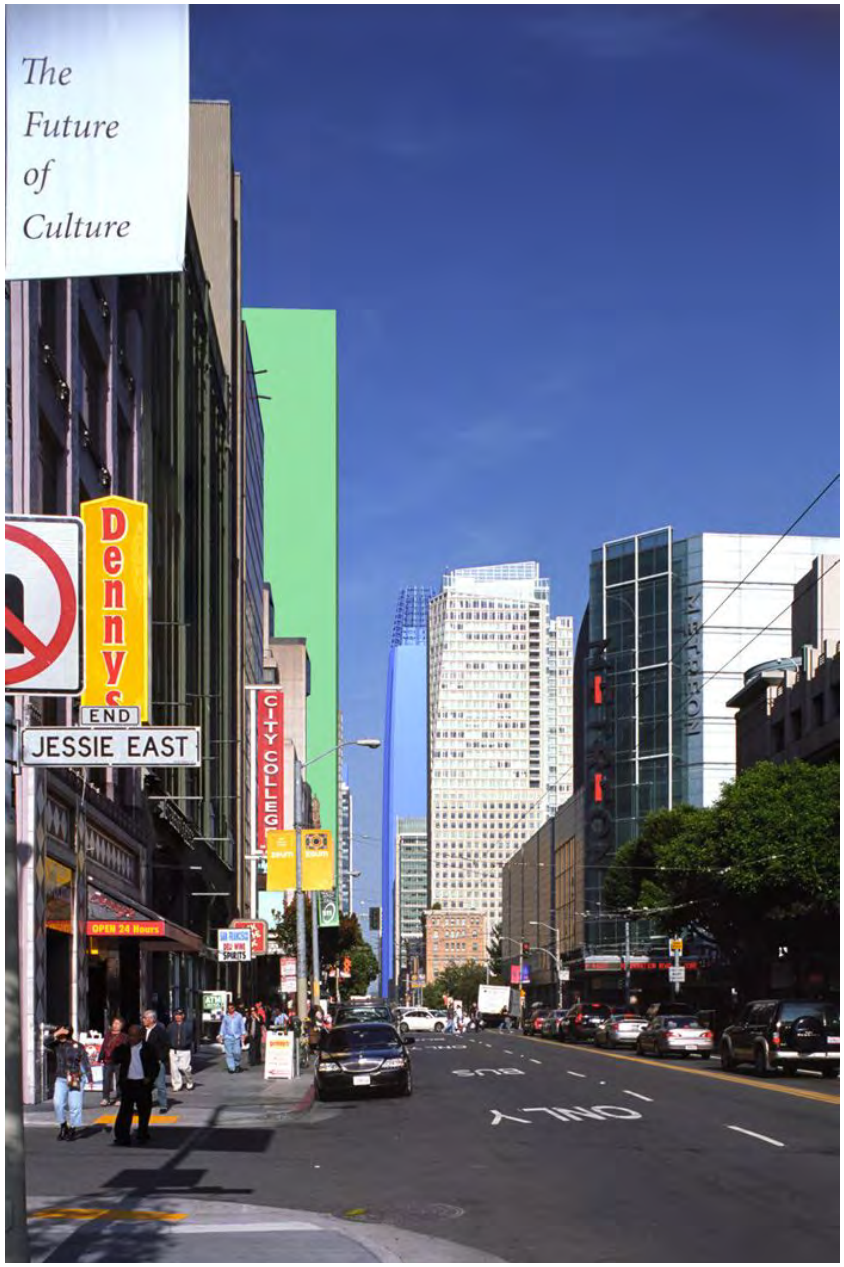


Plan

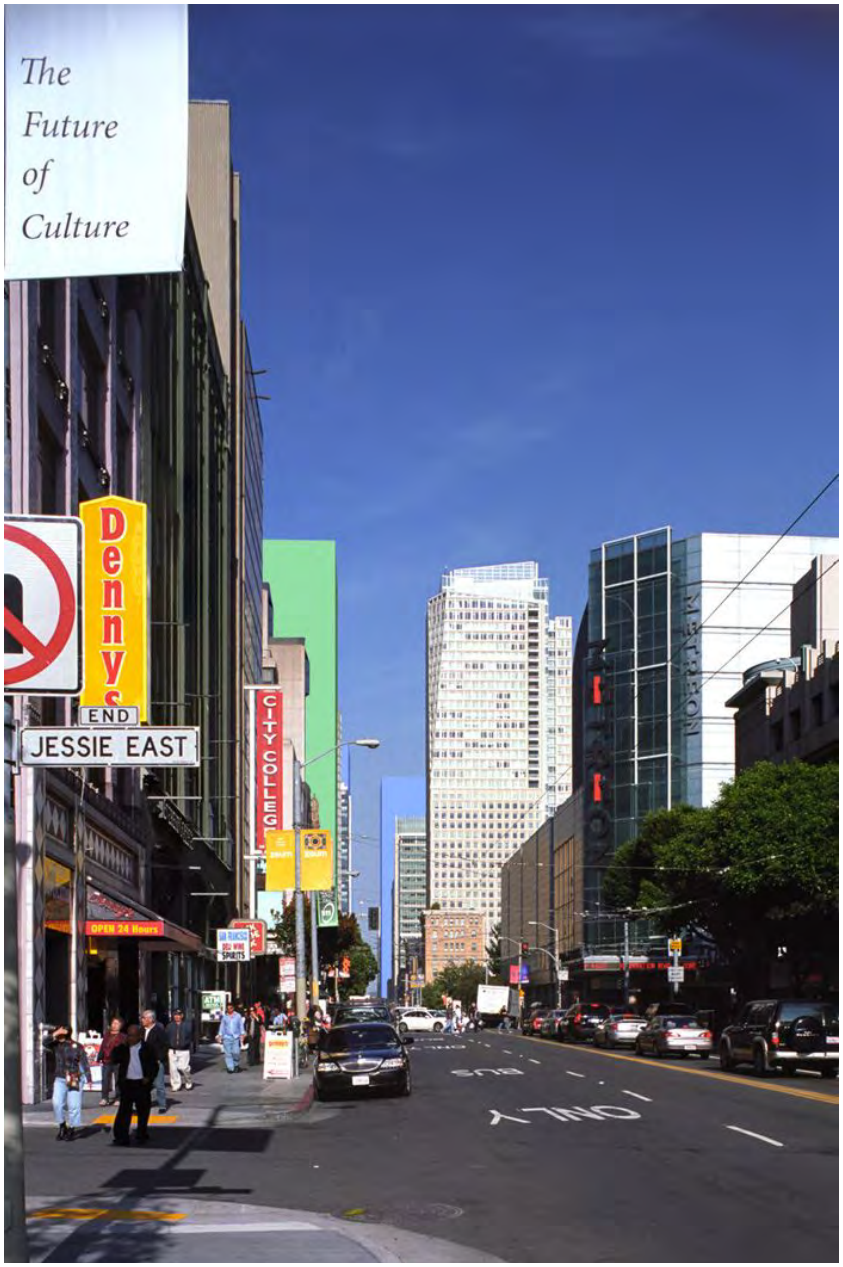
SOURCE: Square One Productions

Figure 28A

Visual Simulations: Mission Street West of Fourth Street



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 28B

Visual Simulations: Mission Street West of Fourth Street



Existing



Plan

SOURCE: Square One Productions

Figure 29A

Visual Simulations: Post and Leavenworth Streets



Cumulative



No Project plus Cumulative

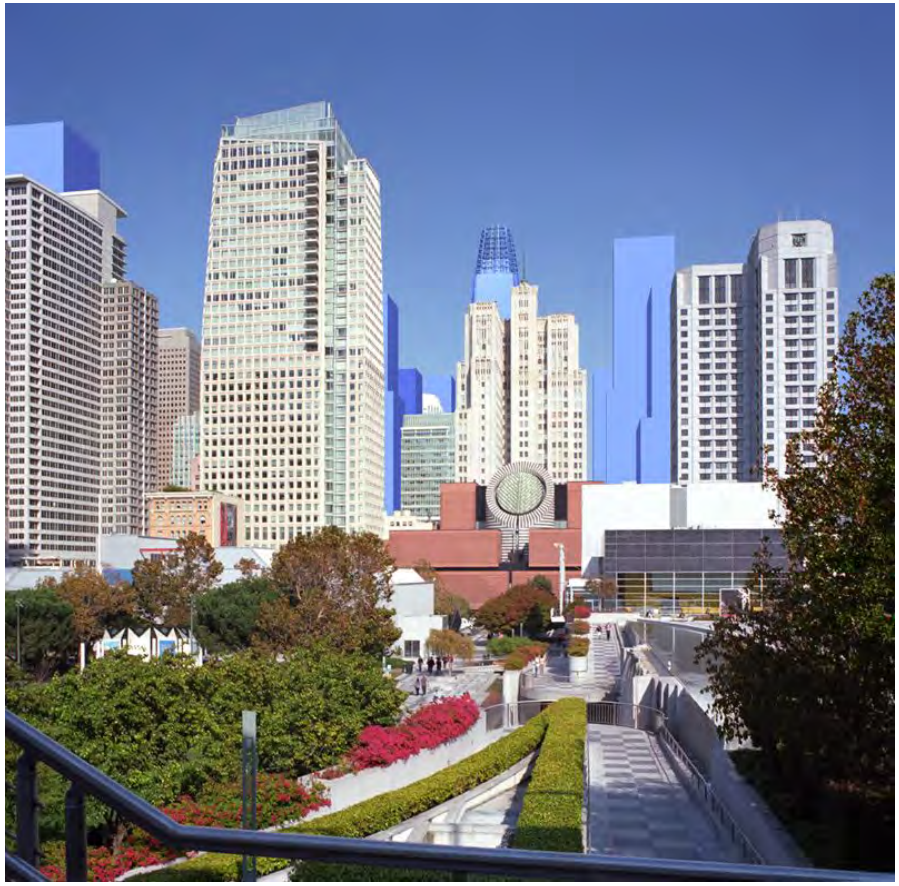
SOURCE: Square One Productions

Figure 29B

Visual Simulations: Post and Leavenworth Streets



Existing

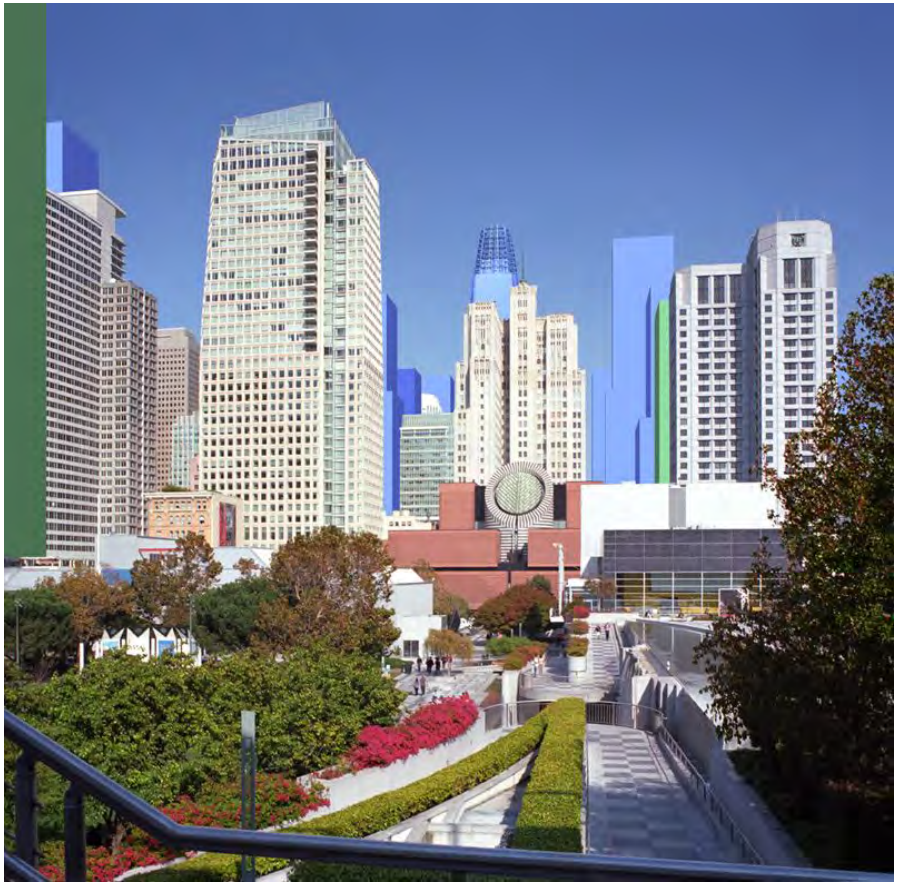


Plan

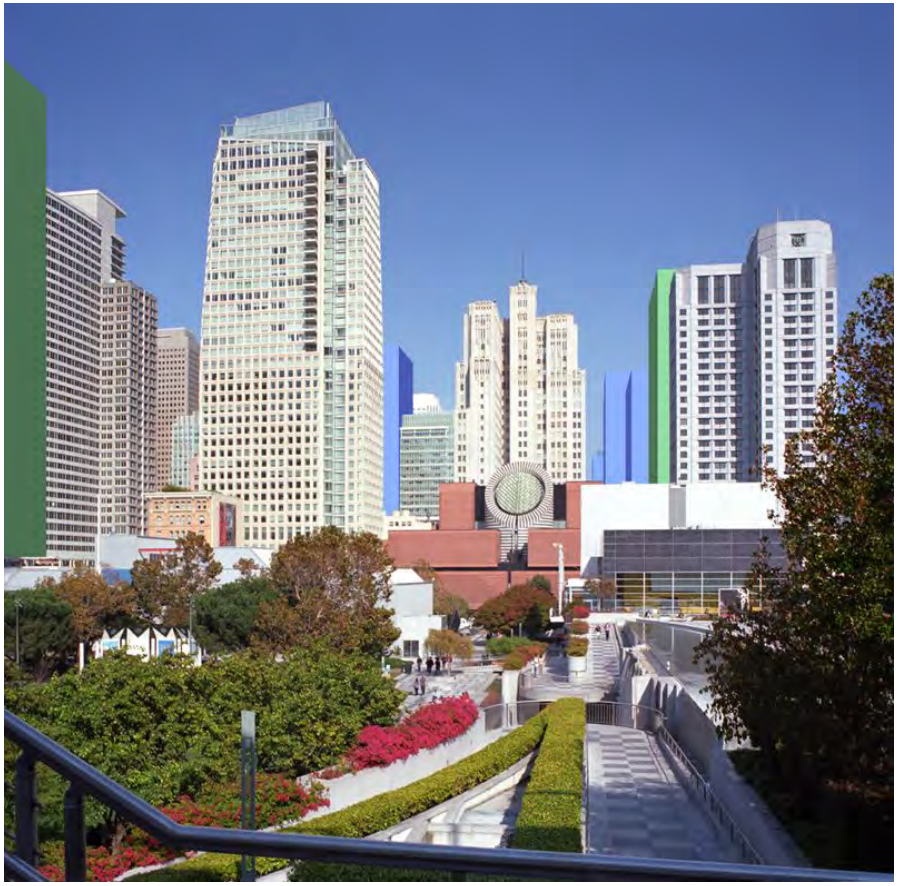
SOURCE: Square One Productions

Figure 30A

Visual Simulations: Yerba Buena Gardens



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 30B

Visual Simulations: Yerba Buena Gardens

would not be considered adverse, as Mission Street already contains several towers that can be visible from this vantage point, and the change with the addition of relatively small portions of Plan area towers added to the view would not be substantial, and no scenic views would be blocked. From Post and Leavenworth Streets, the top stories of the Transit Tower would be visible, along with southerly tower of the 50 First Street project nearby. This would fill in the gap in the horizon that is currently experienced, but would not constitute a severe change to the viewshed as views from this perspective are composed primarily of mid-rise and high-rise buildings and only small slivers of the new buildings would be added to the view.

In comparison to these three vantage points, the view of the Plan area from Yerba Buena Gardens would change more substantially. Specifically, the gaps between the existing high-rise office towers that can currently been seen in the Plan area (particularly the existing gap between the Pacific Telephone building and the W Hotel) would be largely filled in with development that could be constructed under the draft Plan. Rising above all of them would be the Transit Tower, tapering in the distance above the Pacific Telephone. The "TJPA Parcel F" building, just to the right of the Transit Tower, would also be visible from this vantage point. A cluster of other proposed structures, either those that are currently proposed or those that could be developed under the Draft Plan, would be visible to the left of the Transit Tower. Although this view would be visibly altered, such change would not be considered adverse, since the new skyline would be an intensification of the existing skyline and views toward the Plan area from this vantage point already contain exclusively urban forms. Views of the Museum of Modern Art's distinctive western façade as well as the St. Regis tower would continue to be available, and no Bay views, views of major open spaces, or other important scenic views would be obstructed.

Mitigation: None required.

Impact AE-3: The draft Plan would alter public views of the Plan area from key long-range vantage points. (Significant and Unavoidable)

From Alamo Square (**Figure 31A**), the City skyline would take on a new shape, from that of a relatively smooth mound visible some distance to the right of the Bank of America tower to one that showcases the Transit Tower as the tallest feature in the skyline, with other proposed and potential buildings decreasing in height to either side. Currently, the Transamerica Pyramid and the Bank of America tower are the most dominant features of the skyline, whereas, with the Plan, the Transit Tower and the other taller Plan-area buildings would take on a co-dominant role on the skyline. While this would represent a substantial change, it would not necessarily be considered adverse; in fact, the prominence of Plan-area buildings would be consistent with the direction in the Urban Design Element that very tall buildings should reflect the importance of their setting—in this case, a major transportation hub. Additionally, the tallest Plan-area buildings (left-to-right, one of the towers at 50 First Street, the Transit Tower, and the Parcel F building, would be spaced such that areas of open sky would be visible between them, consistent with Urban Design Element Policy 3.5. Finally, no scenic views would be substantially obstructed from this viewpoint.



Existing



Plan

SOURCE: Square One Productions

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Figure 31A
Visual Simulation: Alamo Square



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 31B
Visual Simulation: Alamo Square

Views from Dolores Park, Portola Drive, and Twin Peaks, (**Figures 32A – 34A**), which are located between approximately two-and-one-half and four miles southwest of the Plan area, also offer iconic long-range views of the downtown skyline and would clearly illustrate the proposed changes. In all three views, the Transit Tower would become a co-dominant element in the skyline, along with the Transamerica Tower and Bank of America Building, and the Plan area portion of the downtown "mound" would appear more built-up, dense, and urban.

From Dolores Park (Figure 32A), the "benched" look of the existing development as it extends toward the Bay would be replaced by the very prominent "mounding" of the tallest Plan-area buildings. However, the overall quality of these views would not be substantially compromised, as the views that would be blocked by the new buildings would primarily be of other similar, but slightly shorter buildings. In particular, no views of the Bay, of the Bay Bridge, or of open space would be blocked. While the view from Dolores Park would be altered by development under the draft Plan, there would not be a demonstrable adverse affect, and from this long-range viewpoint the impacts would be less than significant.

The Transit Tower and other Plan area buildings would alter views of major features, including the Bay, the Bay Bridge, the East Bay hills, and Yerba Buena Island, when seen from Portola Drive (Figure 33A) and Twin Peaks (Figure 34A). The Transit Tower would become the first building to rise above the East Bay hills on the skyline. Development in the Plan area, including the proposed Transit Tower, would clearly reduce the visual importance of the Bay Bridge west span towers in this view: whereas the bridge towers now appear approximately as tall as most of the existing buildings in the Plan area, exceeded in height only by the One Rincon Hill building, with development pursuant to the draft Plan, the bridge towers would be flanked on either side by considerably taller structures and would be obscured or overwhelmed by Plan area buildings. While buildings in the Plan area would be "adequately spaced and slender to ensure that they are set apart from the overall physical form of the downtown and allow some views of the city, hills, the Bay Bridge, and other elements to permeate through the district," [69] it appears that full buildout under the Plan would at least partially obscure and/or overwhelm views of the Bay Bridge, Yerba Buena Island, and the East Bay hills.

It is difficult to determine with certainty that aesthetic impacts are significant, as they are by nature subjective and rarely demonstrably adverse. Policies in the *General Plan*, particularly the Urban Design Element, identify the aspects of the visual environment that are important to retain or enhance and for some topics serve as a framework for analysis of aesthetic impacts in the CEQA context. The draft Plan's effects on existing views from Twin Peaks and Portola Drive appear to be in conflict with the Urban Design Element's direction to "[r]ecognize and protect major views in the city, with particular attention to those of open space and water" (Policy 1.1). Policy 1.8 states: "Increase the visibility of major destination areas and other points for orientation," and the supporting text notes, "Views from streets and other

69 Text accompanying Policy 3.5 of the *General Plan* Urban Design Element.



Existing



Plan

SOURCE: Square One Productions

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Figure 32A
Visual Simulation: Dolores Park



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 32B
Visual Simulation: Dolores Park



Existing

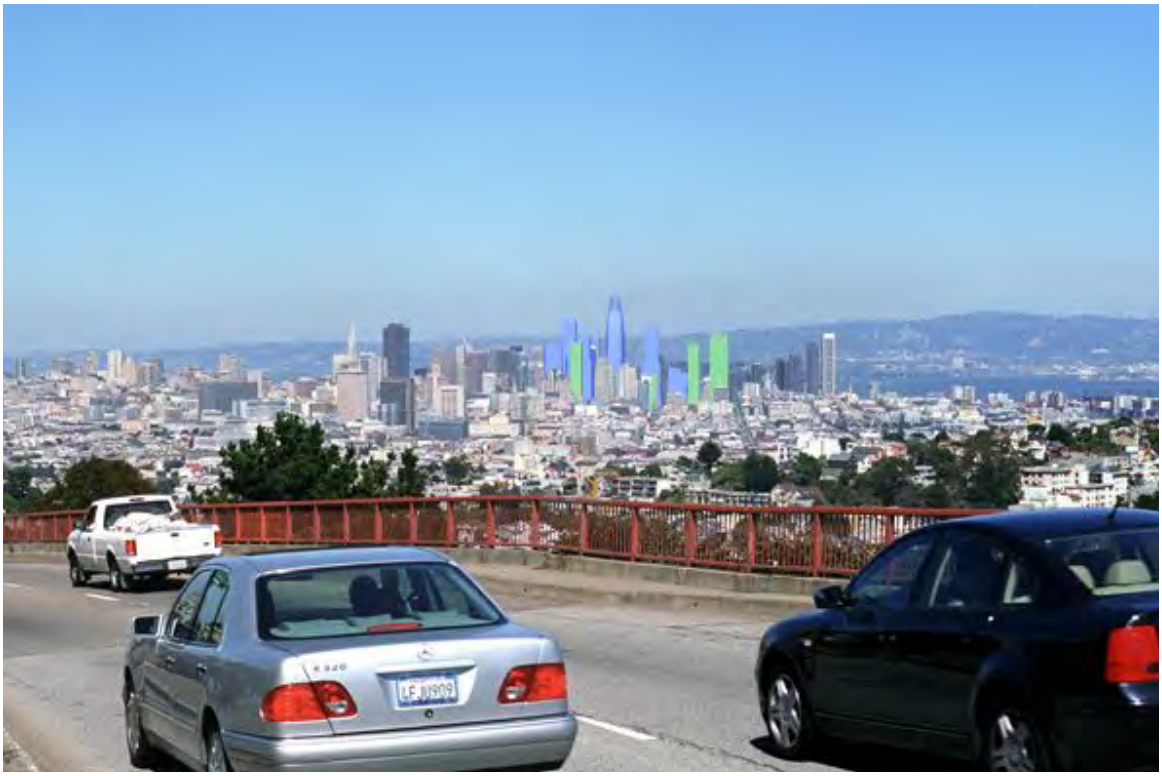


Plan

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 33A
Visual Simulation: Portola Drive



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 33B
Visual Simulation: Portola Drive



Existing

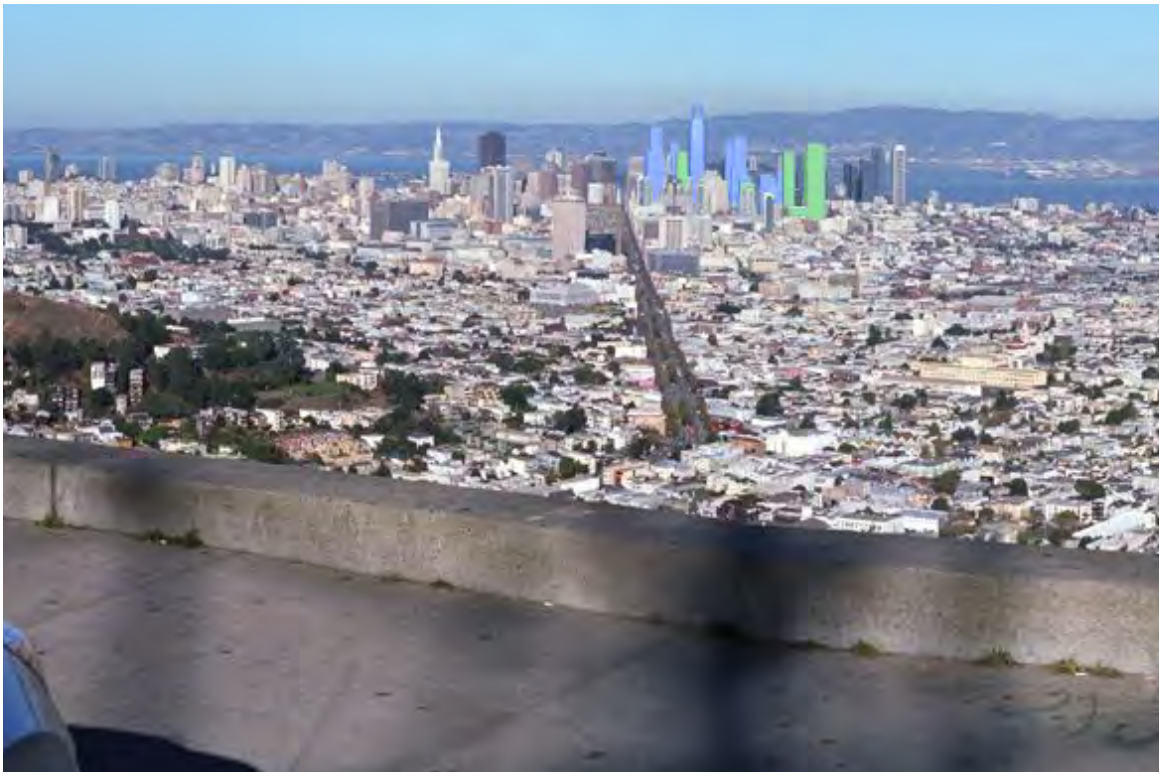


Plan

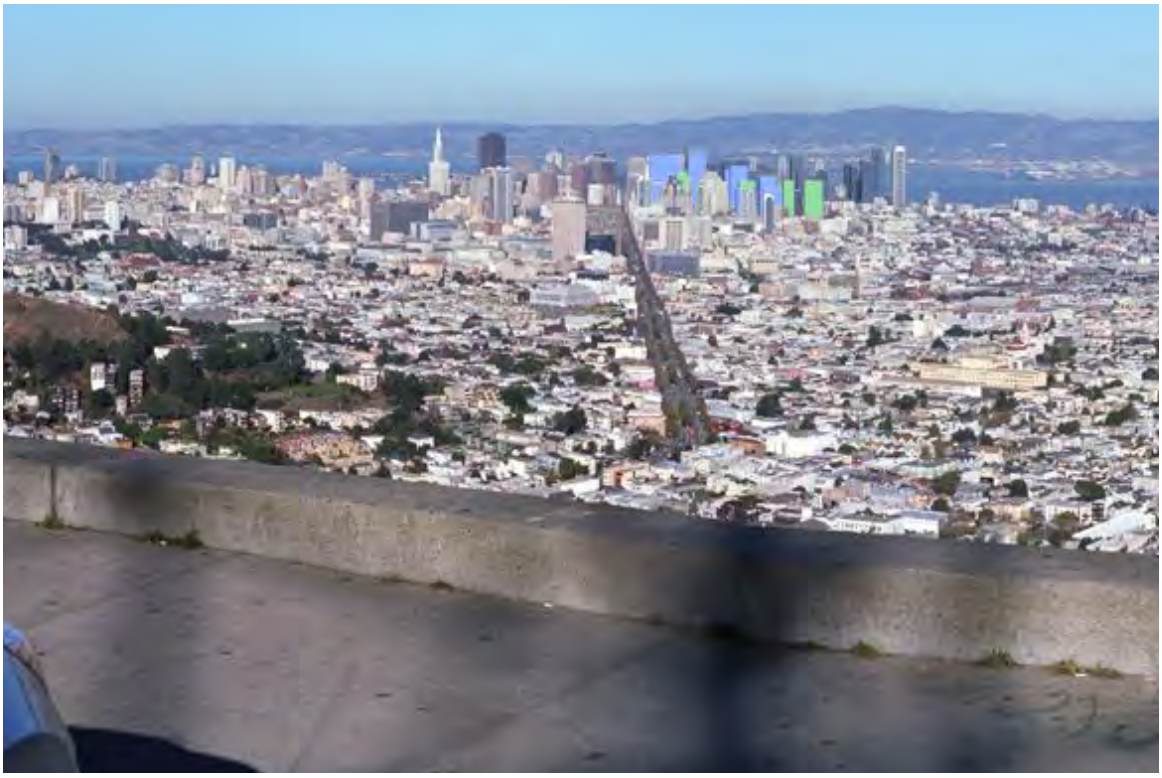
SOURCE: Square One Productions

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Figure 34A
Visual Simulation: Twin Peaks



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 34B
Visual Simulation: Twin Peaks

public areas should be preserved, created and improved where they include the water, open spaces, large buildings and other major features of the city pattern. Entranceways to the city and to districts are of special concern in this respect, as are lateral and downhill views that show a panorama or corridor with prominent features." It is expected that opinions will vary regarding on the overall change in the appearance of downtown San Francisco from these viewpoints. Moreover, the visual analysis portrays each site in the Plan area at full buildout, whereas in reality some sites might not be developed and others would be developed with more sculpted building forms that do not use the full allowable height and bulk. However, due to the reduced prominence of important visual features in a manner that could be considered inconsistent with the direction of the Urban Design Element, this impact is conservatively considered to be **significant and unavoidable**.

Northeasterly views of the Plan area from U.S. 101 (northbound at UPS Building; **Figure 35A**) and I-280 (at Sixth Street; **Figure 36A**) would be altered to a relatively greater extent than more distant views as a result of implementation of the draft Plan. From U.S. 101, dynamic views toward the Plan area would present a more built up cluster of towers, a classic urban downtown look, with many of the proposed and potential high-rises either almost fully or at least partially visible in the background. The tapered top of the Transit Tower would stand out against the sky, although the lower portions would not be visible from this particular vantage point. Detached from the Third and Folsom project to the right would be the 181 Fremont building, while the proposed 50 First Street and "Parcel F" structures would be visible just to the left. Further to the left, towards the Transamerica Pyramid and the Bank of America building, would be the proposed Palace Hotel tower. In combination, these buildings would block some views of a portion of the sky as well as block some other buildings that could be currently viewed from this freeway segment. However, such views are generally not considered scenic, and the reduction in the view of the sky would be minimal. The views with the implementation of the Plan would contain similar features that are visible in existing views of the Plan area, namely high-rise buildings, varying in height and massing, arranged in clusters. The view from I-280 would contain most of the same buildings, although the proposed changes would be perceived more clearly from this view point, as it is located about one quarter mile closer than the U.S. 101 view point. From this location, the new buildings would largely redefine the skyline, and thus would visually predominate, substantially reducing the visual prominence of the One Rincon structure as a result, although the separate mound of Rincon Hill, emphasizing the height of that hill, would be apparent in both views. (Most of the influence on views of the One Rincon Hill tower would be due to already approved buildings, including the second tower proposed as part of that project.) Virtually all of the proposed and potential new high-rises would be visible from this vantage point, transforming the appearance of the Northern Financial District and northern part of the Plan area from an environment in which buildings share a similar range of height and present a "benched" skyline into one with a distinct high point in the Transit Tower and a gradual scaling down in surrounding areas. No scenic views would be obscured from either viewpoint.



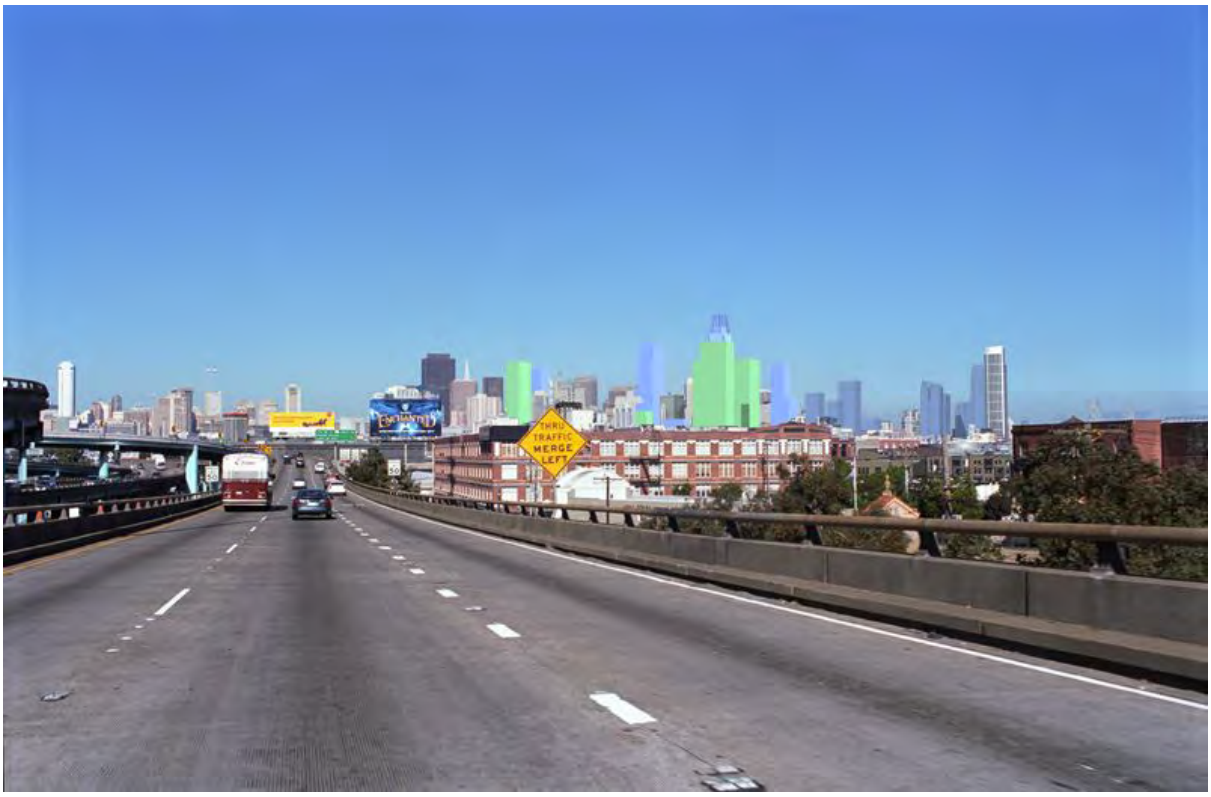
Existing



Plan

SOURCE: Square One Productions

Figure 35A
Visual Simulation: U.S. 101 Northbound at UPS Building



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 35B

Visual Simulation: U.S. 101 Northbound at UPS Building



Existing



Plan

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 36A
Visual Simulation: I-280 at Sixth Street



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 36B
Visual Simulation: I-280 at Sixth Street

This newly formed urban peak would be particularly apparent in views from Potrero Hill (**Figure 37A**), with a viewpoint located between these two freeways but farther south (approximately two miles from the Plan area). Most of the proposed and potential Plan-area buildings would be visible from this vantage point and, in contrast with longer-range viewpoints from the west, the new structures would be essentially unobscured by existing buildings. Moreover, because of the relative orientation of the street grid of Potrero Hill with that of the Plan area blocks, the Transit Tower and other Plan-area buildings would be viewed at approximately a 45-degree angle, meaning that two facades would be fully visible. This would increase the apparent width, and therefore the mass, of the new buildings, as would the fact that the Plan area is closer to Potrero Hill than are other parts of downtown. As with other longer-range views, the Transit Tower would be the tallest feature in the skyline, and its height would be accentuated by the fact that the Bank of America building and Transamerica Pyramid are largely obscured by other buildings in this view. Some small portion of the sky would be obscured as a result of implementation of the draft Plan, although such a change would not be considered substantial as most of the sky would remain visible just to the right and left of the Plan area. With the primary exception of the Transit Tower, the net effect largely would be to further fill in the existing densely developed Downtown, and thus the change would not be considered adverse.

Views of Plan area buildings from Telegraph Hill, approximately one mile north of the Plan area (**Figure 38A**), are, and would continue to be, largely obscured due to existing vegetation and development. However, they would include the upper stories of the Transit Tower and several of the tallest of the other proposed or potential buildings. The visual dominance of the Transamerica Pyramid and Bank of America Building would remain, given their relative proximity to Telegraph Hill (especially the former). However, other high-rises that currently define the skyline (i.e., 345 California Street) would be somewhat diminished in prominence by the tall new structures in the Plan area. This change, while evident, would not be considered adverse, because new buildings in the Plan area would be behind existing high-rise development and would not block views of either the Bay or the Bay Bridge, both of which would remain visible, as at present, to the left (east) in views from Telegraph Hill, nor would views of open space be obscured.

In views from Treasure Island (**Figure 39A**) and the Bay Bridge (**Figure 40A**), the Downtown skyline would be changed in a manner similar to that with other longer-range views described above. From these vantage points, the newly constructed Transit Tower would peak above the backdrop of existing buildings and other new towers, with other proposed and potential buildings, including 181 Fremont Street, 50 First Street, and the TJPA Parcel F building, readily apparent and clustered around the Transit Tower. This visual prominence of the Transamerica Pyramid would, to some degree, be supplanted by the dominance of the proposed Transit Tower and other buildings proposed in the surrounding area.

Although bitterly fought over when first proposed, the Transamerica Pyramid has arguably become an iconic structure on the San Francisco skyline by virtue of both its height and its distinctive silhouette. None of the Plan area buildings would obscure the Pyramid, however, and its somewhat diminished prominence on the skyline in long-range views would not be considered an adverse change, as the Pyramid would retain its importance in the skyline due to its distinctive silhouette. Moreover, from the



Existing



Plan

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 37A
Visual Simulation: Potero Hill



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 37A
Visual Simulation: Potero Hill



Existing



Plan

SOURCE: Square One Productions

Figure 38A
Visual Simulations: Telegraph Hill



Cumulative



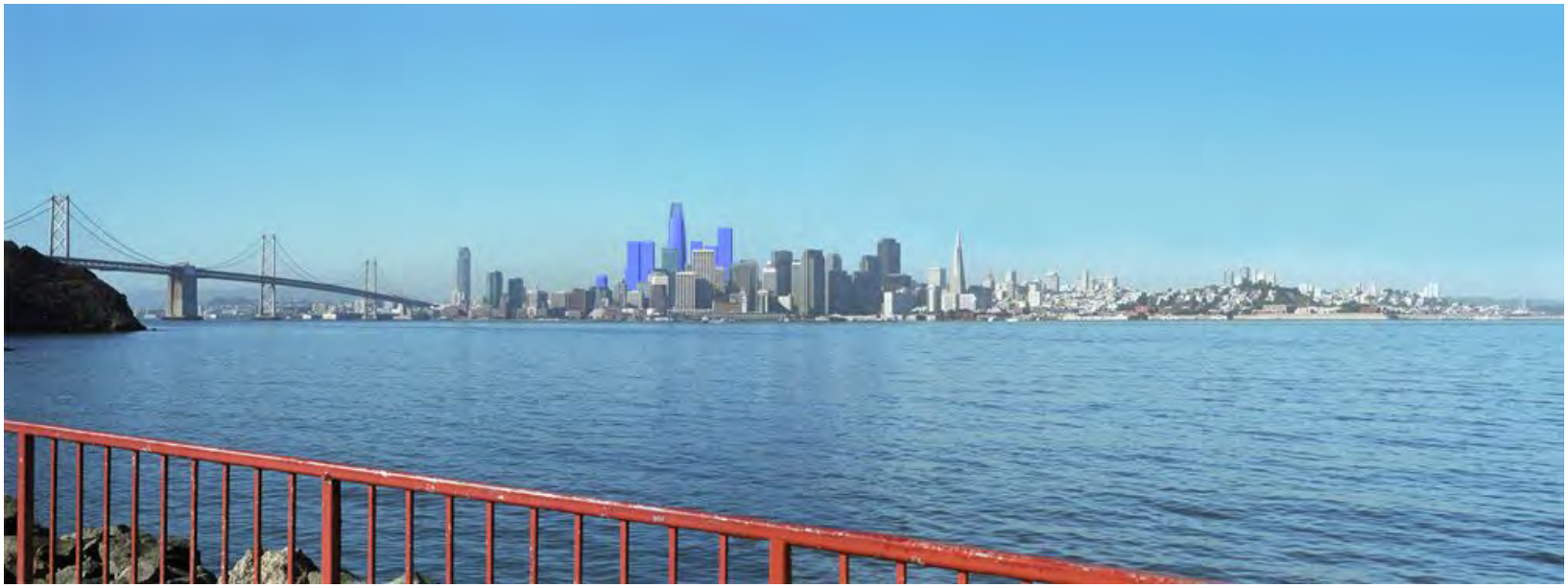
No Project plus Cumulative

SOURCE: Square One Productions

Figure 38B
Visual Simulations: Telegraph Hill



Existing



Plan

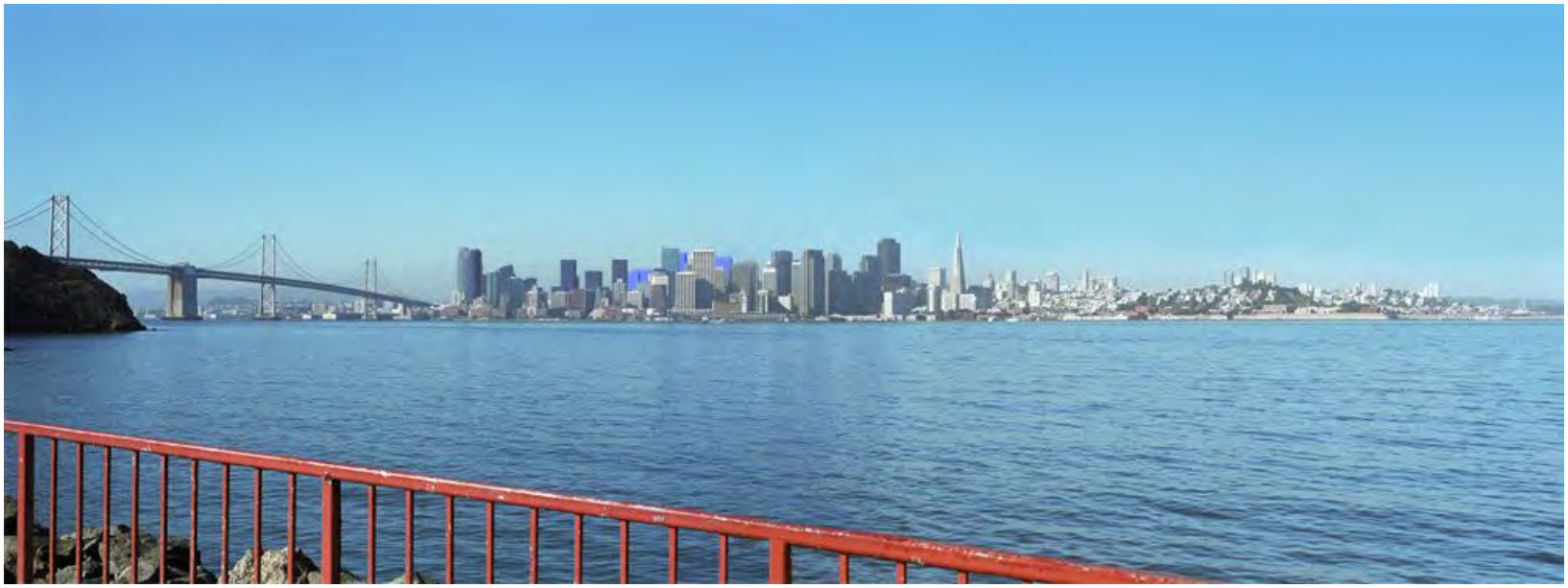
SOURCE: Square One Productions

Figure 39A

Visual Simulations: Treasure Island



Cumulative

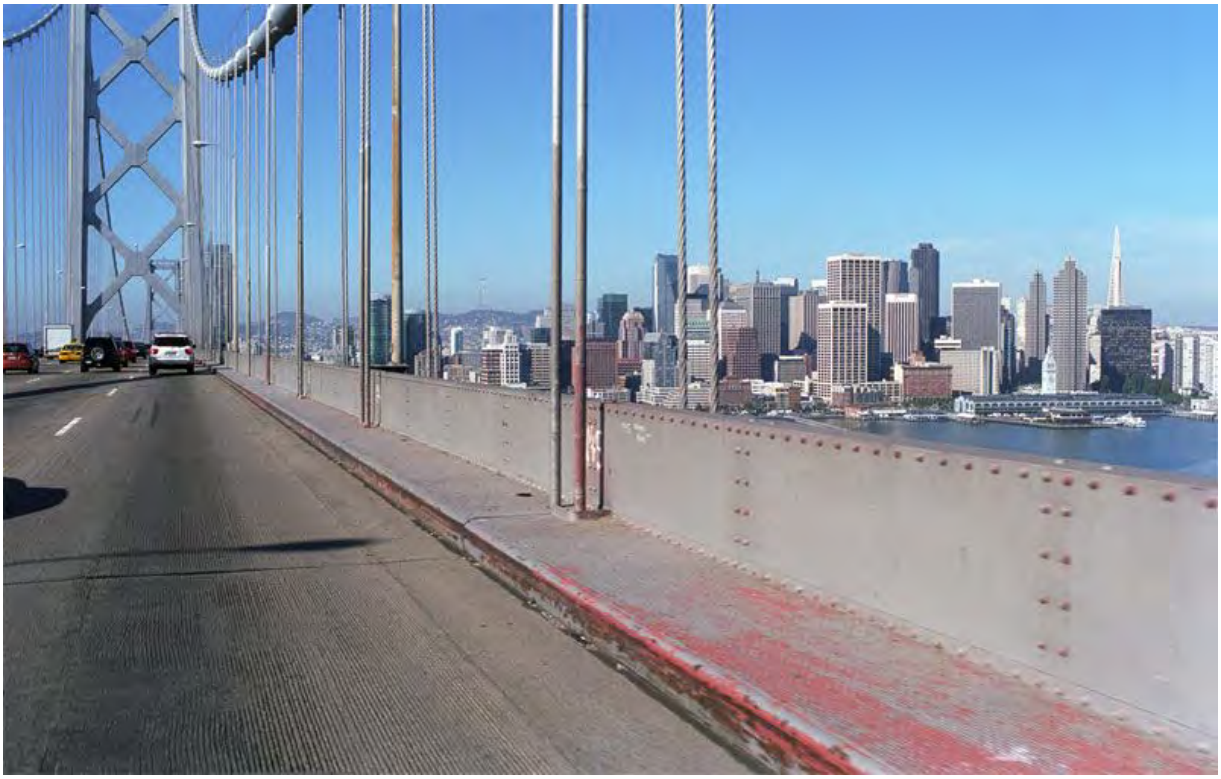


No Project plus Cumulative

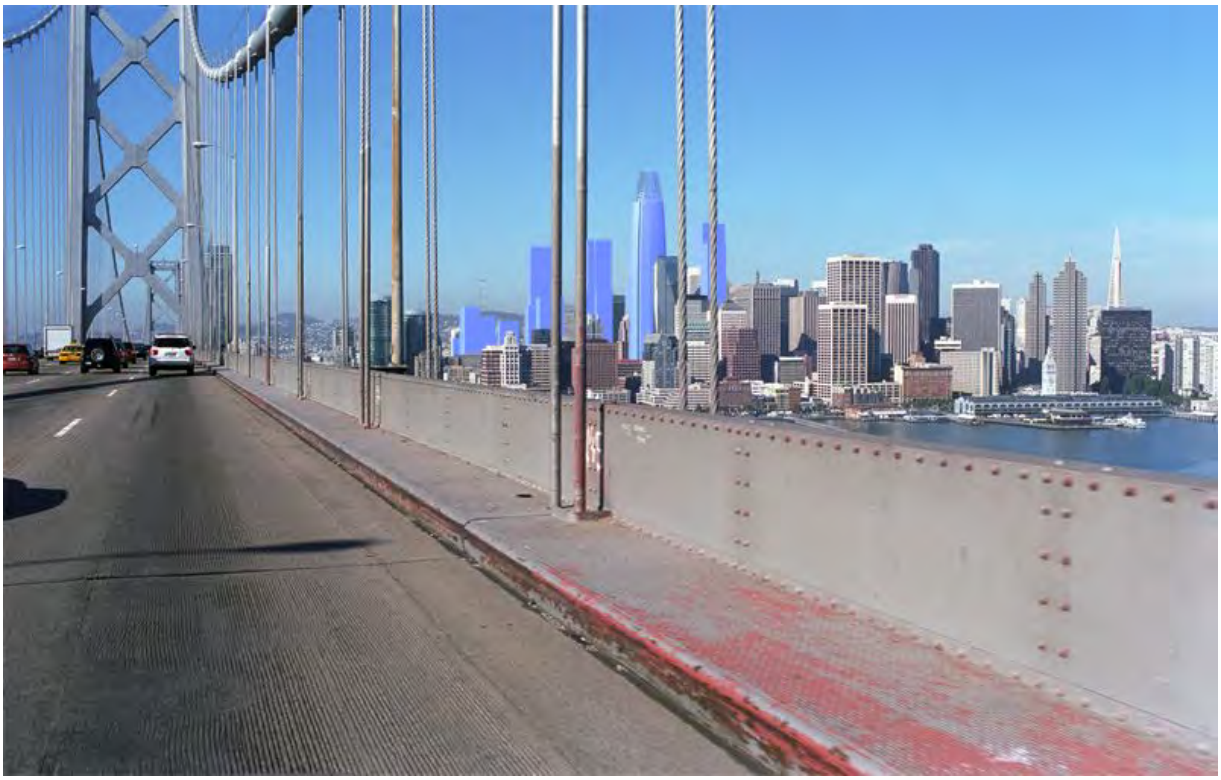
SOURCE: Square One Productions

Figure 39B

Visual Simulations: Treasure Island



Existing

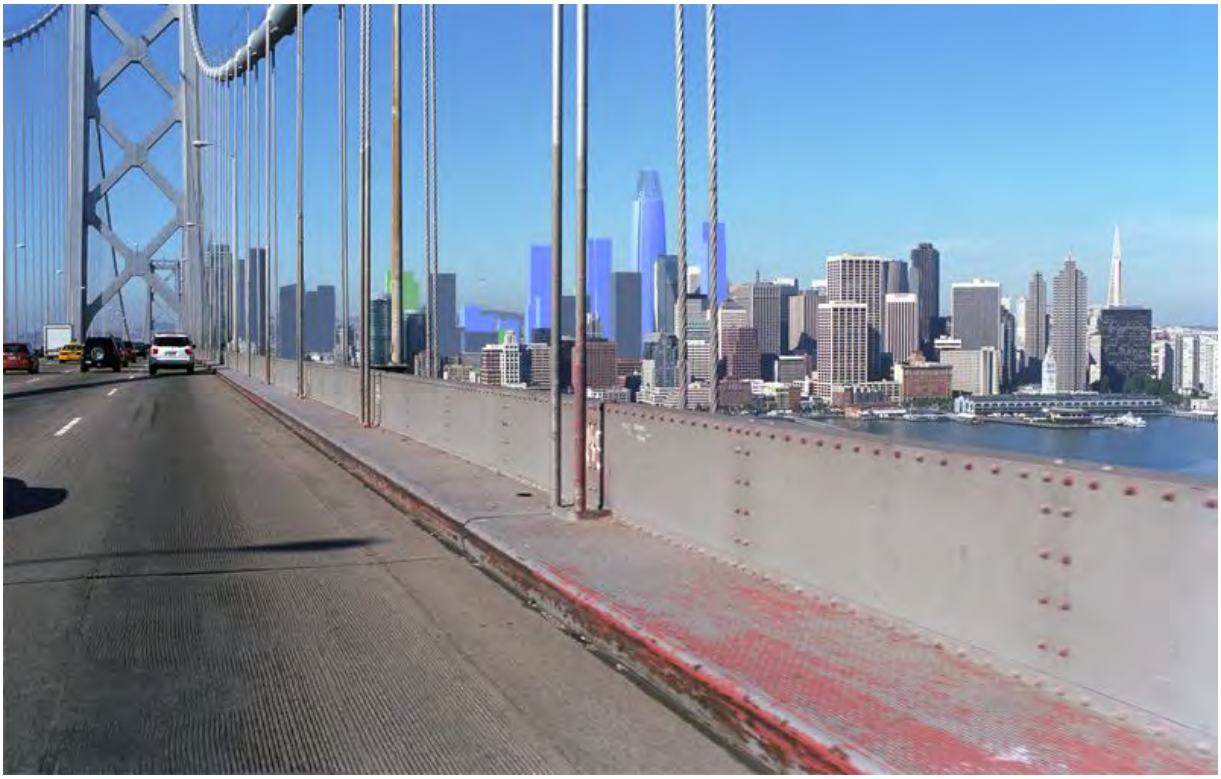


Plan

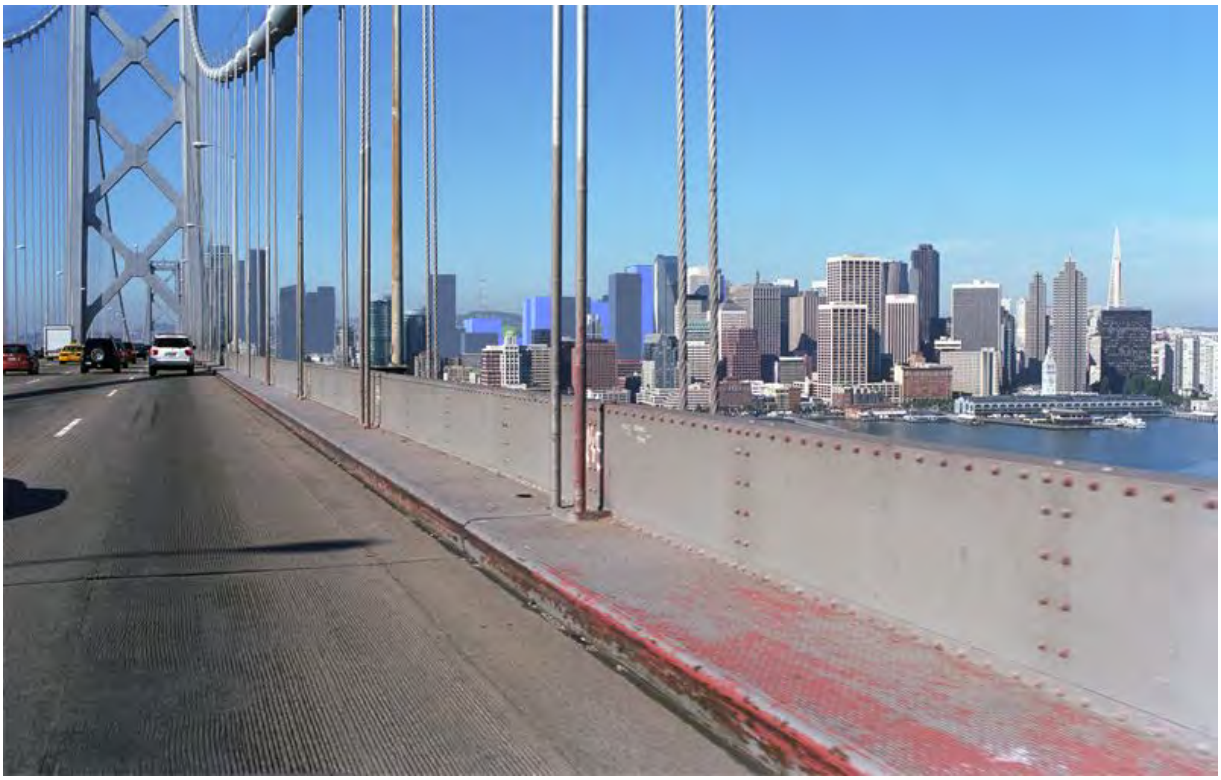
SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 40A
Visual Simulation: Bay Bridge Upper Deck



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 40B

Visual Simulation: Bay Bridge Upper Deck

vantage point of Treasure Island, Plan-area buildings would not block scenic views of the City's hills beyond, nor would they obscure any Bay views or views of open spaces. Effects in views from Bay Bridge would be similar to those from Treasure Island, although in the image presented in Figure 40A, Plan-area buildings would obscure portions of the mid-City ridgeline that includes Twin Peaks and Mount Sutro. However, this view is extremely transitory: that is, observers only experience this particular view for a matter of seconds while traveling on the Bay Bridge at the speed limit in a moving vehicle, and this view of the City hills rapidly opens up as the observer comes alongside downtown. Therefore, and because much of the ridgeline would remain visible, even in this viewpoint, this effect is considered less-than-significant.

Lastly, views of the Plan area from Aquatic Park (**Figure 41A**), located approximately two miles northwest of the Plan area, would reveal the Transit Tower as well as some of the other proposed buildings in the surrounding vicinity. However, no "mounding" effect of multiple new tall buildings would be obvious from this vantage point, due to the competing topography at Telegraph Hill and other dominant structures along the shoreline that would obscure more than half of the new towers.

In conclusion, the increases in density and height of the proposed development would result in changes in the built forms, perceptible most clearly in long-range views of the Plan area. Although the draft Plan would alter at least some public views of downtown from almost all directions, the proposed changes would not constitute a substantial departure from the types and massing of structures that already exist in the Plan area. Implementation of the Draft Plan would provide an additional focal point in long-range views of and through the area, consistent with the direction in the Urban Design Element that tall buildings emphasize the importance of activity centers, such as transit stations, by the location of tall buildings. Additionally, the draft Plan calls for the proposed Transit Tower and a limited number of other buildings taller than existing development to be separated by sufficient distance and to incorporate setbacks and sculpted massing such that they would not adversely affect important views. While the perception of views is inherently subjective and it is conceivable that the changes to the skyline described above due to development pursuant to the draft Plan may be perceived as substantial and perhaps adverse to some individuals, this analysis concludes that the draft Plan, by its adherence to the principles of the *General Plan* Urban Design Element, would largely result in less-than-significant aesthetic impacts.

The exception to this overall conclusion is the effect of the Plan on the views from Twin Peaks and Portola Drive. As discussed above, from these central vantage points views of the Bay, Bay Bridge, and Yerba Buena Island would be overwhelmed and potentially obscured by Plan area buildings. Policy established through the *General Plan* recognizes that such an outcome would be adverse, and for this reason the impact is conservatively considered **significant and unavoidable**.

It is important to point out that it is possible that not all of the buildings illustrated in visual simulations would be developed. Those that are developed would be constructed according to different schedules, spanning perhaps a number of years. Therefore, for some undetermined amount of time following the certification of the EIR and adoption of the draft Plan, one or more of the sites under construction and



Existing



Plan

SOURCE: Square One Productions

Figure 41A

Visual Simulations: Municipal Pier, Aquatic Park



Cumulative



No Project plus Cumulative

SOURCE: Square One Productions

Figure 41B

Visual Simulations: Municipal Pier, Aquatic Park

other site(s) with completed buildings could be visible. The analysis presented herein assumes, for purposes of a most conservative analysis, that all sites identified in the assumptions in Section 4.0 would be built upon.

Mitigation: No mitigation is available.

Impact AE-4: The draft Plan would result in increased light and glare in the Plan area. (Less than Significant)

Individual development projects that occur under the proposed Plan would generate additional night lighting in the future, but the change is not anticipated to be substantial or adverse in the context of the existing densely developed Downtown. New lighting would not be in excess of that currently emitted by existing high-rises, and could be expected to be incrementally reduced, on a per-building basis, with the ongoing and increasing focus on energy conservation. Therefore, implementation of the draft Plan would not result in obtrusive light or glare that would adversely affect views or substantially affect other properties. (A separate analysis of lighting effects on birds is presented in Section IV, Biological Resources.)

Planning Commission Resolution 9212 generally prohibits the use of mirrored or reflective glass in new buildings. Therefore, effects related to glare would not be substantial, and would be less than significant.

Based on the above, impacts of the proposed Plan on light and glare would be less than significant.

Mitigation: None required.

Transit Tower

Impact AE-5: The implementation of the Transit Tower project would alter the visual character of the tower site vicinity and alter public views of the site and the surrounding Plan area from key public vantage points as well as alter views into the surrounding neighborhoods from within the Plan area. (Less than Significant)

As discussed in the Project Description, the Transit Tower would be a 61-story, approximately 1,070-foot-tall office building, located adjacent to the new Transit Center on the south side of Mission Street between Fremont and First Streets. The design of the building would include concave curved exterior walls on all sides, with walls tapering as the building rises. A lattice-like steel sculptural element atop the building would extend 150 feet in height above the approximately 920-foot-tall occupiable area of the tower, and would continue the building's tapering shape. A pedestrian bridge on the tower's fourth level would provide a walking connection from the Transit Tower to the City Park on top of the Transit Center.

Although the Transit Tower would be sited within an area that already contains a high concentration of tall buildings, it would nevertheless be taller than any of the existing structures in the immediate vicinity (or anywhere in San Francisco) and taller than all of the structures that could be constructed as part of the Transit Center District Plan. At the ground level, the new building would provide entrances along all four sides, creating ground-level activity along the project block and elevating the level of pedestrian activity. Despite the proposed tapering of the building, the tower would block views to the sky as well as reduce the amount of sunlight that reaches the ground level as compared to existing conditions. Although all of these changes would be noticeable, they would not substantially alter the visual character of the Transit Tower project site and the surrounding blocks, since they would constitute infill development and a continuation, albeit in a more intensified form, of the types of uses that have historically existed in this area.

In terms of views, photomontages of the proposed Transit Tower, along with accompanying photographs of existing conditions, are included in **Figures 42 – 52**, pp. 158 through 170. These images demonstrate changes that would occur to short-, medium- and long-range public views toward the Transit Tower project site. Thus, the increased height of the downtown "mound" that could eventually be achieved with implementation of the draft Plan and other cumulative projects in the surrounding vicinity is not presented in the images below.

It is noted that these visual simulations illustrate the proposed Transit Tower in the absence of other development proposed as part of the draft Plan. Because the redevelopment of specific opportunity sites would occur gradually over time, as individual project sponsors find opportunities and financing to implement their projects, it is possible that Transit Tower, the tallest building in the City, could be built ahead of the other anticipated projects within the Plan area. While this temporary outcome could be considered adverse, this conclusion is subjective. While the impacts of the draft Plan on long-range views from Portola Drive and Twin Peaks are conservatively considered significant due physical outcomes that would potentially conflict with the Urban Design element (see Impact AE-3), the Transit Tower alone would not result in this impact.

As shown in **Figure 42**, the current view of the site from Mission Street east of Fremont Street, which consists of a largely vacant, underutilized parcel (where the construction of the Transit Center is currently under way) would be replaced by the Mission Street frontage of the proposed Transit Tower. On the ground level, the building would appear as a relatively large building mass clad by glass curtain wall. Some articulation would be apparent, although from this vantage point, the tapering of the tower, or its overall architectural form (for instance, its height as related to other surrounding buildings), would not be readily evident.[70] The Transit Tower would block views of the buildings further east along Mission Street, as well

[70] The visual simulations from both close-in viewpoints on Mission Street do not depict the articulation of the ground floor of the Transit Tower building, because the Tower design has not advanced to this level of detail. Consistent with the draft Plan, a substantial portion of the ground floor would be expected to be occupied with active uses, such as retail and/or restaurant space and it is expected that the Transit Tower would comply with the draft Plan with respect to ground floor design and massing.



Existing



Project

SOURCE: Square One Productions

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Figure 42
Visual Simulation (Transit Tower) from
Mission Street West of First Street

as other buildings to the southeast of the project site that are currently visible through the gap in the streetwall. While this view would be demonstrably altered with the construction of the Transit Tower, this would not be considered an adverse impact, as views of the building would be similar to other views already experienced along Mission Street and other surrounding streets.

Visual simulation of the proposed Transit Tower is also shown from Mission Street, west of First Street. As shown in **Figure 43**, the Transit Tower would appear similar to how it is described above, with its massing and the encircling glass façade as its defining visual characteristics. As with the easterly view from Mission Street, the Transit Tower would likewise block views of buildings immediately to the west, as well as to the southwest. However, while changes to this view would be clearly noticeable, they would not be considered adverse, since Mission Street is developed with other buildings that are similar in massing, lot coverage, and architectural style to the proposed tower.

Neither close-up view of the Tower site, each consisting of several other nearby towers, is considered scenic, and the development of the Transit Tower, while it would fill in areas of sky now visible, would not be considered an adverse change. It is noted that the transformation from the existing condition to development of a building would not constitute a loss of "open space," as the site in its current condition is not considered open space. Moreover, the most recent use of the site was as a bus and taxi loading facility for the Transbay Terminal, which was demolished in 2010.

As shown in **Figure 44**, the proposed Transit Tower would substantially alter views from the Fremont Street freeway off-ramp near Harrison Street. Although these views are typically experienced for short durations by drivers and passengers in passing vehicles, the proposed Transit Tower would become the dominant feature in the foreground, obstructing views of other downtown buildings in the background and substantially altering these views. It is noted that development approved along Folsom Street, in Zone 1 of the Transbay Redevelopment Plan, would partially obscure the Transit Tower in this view. However, if constructed prior to other development, the Tower would be visible nearly in its entirety from this vantage point, with its height further accentuated by the relatively low-scale development in the foreground; it would also appear twice as tall as existing nearby towers. From this vantage point, the Tower would thus clearly demarcate the location of the Transit Center. The view of the Transit Tower from the freeway off-ramp would represent a noticeable change from existing conditions; however, the view from the freeway off-ramp is not considered particularly scenic, and this impact would not be significant.

Views of the Transit Tower that show it within the context of downtown are also available from Potrero Hill, as shown in **Figure 45**. As demonstrated in these images, with the implementation of the Transit Tower, views of the skyline from Potrero Hill would be dominated by the proposed tower, which would appear as a disruption to the generally flat development pattern of the downtown skyline. The tower would be somewhat similar to the Bank of America tower in the left field of vision and the One Rincon Tower in the right field of vision, but due to its height, central placement among other downtown buildings, and the unique tapered form, would stand out among these other structures. The Transit Tower in this view would introduce a new focal point, identifying the Transit Center as an important



Existing



Project

SOURCE: Square One Productions

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Figure 43
Visual Simulation (Transit Tower) from
Mission Street East of Fremont Street



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

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Figure 44
Visual Simulation of Transit Tower from
Fremont Street Ramp near Harrison



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Figure 45
Visual Simulation of Transit Tower from
Potrero Hill - Missouri and Mariposa

activity center in the South Financial District. As with the effects of the draft Plan described in Impact AE-2, the apparent mass of the Transit Tower would be greater in this view than in many others because two full facades would be clearly visible. Nevertheless, no important views of the Bay or hills would be obscured, and the impact would not be considered significant or adverse.

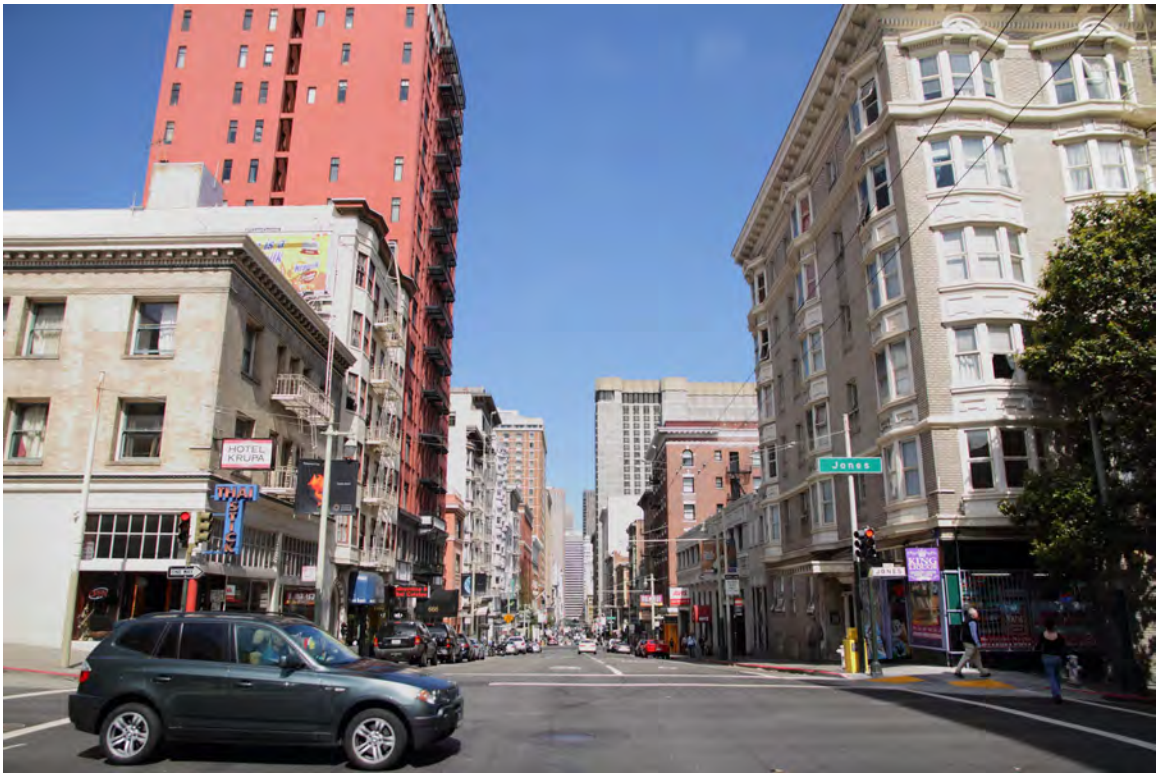
The view from Post and Jones Streets toward the project site, as shown in **Figure 46**, would not change dramatically, although the upper portion of the proposed Transit Tower would be newly visible in the background, as a new element anchoring the end of Post Street at the Transit Center. Because the perceived size of the tower would be somewhat tempered by its distance from this vantage point and the overall mid- to high-rise scale of the surrounding development, and because the Tower would play a key role in orienting the pedestrian from this viewpoint, the change to this public view would not be considered substantial or adverse.

Views toward the Transit Tower project site from the Bay Bridge, both from the bridge's western span (which contains iconic views of the San Francisco's downtown skyline) and over Spear Street, are shown in **Figures 47 and 48**. From both vantage points, the new Tower would dominate the mid- to long-range views, rising substantially above the existing development in the surrounding area and obscuring some views of the sky. As with the draft Plan described in Impact AE-2, these views would be highly transitory in nature. Although the tapered tower would interrupt the existing development pattern by introducing a major new visual element, which might be perceived by some to be an adverse change, the Transit Tower would not obscure the City's central ridgeline, would not block important scenic views, and would focus the observer's attention on the Plan area as a major new source of activity, consistent with the direction in the Urban Design Element. Therefore, this impact would be less than significant.

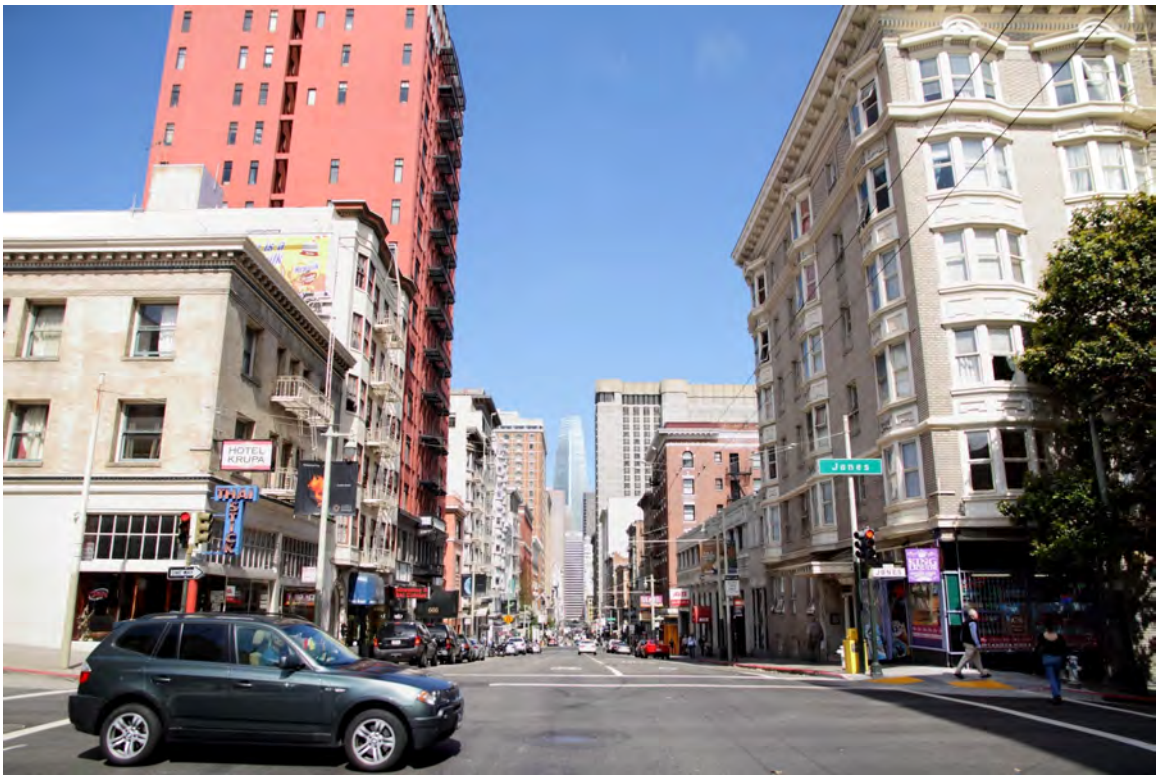
Long-range public views of downtown are also available from Alamo Square and Dolores Park (**Figures 49 and 50**), both of which are considered recreational areas and thus, experience heavy use by the general public. From both views, the development pattern of the downtown skyline would be altered by the proposed Tower, which would be co-dominant with the Bank of America tower, the One Rincon tower and the Transamerica pyramid. From both of these viewpoints, the Tower would somewhat dramatically shift the observer's focus to the South Financial District, emphasizing the importance of the Plan area; again, this would be consistent with the Urban Design Element. Additionally, the Tower's apparent bulk would be substantially less than that of the Bank of America building when seen from both locations. Thus, although clearly a substantial change, this alteration of the skyline would not be considered adverse.

From the vantage point at Columbus Avenue and Broadway (shown in **Figure 51**), changes to views would not be easily perceptible, as only the tapered top portion of the Transit Tower would be visible beyond the existing intervening development; accordingly, no adverse effect would ensue.

As shown in **Figure 52**, from the end of Pier 7 (along the City's waterfront north of the Ferry Building), views toward the Transit Tower project site would also be altered. Although the proposed tower would be taller than the buildings along Market Street and buildings along the north-south oriented streets south of Market Street (i.e., Main, Spear, and Steuart Streets), it would appear similar in scale to these



Existing

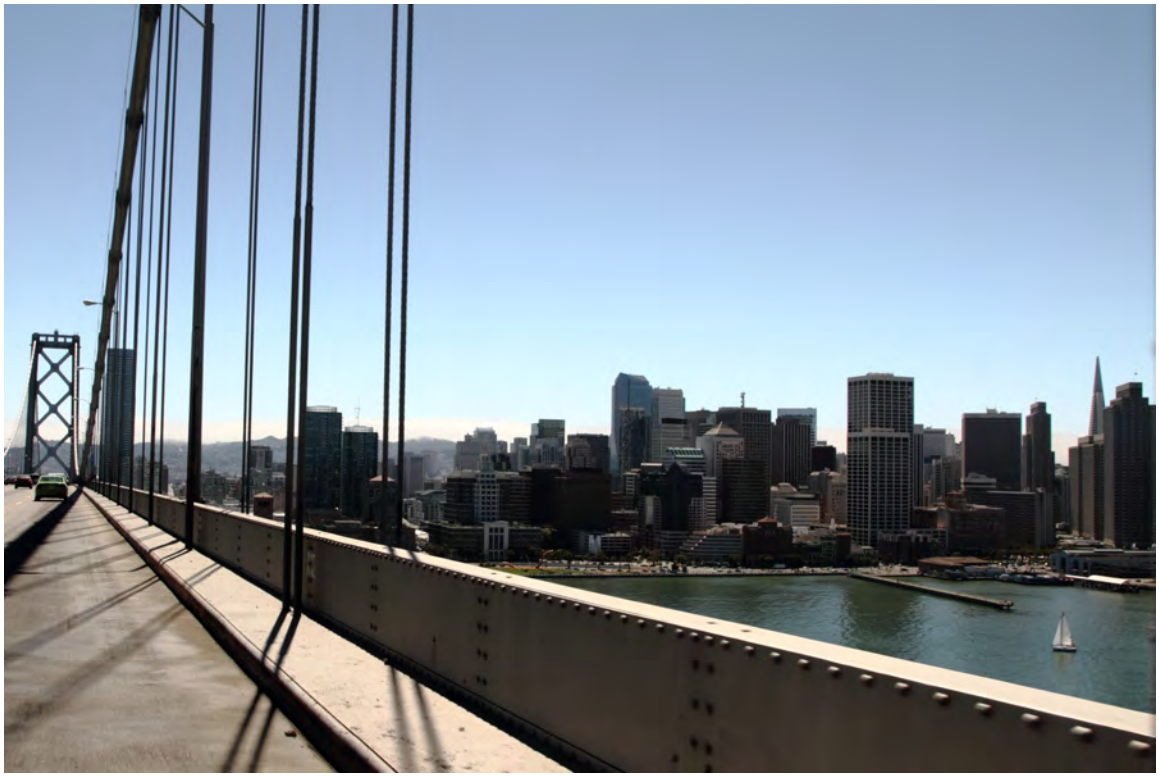


Simulation

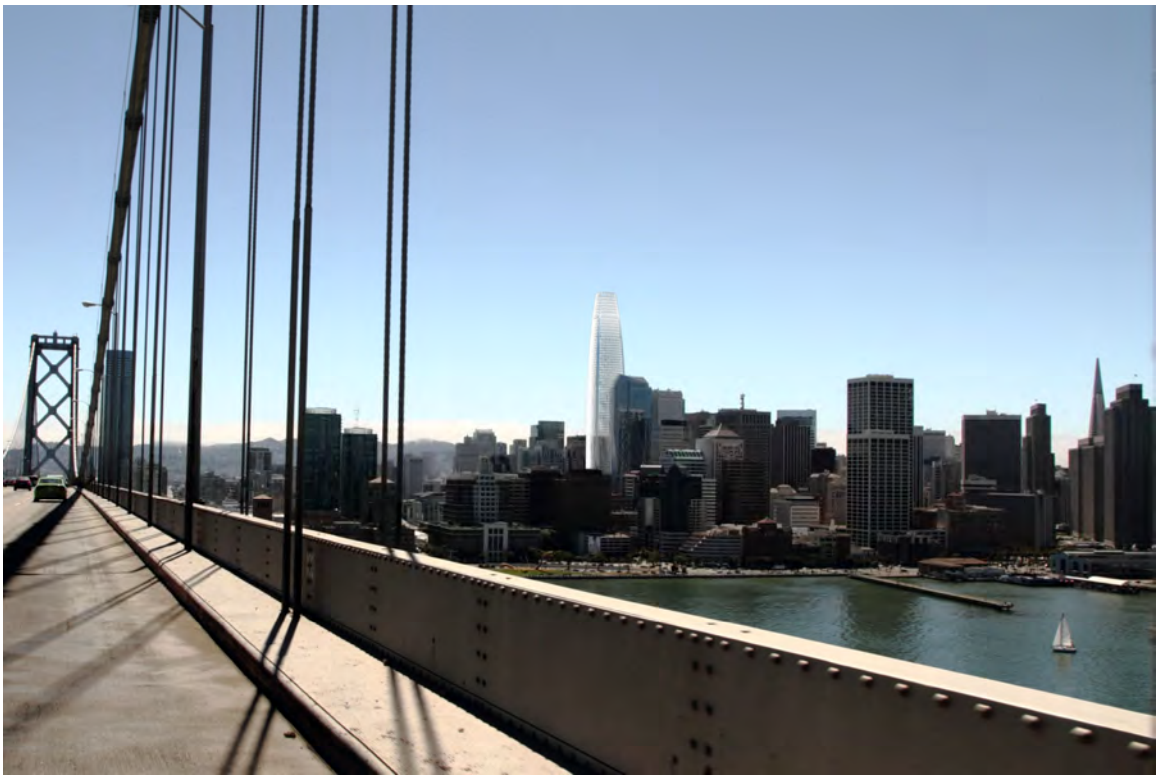
SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

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Figure 46
Visual Simulation of Transit Tower from Post and Jones



Existing



Simulation

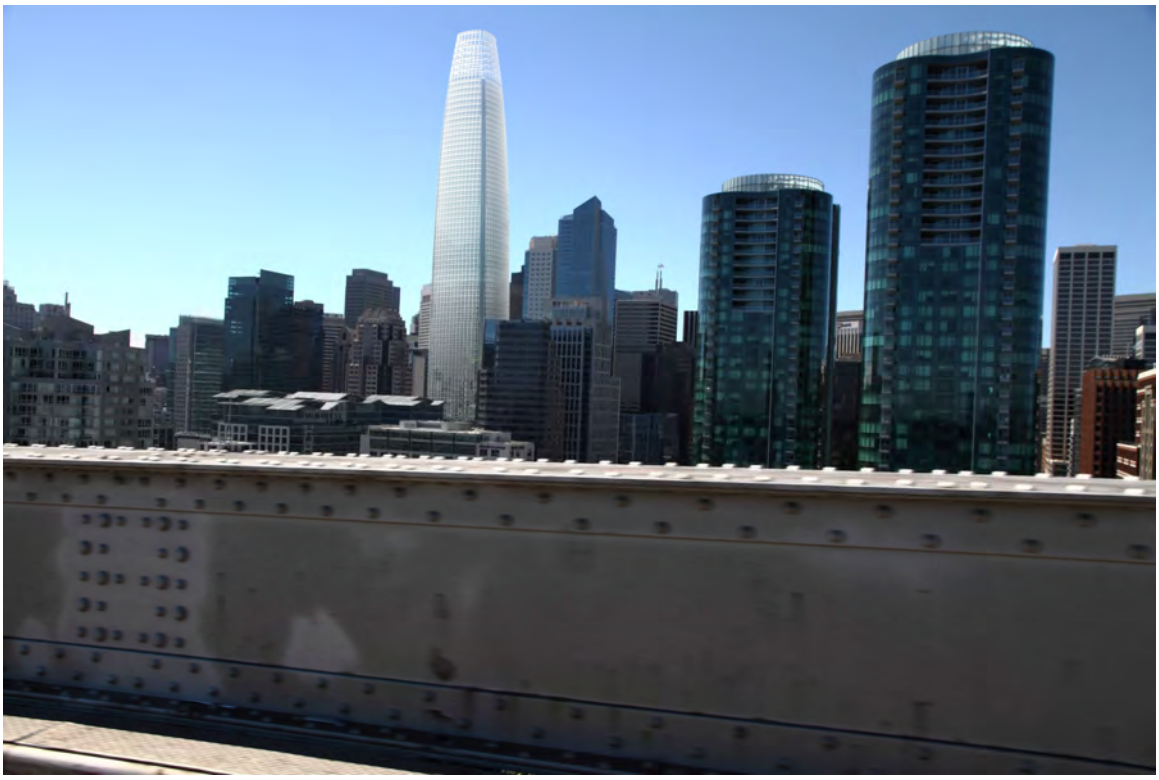
SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 47
Visual Simulation of Transit Tower from Bay Bridge



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 48
Visual Simulation of Transit Tower from Bay Bridge over Spear



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 49
Visual Simulation of Transit Tower from Alamo Square



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 50
Visual Simulation of Transit Tower from Dolores Park



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 51
Visual Simulation of Transit Tower from Columbus and Broadway



Existing



Simulation

SOURCE: Pelli Clarke Pelli Architects and Steel Blue LLC

Case No. 2007.0558E: Transit Center District Plan and Transit Tower . 207439

Figure 52
Visual Simulation of Transit Tower from End of Pier 7

buildings from this perspective because the tower would be located approximately one-half mile further south. Moreover, the apparent bulk of the Transit Tower would be far less than that of numerous other buildings observable from this viewpoint. Thus, while the Transit Tower would constitute a new feature in the downtown's skyline and would partially block views of the sky, in general, these changes would not be considered substantial or adverse.

As illustrated in the photomontages presented above, it is possible that Transit Tower could be built ahead of the other anticipated projects within the Plan area. Without the proposed surrounding Plan-level development to temper the height of the Transit Tower and place it within a larger context, the tower would dominate the skyline in views from certain locations, although from other locations it would play a more secondary role. However, the proposed Transit Tower would be developed generally in keeping with the guidance of the *General Plan* Urban Design Element that tall buildings, if properly located, "can enhance the topographic form and existing skyline of the city. They can orient the traveler by helping to clarify his route and identify his destination. Building height can define districts and centers of activity."

Mitigation: None required.

It is noted that Chapter VI, Alternatives, discusses aesthetics impacts of alternatives that would allow development of Plan area buildings at lesser heights, which would reduce impacts on views and visual character.

Impact AE-6: The proposed Transit Tower would result in increased light and glare. (Less than Significant)

As with all individual development projects pursuant to the draft Plan, the Transit Tower would generate additional night lighting in the future, but the change is not anticipated to be substantial or adverse in the context of the existing densely developed Downtown. New lighting would not be in excess of that currently emitted by existing high-rises, and could be expected to be incrementally reduced, on a per-building basis, with the ongoing and increasing focus on energy conservation. Therefore, the proposed Transit Tower would not result in obtrusive light or glare that would adversely affect views or substantially affect other properties. (A separate analysis of lighting effects on birds is presented in Section IV, Biological Resources.)

Planning Commission Resolution 9212 generally prohibits the use of mirrored or reflective glass in new buildings. Therefore, effects related to glare would not be substantial, and would be less than significant.

Based on the above, impacts of the proposed Transit Tower on light and glare would be less than significant.

Mitigation: None required.

Cumulative Effects

Impact C-AE-1: The draft Plan, in combination with the Transit Tower and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not adversely affect scenic resources or substantially increase light and glare. (Significant and Unavoidable)

As noted throughout this Chapter, the proposed project would consist of implementing the Transit Center District Plan (a set of district-wide zoning and height and bulk changes along with various other revisions), as well as constructing the Transit Tower. When combined with other foreseeable projects proposed or under construction nearby, the proposed project would alter the visual character of the northeast portion of the City as well as modify the public views of the project vicinity that are currently experienced. The projects that are included in the cumulative scenario for purposes of visual quality analysis are described in the introduction to Chapter IV and include the Transit Center, buildings proposed under the Zone 1 Transbay Redevelopment Plan, buildings proposed under the Rincon Hill Plan, the Museum of Modern Art expansion structure,[71] the residential tower at 706 Mission Street that would also house the Mexican Museum, and the potential expansion of Moscone Center and ancillary facilities at Third and Folsom Streets.

Implementation of both the Transit Center District Plan and Transit Tower projects, along with the Transit Center and other proposed nearby projects, would introduce approximately a dozen new high-rises to the northeastern portion of the City, intensifying the overall look and feel of this area. The proposed urban design controls included in the Draft Plan, as well as those previously included in the Rincon Hill Area Plan and the Transbay Redevelopment Plan, would maximize retention of existing views and encourage slender towers by requiring minimum tower separation distances and square footage reductions in the towers' upper levels. Furthermore, the area plans have been developed with reference to each other. For instance, as noted above, the proposed building heights within the Plan area would transition to lower forms within the Rincon Hill Plan area, emphasizing the topographic form of the city and the importance of centers of activity. Overall, the development program envisioned under the Transit Center District Plan, in combination with other nearby plans and projects would continue the existing character of this general area of the City. Although the visual character would be altered by introduction of new buildings as well as intensification of pedestrian and vehicular activity on the local streets, this impact would not be considered to be adverse.

Effects on views from the closer-in locations (Figures 27B — 30B) would be similar to those of the draft Plan, in that only relatively small parts of new towers would be visible from any given location. In the view from Mission Street west of Fourth Street (Figure 28B), buildings outside the Plan area, such as 706 Mission Street, would also become part of the viewshed.

[71] The proposed Museum of Modern Art expansion is modeled as a 320-foot-tall tower, consistent with the information available at the time this analysis was undertaken. The museum has subsequently proposed a shorter building, approximately 200 feet tall, behind the existing museum, which is analyzed in the EIR for that project (Case Nos. 2009.0291E and 2010.0275E).

In terms of views (shown in Figure 31B through 40B), the skyline would appear more built up, blocking some views of other buildings and possibly the Bay and the iconic Bay Bridge (which, according to the Urban Design Element of the *General Plan*, stands out as a feature of community importance). From Alamo Square (Figure 31B), the proposed towers at Third and Folsom Streets (Moscone Center expansion, which are outside the Plan area, would be visible in a separate cluster to the right. The views of the One Rincon Hill building would be at least partially blocked, as would some views of the sky. These changes would be diminished in intensity by distance, because the Plan area is located approximately two miles from the Alamo Square, and because large portions of the new towers would be obscured by existing buildings. However, the buildings that could be constructed under the Draft Plan would be clearly noticeable, and while they would be at a fairly great distance, they could be seen by some observers to diminish the quality of this iconic view. Nevertheless, because the focal point of this view would remain in the near field (i.e., the "painted ladies" across Steiner Street), the effect from this location would not be substantial, and would be less than significant. Moreover, no views of the Bay would be obscured.

In long-range views, particularly from Portola Drive and Twin Peaks (Figures 33B and 34B), cumulative development would obscure portions of San Francisco Bay and much of the Bay Bridge west span, because several buildings west and south of the Plan area would be developed where no intervening high-rise buildings currently exist; Yerba Buena Island would be further obscured. The separate set of buildings on Rincon Hill would clearly be seen to emphasize the height of that hill, consistent with the direction in the Urban Design Element of the *General Plan*. The Rincon Hill Plan EIR (Case No. 2000.1081E; Final EIR certified May 5, 2005) found that aesthetic effects related to implementation of the Rincon Hill Plan would be less than significant. That EIR determined that, while the Rincon Hill Plan would allow for a number of new high-rise residential buildings, despite "what could be described as a dramatic change in density and, especially, height," the Plan would not result in substantial adverse aesthetic change, given the Rincon Hill Plan's attention to the precepts of the Urban Design Element, including many of the Fundamental Principles For Major New Development. In terms of view obstruction, the Rincon Hill Plan EIR found that the Plan would preserve view corridors to the Bay and that obstruction of long-range views would occur over a limited visual field from any given viewpoint.

Consistent with CEQA requirements, this EIR considers potential development in the Plan area together with development that could occur under the Rincon Hill Plan and the Transbay Redevelopment Plan. From the Twin Peaks and Portola Drive viewpoints, full buildout of these plans would result in substantial obscuring of the existing views of the Bay, Bay Bridge, and Yerba Buena Island. The *General Plan* Urban Design Element establishes that impacts to such major, orienting views would be adverse, as discussed above under Impact AE-3. Accordingly, this cumulative impact would be **significant and unavoidable**.

From U.S. Highway 101 Interstate 280 (Figure 35B), the Third and Folsom structures of the potential Moscone Center expansion (outside the Plan area) would appear near the center of the view, partially blocking the Transit Tower behind them, whereas from Interstate 280 (Figure 36B), these buildings and others west of the Plan area would appear prominently to the west (left) of the image, due to their

position relatively closer to the observer. In both of these views, the separate mound of Rincon Hill would be readily apparent. As with the Plan, no scenic views would be obscured.

From Potrero Hill (Figure 37B), cumulative development would appear to spread the skyline both east and west; because of the relatively orientation of the street grid, the buildings on Rincon Hill would blend into the overall skyline more than would be the case from other viewpoints. From Telegraph Hill (Figure 38B), effects would be similar to those of the draft Plan, because most of the cumulative projects would not be visible. From Treasure Island (Figure 39B) and the Bay Bridge (Figure 40B), however, the added mound of Rincon Hill's buildout would be evident, although its "separateness" would be somewhat diminished by the tallest of the buildings along Folsom Street in Zone 1 of the adopted Transbay Redevelopment Plan. From this angle, this potential 550-foot building would act as somewhat of a visual bridge between the South Financial District and Rincon Hill.

In the view from the Bay Bridge, cumulative development, including buildings west of the Plan area and on Rincon Hill, would substantially obscure the mid-City ridgeline. Arguably, the near-complete blockage of the City's hills would be deemed by some observers to be a substantial adverse change. However, as stated above, in Impact AE-2, this viewpoint is transitory, in that observers experience this view for only a few moments while traveling at freeway speed.

From Aquatic Park (Figure 41B), effects would be the same as those of the draft Plan, because no cumulative projects would be seen.

As with the draft Plan, cumulative development would not substantially disrupt the existing natural or built environment. Accordingly, cumulative impacts on scenic resources would be less than significant.

As described above, implementation of the draft Plan and development of the proposed Transit Tower would not result in obtrusive light or glare that would adversely affect views or substantially affect other properties. Because the draft Plan, including Transit Tower, would represent the vast majority of overall development in the greater vicinity, no significant cumulative effects related to light and glare would occur.

In summary, the draft Plan would contribute to significant adverse aesthetic effects on the view from Twin Peaks and Portola Drive, and the cumulative impact would be **significant and unavoidable**.

Mitigation: No mitigation is available.

Impact C-AE-2: The proposed Transit Tower, in combination with the draft Plan and other foreseeable projects nearby, would alter the visual character of the greater Downtown and would alter public views of and through the greater Downtown, but would not contribute considerably to this change, and would not adversely affect scenic resources or substantially increase light and glare. (Less than Significant)

The long-range views that would be blocked by Plan and cumulative development would be obscured regardless of construction of the proposed Transit Tower. In addition, the Transit Tower site is sufficiently distant from the Bay Bridge, as it appears in views from Twin Peaks and Portola Drive, that it would remain visually separate from the bridge towers and would not overwhelm them. Therefore, the proposed Transit Tower would not make a considerable contribution to the cumulative significant impact described in Impact C-AE-1, and would therefore have a less-than-significant cumulative aesthetic impact.

Mitigation: None required.

C. Population and Housing, Business Activity and Employment

This section describes existing conditions and trends for population, housing, business activity and jobs in the Transit Center District Plan area and for downtown San Francisco and sets the Plan area in a city and regional context. The section analyzes the impacts of the Plan on the ability of San Francisco to accommodate population and employment and discusses impacts for housing demand and supply; affordable housing; residential, business, and worker displacement; and job opportunities.

Environmental Setting

Regional Setting

Population and Housing

In 2000, there were 777,000 people living in San Francisco. The household population in the City totaled 757,000; others living in group quarters such as shelters, group homes, nursing homes, dormitories, and correctional facilities numbered about 20,000 residents, or 2.5 percent of the total living in the City. There were 329,700 households in San Francisco, and the average household size was 2.3 persons-per-household.

Since 2000, there has been a marked increase in housing in San Francisco. The City's official housing inventory counts almost 367,000 housing units in 2009, an increase of 22,000 units from April 2000 through 2009.[72] State of California Department of Finance estimates show 368,000 housing units in the City as of January 1, 2010.[73]

The number of people living in the City has increased by 10 percent since 2000. The State estimates cited above show 856,000 people living in San Francisco—an increase of 79,000 people from April 2000 through January 1, 2010. The increases are attributable to natural increase and high levels of net foreign immigration coupled with relatively low levels of domestic out-migration.[74] During this period, the City's population exceeded it prior peak of 780,000 residents recorded in 1951.[75]

An increase in the City's population, consistent with the increased housing supply, represents a change from conditions of the 1980s and 1990s. During those decades, the growth of the City's population was not matched by an increase in housing supply. Therefore, population growth resulted in increases in the

72 San Francisco Planning Department, *San Francisco Housing Inventory*, April 2010.

73 State of California. Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001 – 2010, with 2000 Benchmark*, May 2010.

74 State of California, Department of Finance, *Population Estimates and Components of Change by County, July 1, 2000-2010*, December 2010.

75 The U.S. Census also prepares annual official population estimates. Until 2006, the Census estimated that San Francisco's population had *decreased* from 2000 levels, resulting in a large gap between the state and federal population estimates. In 2008, the City and County of San Francisco filed a challenge to the 2007 Census estimates. That challenge was accepted, and, as of December 2008, the Census Bureau's revised 7/1/2007 population estimate for San Francisco stood at 799,185—an increase of 34,000 over the prior estimate. The most recent Census estimates (for July 1, 2009) show San Francisco's population at 813,358.

number of people living in existing housing. By contrast, average household size since 2000 has remained relatively constant in the range of 2.3 – 2.4 persons-per-household.

San Francisco's resident population is just over 11 percent of the total population living in the nine-county Bay Area. With increases in the housing stock and consistent gains in population over the last 15 years, the City has maintained its share of regional population. This represents a marked change from the historic trend of declining regional share: in 1940, almost 40 percent of the region's population lived in San Francisco. The share dropped to 30 percent in 1950, 20 percent in 1960, reaching 15 percent in 1970, followed by a slower pace of decline in the 1970s, 1980s, and 1990s.

Jobs and Business Activity

There were about 576,000 people working in San Francisco in 2009, a considerable drop from the recent high of 605,000 in 2008.[76] This estimate measures workers by place of work and includes full-time and part-time wage and salary employment, as well as the self-employed.[77] Wage and salary jobs in San Francisco totaled about 524,000 in 2009. The self-employed (and a relatively small number of unpaid family workers) account for about nine percent of total jobs in the City.

San Francisco's role as a place of work in the region has diminished over time. Forty years ago, in 1969, San Francisco was the employment center for the region, claiming about 27 percent of total regional employment—more than one in every four jobs. There were more jobs in San Francisco than in any other Bay Area county. By the mid 1980s, that share had declined to 20 percent: suburban settings became viable location options, particularly for business operations looking for lower-cost space to house large numbers of "back-office" workers, and the high technology sector established the South Bay as the other major employment center in the regional economy. By 2008, only 16 percent of Bay Area jobs were in San Francisco, and there were 3.5 times as many jobs in Alameda and Santa Clara counties combined as in San Francisco. Notably, San Francisco's share of regional employment has held steady at 16 percent since 2001.

Nevertheless, San Francisco is unique in the region as a place of highly concentrated, high density business activity. Other counties may claim more total employment, but that employment is dispersed among smaller Downtowns, BART station areas, larger educational institutions and medical centers, and suburban business parks.

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76 These estimates of employment by place of work count part-time and full-time jobs equally. People who hold more than one job may be counted more than once.

77 The estimate of total employment by place of work including the self-employed is based on data from the U.S. Census Bureau American Community Survey (ACS). That data source provides estimates of the percentage of workers, by place of work, who are private and non-profit wage and salary workers (including the self-employed in their own incorporated businesses), government workers (local, state, and federal), self-employed not incorporated workers, and unpaid family workers. The latter two categories are not covered in employment estimates from the State of California Employment Development Department (EDD). The State data measure wage and salary employment by place of work and do not include the self-employed, a considerable number in San Francisco, or unpaid family workers or private household workers. The more complete estimate of jobs by place of work combines the EDD data with estimates derived from the percentages in the ACS for San Francisco (2007-2009 3-year estimates and 2009 1-year estimates).

There have been substantial fluctuations in the level of employment in San Francisco and elsewhere in the Bay Area over the past decade. The Bay Area and San Francisco economies experienced strong growth through 2000, and employment levels were highest in that year. The subsequent job loss in San Francisco was more severe than the job loss in most other parts of the region, with the exception of Santa Clara County.

Wage and salary jobs, fueled by the boom in the high technology and internet sectors, peaked in San Francisco in 2000 at almost 600,000, but soon returned to employment levels of the mid-1990s, by 2004. Over this 10-year period (1995 – 2004), San Francisco gained and then lost about 85,000 jobs. More recently, the City saw a net gain of 45,000 jobs between 2004 and 2008—an increase of about 11,000 jobs per year on average. Employment remained substantially below the 2000 peak, however. Job growth reversed in 2009, with a year-over-year decrease of 26,000 wage and salary jobs in the City from 2008 through 2009. The boom and bust economic conditions of the last decade have exacerbated long–term trends of decline in manufacturing, wholesale trade, transportation, and warehousing employment in the City. Against this backdrop and with relatively stable employment overall in retail, hospitality, government, education, and health care sectors, jobs losses have been concentrated in the information sector, financial activities, and professional and business services. The overall net decrease in jobs in these three sectors (from the 2000/2001 peak) amounts to about 50,000 jobs—about 10 percent of total wage and salary employment in the City. The Planning Department's *Commerce & Industry Inventory 2010* shows an 11 percent decrease in office employment from 2001 to 2009; the net loss of 25,000 office jobs second to the loss of 31,000 production, distribution, and repair (PDR; generally, light industrial and heavy service in nature) jobs, a 30 percent decrease, over this period.[78]

Through these fluctuations, the City's economy has remained diverse. The 25 largest employers in San Francisco account for 20 percent of all employment in the City. That group of large employers represents twelve business sectors: government, health sciences, education, professional services, health care, hospitality, retail, facility services, utilities, financial services, high technology, and non-profits. These large entities are only a fraction of the total number of business establishments in the City (about 29,000 in 2009).[79] **Table 4** illustrates the diversity of San Francisco's private sector business mix.

Labor Force, Employed Residents, and Commuters

The Great Recession has resulted in persistent high unemployment in the San Francisco—annual rates of nine and ten percent through 2009 and 2010. The City's unemployment rate is now more than double what it was at mid-decade. The unemployment rate measures people who do not have jobs as a

78 San Francisco Planning Department, *Commerce & Industry Inventory*, October 2010, Table 3.2.1.

79 San Francisco Planning Department, *San Francisco Commerce and Industry Inventory*, October 2010. This list does not count government or the 23,000 private households that employ caregivers, gardeners, and other household maintenance workers.

TABLE 4
ESTABLISHMENTS BY LAND USE CATEGORY, 2009

Land Use Category	Number of Establishments	Percent of Total
Office	11,419	40%
Retail	7,496	26%
Cultural, Institutional, Educational	4,739	17%
Production, Distribution, and Repair	4,718	16%
Hotel	292	1%
Total	**28,664**	**100%**

NOTE: Does not include private households or government.

SOURCE: San Francisco Planning Department, *San Francisco Commerce & Industry Inventory*, October 2010.

percentage of people actively looking for work. Additional evidence of the drop in economic activity in the City is the decrease in the labor force—the number of people actively looking for work.

As a result of the "internet bubble," the year 2000 represented a peak for labor force participation and employment of City residents: about 456,000 of the people living in San Francisco were employed in 2000, according to the U.S. Bureau of Labor Statistics and the California Employment Development Department. That number stood at 411,000 employed residents in 2010. During a period of population growth, the number of San Francisco residents in the labor force decreased by 17,500 from 2000 through 2010, while the number of employed residents has decreased by over 45,000 and the number of unemployed has increased by 28,000.

The employed residents hold jobs in San Francisco and elsewhere in the regional labor market. Decentralization of regional employment beginning in about 1960 resulted in erosion of the share of the City's employed population working in San Francisco from almost all (94 percent) employed residents working in the City in 1960. During the 1990s, however, the likelihood of City residents working in San Francisco did not change as much as it had in prior decades. Citywide, in 2000, 78 percent of employed residents worked in San Francisco, only three percentage points below the 1990 share (81 percent).[80] Notably, in 2000, about the same number of San Francisco residents worked in the City as in 1960, marking a comeback after three decades of lower numbers. The 2007 – 2009 American Community Survey indicates the percentage of employed residents working in San Francisco holding steady at 76 – 78 percent. The consistent growth over this period has been in the number and percentage of the City's residents commuting to jobs outside San Francisco—from six percent in 1960 to 22 percent in 2000.

The employed residents living and working in San Francisco hold 56 percent of the jobs in the City. Commuters from other Bay Area counties hold about 43 percent of San Francisco jobs, and commuters from neighboring counties outside of the Bay Area account for about one percent of San Francisco jobs.

80 Metropolitan Transportation Commission, County-to-County Commuting in the San Francisco Bay Area, 1960 – 2000 (http://www.mtc.ca.gov/maps_and_data/datamart/census/county2county/).

As with the percentage of City residents working in the City, the percentage of San Francisco jobs held by people also living in the City has declined over time. In 1960, San Francisco residents held almost three-quarters of the jobs in the City. The percentage declined to about 56 percent through 1980 and has remained at about that level ever since.

These trends and the stabilization of intra-regional commute patterns are illustrative of the growth of Bay Area suburbs, the de-concentration of business location options leading to the diminution of San Francisco's position as regional employment center, offset to some extent by the development of regional transportation systems designed to get commuters to central city jobs.

Workforce Characteristics; Types of Jobs Held by Workers Living in the City

The relatively high educational attainment of the City's labor force is a foundation of the City's competitive advantage with respect to economic growth. People who have at least a high school diploma represent 85 percent of the City's labor pool, and most of those (52 percent of the total labor pool over aged 25) have college degrees or graduate degrees. Nationwide, the percentage of people who have college or graduate degrees is only 28 percent, and the California average is 30 percent. In San Francisco, one of every five working-age people has a graduate or professional degree.[81]

Although, as noted above, the City's labor force is generally highly educated, the education and training possessed by San Francisco residents spans a range from very high to very low. This is reflected in the wide range of occupations and earnings for San Francisco residents.

Half of the employed residents of San Francisco work in management and professional occupations, generally occupations that require college or advanced degrees and prior work experience. About one-quarter work in sales and office support occupations. Sales positions in the financial, insurance, and real estate sectors require college degrees or vocational degrees. Other sales occupations require prior work experience, and still others are entry-level positions offering on-the-job training. Of the balance of San Francisco's employed residents, most are in service occupations. College degrees and prior training are not required, and wage levels are low. About 10 percent of the working population of San Francisco holds jobs in construction, repair, maintenance, production, or transportation occupations. These occupations cover a range of skill levels mostly relating to prior on-the-job training. [82]

Housing Market Conditions and Housing Affordability

Housing prices in San Francisco are among the highest in the Bay Area region and consistently rank among the highest in the nation. In 2010, the median price for houses sold in San Francisco was $661,000—$248,500 (60 percent) higher than the regional median price of $412,000. Median house prices in San Francisco have been consistently about 20 – 30 percent higher than the regional median until 2008 when median prices plummeted elsewhere. In all other Bay Area counties, through 2008 and 2009,

81 U.S. Census Bureau, *2009 American Community Survey* 1- Year Estimates and *2007 -2009 American Community Survey* 3-Year Estimates.

82 U.S. Census Bureau, *Census 2000* and *2007 – 2009 American Community Survey* 3-Year Estimates.

median prices dropped between 27 percent (San Mateo County) and 56 percent (Contra Costa County) below the 2007 peak. In San Francisco, median prices dropped 16 percent overall during this time period.[83] The diversity of the City's housing supply—a range of types of new and existing housing in a variety of neighborhood settings at a variety of price points—as well as strong underlying demand for urban housing and for living in San Francisco in particular explain some of this pattern.

The housing inventory in and around the Plan area is primarily new high-rise construction. At a median price of $727,000 in 2010, housing in the South of Market/Rincon Hill area was about 10 percent more expensive than the citywide median.[84] Prices have been particularly volatile in this area, however, due to the large number of new units that came on the market in the last five years, during the peak and subsequent collapse of the housing market bubble. Across San Francisco planning districts, average rents are highest in the South of Market district—at $3,284 on average for a two-bedroom unit.[85] The housing supply is predominantly new construction here, and there is a premium for proximity to Downtown, to the waterfront, and to new neighborhood amenities, as well as for high-rise construction with views. Much of the rental supply in the South of Market district consists of units originally intended for owner-occupancy that are either put on the rental market by building developers or are subsequently placed on the rental market by absentee owners.

The cost of housing in San Francisco is very high relative to household incomes. A three-person household with an income of about $100,000 can afford a maximum purchase price of about $350,000—only about half of the median sales price in San Francisco.[86] Equally important, the rental housing market is the largest component of San Francisco's housing market; for most existing residents and newcomers, rents are the most important housing market indicator. After falling from the year 2000 peak ($2,750 average monthly rent for a two-bedroom apartment), average rents citywide were back to those levels in 2007 and have held steady since then.[87] Assuming 30 percent of income to rent, these rents are affordable to a household with an annual income of $110,000. The median household income in San Francisco is about $70,000 (2009 dollars) and only about one-third of San Francisco households could reasonably afford this average-priced two-bedroom apartment.[88]

With prices and rents this high, many people share housing and/or look for second jobs, and households take on substantial housing cost burdens to live in San Francisco. Housing cost burdens in San Francisco are particularly high for lower-income newcomers, and new households, such as immigrants, young

83 Real Estate Research Council of Northern California, *Northern California Real Estate Report*, Fourth Quarter 2010.
84 Dataquick, San Francisco Home Sales Activity, San Francisco Chronicle Chart for the Year 2010.
85 *San Francisco General Plan* Housing Element Part I: Data and Needs Analysis, March 2011 (see footnote 48, p. 59); p. I.37 58.
86 This household is at about 120 percent of the three-county Area Median Income for households in San Francisco, San Mateo and Marin counties and represents the local household in need of affordable housing that has the *most* money to pay for housing. The maximum purchase price is based on factors used by the Mayor's Office of Housing to estimate sample sales prices for the San Francisco Inclusionary Housing Program.
87 Rent data from Zilpy.com published in San Francisco Planning Department, *Housing Inventory 2009*, April 2010.
88 Household income distribution and median household income estimates for San Francisco are from the U.S. Census, *American Community Survey*, 2005-2009 5-Year Estimates, 2007-2009 3-Year Estimates, and 2009 1-Year Estimates.

entry-level workers, students, and artists, as well as for existing residents who become unemployed or find themselves in the housing market not by choice but because they are displaced from their household and former housing unit. Rent is greater than 30 percent of household income for over 44 percent of renter households in San Francisco (more than two of every five renter households); and for almost half of these households, rent is 50 percent or more of household income. Owner households are considered to be overpaying for housing if 35 percent or more of income goes towards mortgage payments. By this measure, 40 percent of owner households in San Francisco with mortgages are overpaying, and for 60 percent of this group, mortgage costs are 50 percent or more of household income. [89] The increase in financial burden among homeowner households is at least in part attributable to the relaxed criteria for issuing mortgage loans during this period.

Housing Needs

In the face of persistent strong demand from the many different types of people who want to live in San Francisco, increasing the housing supply and making housing more affordable have been key concerns of the City's policy-makers for decades. Affordable housing production in San Francisco is supported by funding from the San Francisco Redevelopment Agency, the Inclusionary Affordable Housing Program, the Jobs-Housing Linkage Program, and the commitment of a robust non-profit housing development sector. One-third of the new housing units added in San Francisco from 2005 – 2009 were affordable units, meaning the units are rented or owned at prices affordable to households with low or moderate incomes (as defined by income limits determined by U.S. Department of Housing and Urban Development for the San Francisco Market Area). Almost 60 percent of these units were built for the lowest ends of the affordability spectrum—households at or below 50 percent of median household income. As of December 2009, another 1,100 affordable units were under construction. In addition to this supply of newly constructed affordable units, 836 units of permanently affordable housing were added to the City's supply during the 2005 – 2009 period through acquisition and rehabilitation of existing housing by non-profit housing organizations to create housing for low- and very-low income persons.[90]

In spite of this production record, San Francisco has not met the quantified housing goals established by the California Department of Housing and Community Development (HCD) and the Association of Bay Area Governments (ABAG). **Table 5** shows how affordable housing production in San Francisco over the 1999 – 2006 period tracked with the housing need goals set for the City for that period by HCD and ABAG.[91] As a consequence of relatively high rates of housing production in the City over this period, San Francisco was close to meeting the *overall* housing production goal. Market-rate units accounted for almost two-thirds (65 percent) of total production—exceeding the target amount. Allocation of public funds for affordable housing, development activity by non-profit housing developers, and other efforts

89 U. S. Census Bureau, *American Community Survey*, 2005-2009 5-Year Estimates and 2007-2009 3-Year Estimates.
90 San Francisco Planning Department, *San Francisco Housing Inventory 2009*, April 2010.
91 Current housing goals for the 2007 – June 2014 period are described in the Chapter II of Part I of the *General Plan* Housing Element.

TABLE 5
HOUSING PRODUCTION TARGETS, 1999-JUNE 2006 AND ACTUAL PRODUCTION, 1999-2006

	ABAG/HCD Regional Housing Needs Determination (RHND) Production Goals 1999-June 2006		Actual Housing Production 1999 – 2006	
Income Category	**No. of Units**	**% of Total**	**No. of Units**	**% of RHND Goal**
Very Low (< 50% AMI)	5,244	25.7%	4,342	82.8%
Low (50-79% AMI)	2,126	10.4%	1,113	52.4%
Moderate (80-120% AMI)	5,639	27.7%	725	12.9%
Market (over 120% AMI)	7,363	36.1%	11,293	153.4%
TOTALS	**20,372**	**100.0%**	**17,473**	**85.8%**

SOURCE: San Francisco Planning Department, Housing Element Part I: Data and Needs Analysis March 2011.

and resources enabled the City to achieve 83 percent of the ABAG goal for meeting the housing needs of very-low-income households and over half of the goal for low-income households. The under-production of housing affordable to moderate-income households (at around 100 percent of median income—just below the threshold where market rate housing is affordable) stands out as a key gap in recent production statistics.

Local Setting

Population and Housing

There are not many people living in the Plan area, although the number of people living there has increased substantially since 2000. The 2000 Census counted about 350 people living in 263 households and an additional 128 people (almost 30 percent of the total population) living in non-institutional group quarters.[92] **Table 6** presents the characteristics of Plan area housing and population as of the 2000 Census. Compared to the citywide average, Plan area households were small—just over 1.3 persons per households, and almost all the units were rental housing. One-in-five units was vacant, and almost all of these units were categorized by the Census as held "for seasonal, recreational, or occasional use." The Census tabulations for 2000 represent essentially one project: in 2000, the largest residential development in the plan area was the Rincon Towers apartment complex, completed in 1989. The 320 units in this development continue to be managed for both long-term lease to primary residents and short-term furnished corporate housing.

92 Estimates from 2000 Census block-level data for Census tracts 176.02 and 179.01, excluding blocks east of Steuart Street (Tract 176.02 blocks 1000, 1001, and 1999) and blocks in the Rincon Hill Plan area (Tract 179.01 Blocks 1007 – 1019, 4005, and 4006).

TABLE 6
TRANSIT CENTER DISTRICT PLAN AREA
POPULATION AND HOUSING, 2000

Total Population	475	
Household Population	347	
Households	263	
Persons Per Household	1.32	
Group Quarters Population	128	27% of plan area population
Housing Units	332	
Occupied Units	263	
Owner Occupied	4	
Renter Occupied	259	
Vacant Units	69	21% of plan area housing units

NOTE: Estimates from 2000 Census block-level data for Census tracts 176.02 and 179.01, excluding blocks east of Steuart Street (Tract 176.02 blocks 1000, 1001, and 1999) and blocks in the Rincon Hill Plan area (Tract 179.01 blocks 1007 – 1019, 4005, and 4006).

SOURCE: U. S. Census Bureau, *Census 2000.*

Planning Department estimates for 2005 show about 740 households and a household population of about 1,500 people in the Plan area—a three-fold increase from 2000 Census counts.[93] New housing in the Plan area during this period includes 246 Second Street and smaller condominium developments on Clementina.[94]

Plan area residents are less than one half of one percent of the total population in San Francisco. **Table 7** compares the number of people living in the Plan area to the number living throughout downtown San Francisco. In 2005, just over 55,000 people lived in downtown San Francisco, defined here to include the C-3 District covered by the Downtown Plan, in addition to the Transbay, Rincon Hill, and Yerba Buena planning areas; other parts of the "Downtown" planning district (Civic Center, Union Square, Chinatown, and Tenderloin); and parts of Eastern SoMa. This larger area houses just under 10 percent of the City's households and household population and 20 percent of the group quarters population. The Plan area comprises two – three percent of the C-3 / Downtown total for population and households.

93 Preliminary 2010 Census data for newly created Tract 615, which combines former Tracts 176.02 and 179.01 and which encompasses the Plan area, Rincon Hill, and South Beach, shows a total population of approximately 11,500 in about 8,250 units, 6,785 of which are occupied. The comparable totals for the entirety of 2000 Tracts 176.02 and 179.01 were: population, 5,942; housing units: 3,925; occupied units: 3,500. Major residential projects completed in the Plan area since 2005 include 199 New Montgomery Street, 74 New Montgomery Street, and the Millennium Tower at 301 Mission Street. Census 2010 data are not yet available at the level of detail used in this analysis, and therefore the analysis relies on 2005 data as the most detailed current information available.

94 San Francisco Planning Department, *Housing Inventory 2005*, October 2006.

TABLE 7
TRANSIT CENTER DISTRICT PLAN AREA AND DOWNTOWN SAN FRANCISCO
POPULATION AND HOUSEHOLDS, 2005

	Transit Center District Plan area	C-3 / Downtown	Plan area % of C-3 / Downtown	C-3 / Downtown % of City
Population	1,654	55,566	3%	7%
Household Population	1,463	51,379	3%	7%
Households	742	31,814	2%	9%
Group Quarters Population	191	4,187	5%	21%

NOTE: The C-3 / Downtown area is defined to include the C-3 District covered by the Downtown Plan and adjacent areas relevant to the analysis of the Transit Center District Plan: Transbay, Rincon Hill, and Yerba Buena planning areas; other parts of the "Downtown" planning district (Civic Center, Union Square, Chinatown, Tenderloin); and parts of East SoMa. These areas include most but not all of the Greater Downtown identified in the Planning Department's Downtown Plan Monitoring Reports.

SOURCE: San Francisco Planning Department, Land Use Allocation 2007 (revised January 2010).

The amount of housing and resident population in both the Plan area and the C-3 District / Downtown area has increased more rapidly than in many other parts of the City. This is consistent with the goals of the Downtown Plan, the Rincon Hill Plan, and the Rincon Point - South Beach and Yerba Buena Redevelopment Plans.[95] From 2005 through 2009, another 700 units have been completed in the Transit Center District Plan area and almost 2,700 units have been added within one – two blocks of the Plan area since 2002.[96] Fully 63 percent of the housing units added in San Francisco through 2009 (since the 2000 Census) were located in the larger Downtown and South of Market planning districts used to analyze housing production trends in the Planning Department's annual Housing Inventory Report.[97]

Most of this new housing production is mid-rise and high-rise construction of condominiums and rental units. The primary target market is people working in downtown San Francisco. Most of the units are developed with views, finishes, and amenities for the high end of the housing market. Although prices have dropped from the high levels approaching $1,000 per square foot achieved in some cases during the housing bubble, housing costs, considering housing prices, taxes, and HOA fees, remain at high levels relative to household incomes.

Business and Employment

In 2005, there were about 78,000 jobs in the Plan area—14 percent of total employment in San Francisco and about one-third of total employment in the C-3 / Downtown Area. **Table 8** presents estimates of existing employment by business activity for the Plan area, the larger Downtown area in which it is located, and the City overall.

95 The Yerba Buena Redevelopment Plan expired in January 2011.
96 San Francisco Planning Department, *Housing Inventory* reports, July 2005, October 2006, December 2007, April 2008, April 2009, and April 2010.
97 This larger geographic area includes Mission Bay, where several large new housing developments were completed during this time period. San Francisco Planning Department, *Housing Inventory 2009*, April 2010.

TABLE 8
TRANSIT CENTER DISTRICT PLAN AREA, DOWNTOWN, AND SAN FRANCISCO
EMPLOYMENT BY BUSINESS ACTIVITY, 2005

Business Activity / Land Use[1]	Transit Center District Plan area	C-3/ Downtown	San Francisco Total	Plan area % of C-3 / Downtown	Plan area % of City	C-3 / Downtown % of City
Management/Information/Professional Services	67,165	175,806	275,380	38%	24%	64%
Retail/Entertainment	5,296	26,812	88,710	20%	6%	30%
Visitor Lodging	657	12,051	17,350	5%	4%	69%
Medical and Health Services	285	3,546	38,027	8%	1%	9%
Cultural/Institutional/Educational (CIE)	3,871	13,709	59,524	28%	7%	23%
Production/Distribution/Repair (PDR)	360	7,058	73,003	5%	0.5%	10%
Total	**77,634**	**238,982**	**551,994**	**32%**	**14%**	**43%**

[1] The business activity / land use categories used in this analysis are summarized from the Planning Department's Land Use Allocation 2007. The estimates rely on Planning Department analysis of the relationship between ABAG's classification system based on the North American Industrial Classification System (NAICS) and the Planning Department's land use classification system (also dependent on detailed NAICS categories). The categories used in this analysis vary in small degree from those defined in the Planning Department's *Commerce and Industry Inventory*.

NOTE: The C-3 / Downtown area is defined to include the C-3 District covered by the Downtown Plan and adjacent areas relevant to the analysis of the Transit Center District Plan: Transbay, Rincon Hill, and Yerba Buena planning areas; other parts of the "Downtown" planning district (Civic Center, Union Square, Chinatown, Tenderloin); and parts of East SoMa. These areas include most but not all of the Greater Downtown identified in the Planning Department's Downtown Plan Monitoring Reports.

SOURCE: San Francisco Planning Department Land Use Allocation 2007, revised January 2010.

Downtown and the Plan area have specialized functions in San Francisco economic geography. Almost 65 percent of San Francisco office employment is located in the C-3 / Downtown area, and Downtown is the primary destination for most tourists, shoppers, and sightseers. Office employment, represented by the Management, Information, and Professional Services (MIPS) category is the dominant type of business activity in the Plan area and in the larger C-3 / Downtown area. In the Plan area, office employment represents almost 90 percent of area employment and accounts for almost 40 percent of the office employment in downtown San Francisco.

Retail/Entertainment and Cultural/Institutional/Educational (CIE) jobs are the next largest components of Plan area employment, at seven percent and five percent, respectively, of the total. The Plan area employment in these categories is 20 – 30 percent of the retail and CIE employment in Downtown. Retail activity in the Plan area consists primarily of small stores, full-service restaurants, sandwich shops, and coffee shops located in ground floor spaces and serving the day-time office worker population. The area is increasingly a nighttime entertainment destination as a consequence of new housing development and attractions at the adjacent Yerba Buena Center, Moscone Center, and AT&T Park. Cultural, institutional, and educational activities have been attracted to the Plan area by relatively lower space costs and the proximity to transit and the Yerba Buena Center cultural district.

In the other employment categories, Plan area employment is less than 10 percent of Downtown totals. By contrast, the larger C-3 / Downtown area is somewhat more diverse; Retail/Entertainment, Visitor

Lodging, and CIE activities are more substantial parts of the mix when Union Square, Yerba Buena Center, and the northern Financial District are included.

In the 25 years since the Downtown Plan was adopted, San Francisco's Financial District has expanded south of Market Street to such an extent that real estate market reports commonly define a North Financial District and a South Financial District, split by Market Street. Analysis of establishment data for ZIP Codes that match these boundaries reveals additional characteristics of Plan area business activity. Consistent with the more recent development pattern of large floor-plate office structures south of Market Street, businesses in and around the Plan area are larger on average than businesses north of Market Street—two times as large at an average of 42 jobs per establishment in the South Financial District compared to 20 jobs per establishment in the North Financial District.[98]

In the combined North and South Financial District, there are about 50 million square feet of office space—two-thirds of the total office space in the greater Downtown. That office inventory is split fairly evenly with about 54 percent in the North Financial District and 46 percent in the South Financial District. Following two consecutive years in which office occupancy declined by a combined total of more than three million square feet, 2010 saw positive net absorption of office space in San Francisco. Almost all of the new leasing activity was the result of technology sector activity outside of the Financial District, however; vacancy rates in the Financial District continue to reflect a total of seven million square feet of vacant space—about two times the eight percent vacancy estimated as San Francisco's natural vacancy rate.[99] To bring Financial District vacancy down to eight percent requires absorption of about three million square feet of office space, equivalent to about 10,000 office workers.[100]

Growth Context: The Bay Area Region and San Francisco

Regional Scenario for Population and Employment Growth

Projections of population and employment for the Bay Area are based on regional economic, demographic, and transportation assumptions, analysis of land use patterns and land availability, and on smart growth policy assumptions, emphasizing infill development to revitalize central cities, support and enhance public transit, and preserve open space and agricultural land. *Projections 2007*, published by the

98 Based on analysis of *2008 County Business Patterns: ZIP Code Business Statistics.* ZIP Codes 94104, 94105, 94108, and 94111 define the Financial District in the Planning Department's *Commerce and Industry Inventory*. The Plan area is in ZIP Code 94105—the Financial District south of Market Street.

99 Cassidy Turley Commercial Real Estate Services, " Office Market Snapshot, San Francisco – Fourth Quarter 2010."

100 San Francisco's natural office vacancy rate is described in Federal Reserve Bank of San Francisco, FRBSF Economic Letter Number 2001-27, October 5, 2001, 'Natural Vacancy Rates in Commercial Real Estate Markets." The analysis of absorption and employment is consistent with that presented in *Downtown San Francisco: Market Demand, Growth Projections and Capacity Analysis*, prepared for the San Francisco Planning Department, Seifel Consulting, May 2008.

Association of Bay Area Governments (ABAG) in December 2006 provides the long-term regional growth context for this analysis.[101]

The nine-county Bay Area is expected to gain about 1.6 million people between 2005 and 2030 and about 1.5 million jobs. Rates of population growth are projected to slow somewhat from those of the 1990 – 2005 period, while employment growth is expected to increase at a faster pace over the long-term—2005 represents a decline from the employment peak in 2000. Over the 30-year projection period, housing production is expected to continue at about the same pace of the last 15 years, averaging about 24,000 units added per year, region-wide.

San Francisco Growth in the Regional Context

Population and Housing

Table 9 presents projections of population and household growth for San Francisco and the rest of the Bay Area region from 2005 – 2030. By 2030, the City's population is expected to increase by almost 20 percent, to about 934,000 people. While growth is projected at a somewhat faster pace in other parts of the region, San Francisco maintains its share of regional population and housing under this future growth scenario—consistent with more recent regional trends.

The population increase depends on housing development in the City—the projection shows over 50,000 new households in San Francisco between 2005 and 2030. This represents an average of just over 2,000 net additional units per year. This is substantially higher than the annual average increase for the 20-year period from 1990 – 2009: about 1,600 net additional units per year on average. The housing scenario anticipates maintaining the more recent pace of housing production in the City; from 2000 – 2009 the annual net addition to the housing inventory averaged 2,300 units per year.[102]

Employment

Total employment in San Francisco is projected to increase by 50 percent between 2005 and 2030, to a total of 793,000 jobs. The increase of 241,000 jobs between 2005 and 2030, represents about 16 percent of the 1.5 million additional jobs expected in the region over this period (**Table 10**).[103] According to this projection scenario, San Francisco maintains its share of regional employment, as is the case with population and housing, reflecting more recent regional development patterns.

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101 ABAG generally publishes revised regional growth projections every two years. The version subsequent to *Projections 2007*, *Projections 2009*, was published in August 2009, after the draft Plan and EIR analyses had been undertaken, and subsequent to publication of the EIR Notice of Preparation, which was issued in July 2008. *Projections 2009* shows lower population and job totals in the short- to mid-term, representing the depth of the recession, but the longer term for 2030 and 2035 generally track the regional totals in *Projections 2007*.

102 San Francisco Planning Department, *San Francisco Housing Inventory*, April 2010 (Table 2) and *Residence Element*, Adopted September 13, 1990, (Table 23).

103 For both the City and the region, the job count was lower in 2005 than in 2000. Measured from the peak for employment in 2000, San Francisco is projected to add about 150,000 jobs by 2030, a 23 percent increase over 2000 levels, and the rest of the region is projected to add about one million jobs.

TABLE 9
POPULATION AND HOUSEHOLD PROJECTIONS FOR SAN FRANCISCO AND THE REST OF THE BAY AREA REGION: 2005 AND 2030

			2006-2030		
	2005	2030	Change	Percent Change	Annual Rate
Total Population					
San Francisco	799,800	933,800	134,000	17%	0.6%
Rest of the Bay Area	6,300,300	7,790,200	1,489,900	24%	0.9%
Total Bay Area	**7,100,100**	**8,724,000**	**1,623,900**	23%	0.8%
City Percent of Total	11%	11%	8%		
Household Population					
San Francisco	779,500	912,000	132,500	17%	0.6%
Rest of the Bay Area	6,176,000	7,654,000	1,478,000	24%	0.9%
Total Bay Area	**6,955,500**	**8,566,000**	**1,610,500**	23%	0.8%
City Percent of Total	11%	11%	8%		
Households					
San Francisco	341,200	392,700	51,500	15%	0.6%
Rest of the Bay Area	2,244,200	2,790,800	546,600	24%	0.9%
Total Bay Area	**2,585,400**	**3,183,500**	**598,100**	23%	0.8%
City Percent of Total	13%	12%	9%		

SOURCE: San Francisco Planning Department, Land Use Allocation 2007 (revised January 2010) and Association of Bay Area Governments, *Projections 2007,* December 2006.

TABLE 10
EMPLOYMENT PROJECTIONS FOR SAN FRANCISCO AND THE REST OF THE BAY AREA REGION: 2005 AND 2030

			2006-2030		
	2005	2030	Change	Percent Change	Annual Rate
Total Employment (by place of work)					
San Francisco	552,000	793,300	241,300	44%	1.5%
Rest of the Bay Area	2,896,550	4,139,100	1,242,600	43%	1.4%
Total Bay Area	**3,448,550**	**4,932,400**	**1,483,850**	43%	1.4%
City Percent of Total	16%	16%	16%		

SOURCE: San Francisco Planning Department, Land Use Allocation 2007 (revised January 2010) and Association of Bay Area Governments, Projections 2007, December 2006.

Scenario for Growth and the Distribution of Growth within San Francisco

Downtown San Francisco, including the Plan area, is expected to accommodate a substantial amount of the population and employment growth projected for the City. The growth scenario reflects state, regional, and local policy priorities directing new development to dense urban centers served by transit, as well as the other market factors favoring San Francisco: important business location, central location well-connected to other parts of the region, diverse and walkable neighborhoods, cultural and entertainment attractions, range of housing options, reputation for tolerance and acceptance, and opportunities for immigrants and other newcomers.

Building on market trends and planning efforts, an additional 15,000 households and 30,000 residents are expected in the C-3 / Downtown area between 2005 and 2030 (see **Table 11**). This is a substantial percentage increase—almost 50 percent for households and 60 percent for population. The increase in housing and population Downtown is 20 – 30 percent of the total growth projected for the City as the share of the City's population living Downtown is expected to continue to increase over time.

TABLE 11
GROWTH SCENARIO FOR DOWNTOWN AND THE REST OF THE CITY
HOUSEHOLDS AND HOUSEHOLD POPULATION
2005 – 2030

			2006-2030	
	2005	**2030**	**Change**	**Percent Change**
Household Population				
C-3 / Downtown	51,379	80,602	29.223	57%
Rest of the City	728,080	831,437	103,267	14%
San Francisco Total	**779,549**	**912,039**	**132,490**	17%
C-3 / Downtown Percent of City Total	7%	9%	22%	
Households				
C-3 / Downtown	31,814	46,472	14,658	46%
Rest of the City	309,434	346,227	36,793	12%
San Francisco Total	**341,248**	**392,699**	**51,451**	15%
C-3 / Downtown Percent of City Total	9%	12%	28%	

NOTE: The C-3 / Downtown area is defined to include the C-3 District covered by the Downtown Plan and adjacent areas relevant to the analysis of the Transit Center District Plan: Transbay, Rincon Hill, and Yerba Buena planning areas; other parts of the "Downtown" planning district (Civic Center, Union Square, Chinatown, Tenderloin); and parts of East SoMa. These areas include most but not all of the Greater Downtown identified in the Planning Department's Downtown Plan Monitoring Reports.

SOURCE: San Francisco Planning Department, Land Use Allocation 2007 (revised January 2010) and ABAG, *Projections 2007*, December 2006.

While an additional 61,000 jobs are projected for the C-3 / Downtown area during this planning horizon, bringing total Downtown employment to 300,000 in 2030, the share of total San Francisco employment located Downtown is projected to decline somewhat (see **Table 12**). The share of City employment located in the C-3 / Downtown is expected to decline across all business activities. This is due to the fact that most of the Downtown business district is largely built out, and other locations in the City,

TABLE 12
GROWTH SCENARIO FOR DOWNTOWN AND THE REST OF THE CITY
EMPLOYMENT BY BUSINESS ACTIVITY
2005 – 2030

			2006-2030		
	2005	2030	Change	Percent Change	Percent of Total Change
C-3 / Downtown					
Management/Information/Professional Services	175,806	222,206	46,800	27%	77%
Retail/Entertainment	26,812	32,579	5,767	22%	9%
Visitor Lodging	12,051	16,445	4,394	36%	7%
Medical and Health Services	3,546	4,939	1,393	39%	2%
Cultural/Institutional/Educational (CIE)	13,709	16,363	2,654	19%	4%
Production/Distribution/Repair	7,058	7,181	123	2%	0.2%
Total	**238,982**	**300,113**	**61,131**	**26%**	**100%**
San Francisco Total					
Management/Information/Professional Services	275,380	395,530	120,150	44%	50%
Retail/Entertainment	88,710	127,450	38,740	44%	16%
Visitor Lodging	17,350	27,359	10,009,	58%	4%
Medical and Health Services	38,027	57,951	19,924	52%	8%
Cultural/Institutional/Educational (CIE)	59,524	85,201	25,677	43%	11%
Production/Distribution/Repair	73,003	99,666	26,663	37%	11%
Total	**551,994**	**793,157**	**241,163**	**44%**	**100%**
Downtown Percent of City Total					
Management/Information/Professional Services	64%	59%	39%		
Retail/Entertainment	30%	26%	15%		
Visitor Lodging	69%	60%	44%		
Medical and Health Services	9%	9%	7%		
Cultural/Institutional/Educational (CIE)	23%	19%	10%		
Production/Distribution/Repair	10%	7%	0%		
Total	**43%**	**38%**	**25%**		

NOTE: The C-3 / Downtown area is defined to include the C-3 District covered by the Downtown Plan and adjacent areas relevant to the analysis of the Transit Center District Plan: Transbay, Rincon Hill, and Yerba Buena planning areas; other parts of the "Downtown" planning district (Civic Center, Union Square, Chinatown, Tenderloin); and parts of East SoMa. These areas include most but not all of the Greater Downtown identified in the Planning Department's Downtown Plan Monitoring Reports.

SOURCE: San Francisco Planning Department, Land Use Allocation 2007 (revised January 2010) and ABAG, *Projections 2007*, December 2006.

specifically South of Market, Mission Bay, parts of the Eastern Neighborhoods, and Hunters Point Shipyard /Candlestick Point, are planned to be the locations of choice for the technology, medical, engineering, health sciences sectors leading San Francisco's next decades of economic growth.

Management, information, and professional services employment is anticipated to remain the dominant business activity in San Francisco, providing almost 400,000 jobs citywide by 2030, 60 percent of which are located in the C-3 / Downtown area. The office employment represented by this sector accounts for

80 percent of total employment growth Downtown, from 2005 through 2030. Medical and health services and visitor lodging are projected to show the strongest pace of growth citywide and in the Downtown area over this period, reflecting both the increasing demand for health and medical services and products as the population ages and San Francisco realizes its emerging competitive edge as a location for this sector, and the continued importance of tourism to the City's economic base. Retail and entertainment, and cultural, institutional, and educational employment grows at an average pace, citywide and in the Downtown area. These activities, along with production, distribution, and repair activities, are more important components of employment growth outside of the Downtown.

Regulatory Framework

San Francisco General Plan

Downtown Plan

The Downtown Plan contains the objectives and policies to guide land use decisions about downtown San Francisco, including the Transit Center District Plan area. The Transit Center District Plan is proposed to build on the policies of the Downtown Plan, taking into account the evolution of downtown San Francisco over the 25-years since the Plan's adoption.

The following Downtown Plan objectives and policies address employment opportunities, Downtown housing, and managing the impacts of employment growth. They are relevant to evaluating the impacts of the proposed Transit Center District Plan on population, housing, business activity, and employment. In addition, what was originally the Office-Affordable Housing Production Program (now the Jobs-Housing Linkage Program), implemented in concert with the Downtown Plan to mitigate impacts of office employment growth, is also described below.

- Objective 2: Maintain and improve San Francisco's position as a prime location for financial, administrative, corporate, and professional activity.
- Policy 2.1: Encourage prime Downtown office activities to grow as long as undesirable consequences of such growth can be controlled.
- Policy 2.2: Guide location of office development to maintain a compact Downtown core and minimize displacement of other uses.
- Objective 7: Expand the supply of housing in and adjacent to Downtown.
- Policy 7.1: Promote the inclusion of housing in Downtown commercial developments.

Jobs-Housing Linkage Program

The Jobs-Housing Linkage Program was first imposed in 1985 as the Office Affordable Housing Production Program (OAHPP)—one means by which the impacts of Downtown office employment growth would be managed and mitigated. The original exaction was limited to Downtown (C-3 zoning districts) office development. The program was updated and expanded in 1997. The updated nexus

analysis demonstrated the relationship between all types of new commercial development and the need for affordable housing and expanded the geographic scope beyond Downtown to the rest of the City.[104]

Carrying forward ongoing policy, Policy 1.9 of the Housing Element 2009 calls for enforcement and monitoring of the Jobs-Housing Linkage Program requiring that new commercial development (as well as institutions of higher education) in the City provide affordable housing or pay an in-lieu fee to meet the housing need attributable to employment growth and new commercial development, particularly the demand for new housing affordable to low and moderate income households.[105] The current Jobs-Housing Linkage Program applies to the following types of nonresidential development: office, research and development, retail, entertainment, and hotel. The Jobs-Housing Linkage Program is codified in Section 413 *et seq* of the *San Francisco Planning Code*.

Housing Element

The Housing Element of the *General Plan* describes housing needs and identifies the capacity for new housing in the City based on land supply and development capacity. The 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 mitigating the impacts of growth on the housing market that are relevant to evaluation of the draft Plan.

Housing Needs Allocation

San Francisco's official quantified targets for addressing housing needs are provided by the Association of Bay Area Governments (ABAG), in coordination with the California State Department of Housing and Community Development (HCD) as part of the Regional Housing Needs Plan (RHNP). The RHNP 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 both household growth, employment growth, and the need to turn 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.

The Regional Housing Needs Plan for the 2007—2014 period was published in June 2008, and San Francisco's allocation is incorporated in the *San Francisco General Plan* Housing Element (adopted by the Planning Commission March 2011). The housing allocation is expressed not only as an overall housing production target to alleviate tight housing market conditions and reduce long-distance

[104] Keyser Marston Associates, Inc. and Gabriel Roche, Inc., *Jobs Housing Nexus Analysis, City of San Francisco*, prepared for Office of Affordable Housing Production Program, City and County of San Francisco, July 1997.

[105] *San Francisco General Plan* Housing Element 2009 Part II: Objectives and Policies, March 2011 (see footnote 47, p. 58); pp. 11-12.

commuting, but, more importantly, as separate targets for production of housing affordable to various household income categories. San Francisco's 2007—2014 goal is just over 31,000 units—almost 15 percent of the regional total. This amounts to housing production of about 4,160 units per year. This overall production goal is almost two times what was actually achieved over the last decade of strong housing production in the City. (See **Table 13**.)

TABLE 13
HOUSING NEEDS ALLOCATION, 2007-JUNE 2014

	ABAG/HCD Regional Housing Needs Allocation Production Goals by Income Category 2007-June 2014	
Income Category	**No. of Units**	**% of Total**
Extremely Low (< 30% AMI)	3,294	10.5%
Very Low (31 50% AMI)	3,295	10.5%
Low (51-80% AMI)	5,535	17.7%
Moderate (81-120% AMI)	6,754	21.7%
Above Moderate (over 120% AMI)	12,315	39.5%
TOTALS	**31,193**	**100.0%**

SOURCE: San Francisco Planning Department, Housing Element, March 2011.

Furthermore, a substantial component of the housing need is for affordable housing production. ABAG estimates that 60 percent of the production should be affordable to moderate-, low-, and very-low-income households. Meeting the needs for these segments of the market requires changing land use regulations and marshalling additional resources and implementation actions. In particular, substantial financial resources are required to bridge the gap between land and development costs and the resources that very low-, low-, and moderate- income tenants or first-time buyers can be expected to pay for housing.

Land Supply for Housing

Analysis presented in the Housing Element 2009 identifies capacity (under existing zoning) for 63,600 new housing units on vacant or underdeveloped sites throughout the City. Almost 60 percent of this capacity is in neighborhood commercial and mixed-use districts, including housing potential under recently adopted area plans: Eastern Neighborhoods, Market & Octavia, Balboa Park, Visitacion Valley, and Rincon Hill. In the Downtown C-3 districts, the residential development capacity under existing zoning totals 1,100 units. In addition, there is remaining capacity for another 11,000 units in programmed redevelopment areas: Mission Bay, Hunters Point Shipyard Phase I, and Treasure Island (before counting additional capacity that would be added under proposed rezoning in the latter two areas).[106] This estimate of development capacity for a total of 73,700 units of housing under existing zoning does not include the parcels in the proposed residential development pipeline. Including 6,800 units under construction, that amounted to a total of 50,200 units as of the fourth quarter of 2008.[107]

106 Housing Element 2009 Part I: Data and Needs Analysis, March 2011 (see footnote 48, p. 59), pp. I.62 – I.67.
107 This is the estimate presented in the Housing Element 2009: Part I: Data Needs and Analysis, March 2011, Table vI-65, page I.94.

On-going community planning efforts in San Francisco aim to expand this residential development potential, and some of the pipeline projects under review are in anticipation of that rezoning. The Housing Element estimates another 28,800 units could be provided under rezoning proposed in such areas as Executive Park, Western SoMa, India Basin, and Treasure Island. This list includes another 1,100 units under the draft Plan.[108]

Finally, housing could be added on some surplus sites owned by public agencies, amounting to only about 57 acres of land in total. The Housing Element describes planning efforts that could add another 4,000 units to the City's residential development capacity. This would be on sites owned by the San Francisco Municipal Transportation Agency, the San Francisco Community College District, and the San Francisco Public Utilities Commission, in addition to the Central Freeway parcels.[109]

Residential Inclusionary Affordable Housing Program / Affordable Housing Fee

Contributing to the production of housing affordable to low- and moderate-income households as a function of producing new market-rate housing is a zoning requirement in San Francisco. The program is one of several local resources applied in San Francisco to increase the supply of affordable housing, as called out in the Housing Element:

> Policy 7.1: Expand the financial resources available for permanently affordable housing, especially permanent sources.[110]

The year 2006 saw a substantial review and expansion of the City's inclusionary housing program, and the program was clarified in 2010 to primarily require developers of market-rate housing to pay an Affordable Housing Fee to mitigate the impacts of demand for affordable housing. The program applies to projects that develop five or more units of market-rate housing. The fee amount is the difference between the affordable sales price and the cost of developing a comparable housing unit (the "affordability gap" established annually by the Mayor's Office of Housing) multiplied by (generally) 20 percent of the number of market-rate units proposed. The Residential Inclusionary Affordable Housing Program is codified in Section 415 *et seq* of the *San Francisco Planning Code*.

Recent changes to the Inclusionary Affordable Housing Program limit the ability of project applicants to satisfy the requirement by providing on-or off-site affordable units. To qualify for compliance through the construction of on- or off-site units, developers must develop permanently affordable ownership units, or show direct public financial contribution, zoning changes or density bonus assistance, or the provisions of a development agreement.[111]

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108 Housing Element 2009 Part I: Data and Needs Analysis, March 2011, page I.95.
109 Housing Element 2009 Part I: Data and Needs Analysis, March 2011, pp. I.96 – I.98.
110 Housing Element 2009 Part II: Objectives and Policies, March 2011, page 28.
111 San Francisco Planning Department, Memorandum to Applicants Subject to *Planning Code* Section 415: Inclusionary Affordable Housing Program, January 24, 2011.

Impact Analysis

Significance Criteria

The proposed project would have a potentially significant impact related to population and/or employment if it would:

- Induce substantial 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);
- Displace a large number of people (involving either housing or employment), or
- Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply.

Approach to Analysis

The impact analysis for population, housing, and employment evaluates the change in development capacity represented by the proposed plan in the context of Plan area, Downtown, and citywide growth expectations. The analysis estimates the amount of population and employment that would occupy the additional building space allowed in the Plan area as a result of implementation of the Plan's proposed rezoning. To derive conclusions about the relative magnitude of the growth, and therefore whether or not the amount of population or employment is substantial, the evaluation compares these estimates to both existing conditions and to growth scenarios for the larger Plan area, for downtown San Francisco, and for the city as a whole, developed by San Francisco and regional agencies as the basis for long-term regional transportation and other infrastructure planning.

The analysis assumes eventual return to market conditions for housing and office development in which demand and supply are at levels that support the rents and sales prices that make new high-rise development feasible.

Plan Growth Scenarios: Housing, Population, and Employment

The key goal of the draft Transit Center District Plan is to concentrate future growth where it is best served by public transit and where private development can best capitalize on major investment in transit infrastructure.

The proposed Plan and the adopted Transbay Redevelopment Plan would each accommodate high-density residential and commercial development in the proposed Transit Center District Plan area, which encompasses most of Zone 1 of the redevelopment area. Most of the housing is planned for Zone 1 of the Redevelopment Plan area, on sites freed for development by the demolition of the Embarcadero Freeway and Terminal Separator Structure. Office and mixed-use towers are planned for the blocks centered on the Transit Center.

The proposed Plan would rezone a number of sites in the Plan area to accommodate more development potential than allowed under current zoning by changing height and bulk limits and floor-area ratio

limits. Planning Department staff has identified 17 "opportunity sites" within the Plan area. According to estimates prepared by the Department, the net additional development that could be accommodated on these sites under the proposed plan totals just over 9 million square feet of building space; of this, approximately 4 million square feet is the additional increment that would be permitted under the draft Plan, compared to existing zoning. (Net additional development accounts for demolition of existing buildings on these sites.)

The rezoning would increase the amount of office, hotel, and residential development concentrated around the Transit Center. There would be more employment on these blocks and more housing and population, as well as more visitor activity, assuming the above-noted increase in hotel rooms. **Table 14** presents the estimates of households, population, and employment growth for the Plan area and the opportunity sites in the Plan area.

Business activity and employment is the much larger component of the growth accommodated on Plan area opportunity sites. Net additional non-residential development on these blocks would accommodate a total of about 22,000 jobs, almost all in office use. There would be about 900 new hotel jobs and just over 200 new retail jobs.[112] The increment of new non-residential development allowed by the proposed rezoning would accommodate 8,000 new jobs in the Plan area, about 40 percent of the total for the opportunity sites (the remainder could be accommodated under existing zoning); in turn, the opportunity sites would accommodate three-fourths of the job growth in the Plan area, with the remainder attributable to sites in Zone 1 of the redevelopment area and to other locations. The development that could occur with implementation of the proposed rezoning represents an increase of about 60 percent in the capacity of these opportunity sites near the Transit Center to accommodate employment growth, compared to existing capacity.

The new housing on Plan area opportunity sites would accommodate about 1,200 additional households and about 1,900 additional residents. The increment of new development allowed with rezoning, after accounting for proposed controls limiting residential use, would more than double the housing and residential population otherwise accommodated on the opportunity sites. However, 80 percent of the increase in residential development in the Plan area would occur within Zone 1 of the approved redevelopment area.

Table14 shows the projections of Plan area growth from 2005 through 2030, and compares that growth to what is forecast for the larger Downtown area and for the City overall during this period.

[112] New development on the opportunity site currently occupied by Golden Gate University would potentially reduce institutional employment on these blocks, but not necessarily in the larger Plan area or in downtown San Francisco; it is possible that Golden Gate University would be accommodated elsewhere in the Plan area or nearby. See the following impact analysis.

TABLE 14
HOUSING, POPULATION AND EMPLOYMENT: 2005 – 2030
TRANSIT CENTER DISTRICT PLAN AREA COMPARED TO DOWNTOWN AND CITY TOTALS

	Transit Center District Plan Area			Pct. of Dwntn. Increase	Pct. of Citywide Increase	Oppor. Sites Change[1]	Pct. of Plan Growth[1]	Plan-induced Change[2]	Pct. of Opp. Site Growth[2]
	2005	2030	Increase						
Households	742	6,851	6,109	42%	12%	1,233	20%	760	14%
Household Population[3]	1,463	10,730	9,469	32%	7%	1,911	20%	1,179	14%
Employment by Land Use									
MIPS[4]	67,165	91,980	24,815	53%	21%	21,183	85%	7,322	42%
Retail/Entertainment	5,296	7,093	1,797	31%	5%	232	13%	10	<1%
Visitor Lodging	657	3,169	2,512	57%	25%	887	35%	729	41%
Other[5]	4,512	4,674	162	2%	<1%	(461)	n/a	—	n/a
Total	**77,630**	**106,916**	**29,286**	**48%**	**12%**	**21,841**	75%	8,060	37%

NOTE: This is a summary of the land use allocation by Traffic Analysis Zone (TAZ) for those TAZs within the Plan area boundary. There are three TAZs on the western edge of the Plan area that are not entirely within the Transit Center District Plan area. Therefore, some of the growth included in the estimates above may represent potential future development along Third Street, just west of the Plan area.

1 Represents the amount of Plan area change that would occur on the opportunity sites.

2 Represents the increment of opportunity sites growth attributable to the proposed rezoning of opportunity sites.

3 Household population for the Plan area assumes household sizes smaller than the citywide average and more appropriate to the existing and future Plan area housing stock. For 2005, the household population estimate is based on an average household size of 1.7 persons-per-household, derived from the 2000 Census. The growth in household population assumes an average household size of 1.55 persons per household, as estimated for the Rincon Hill Plan EIR.

4 MIPS – Management, Information, and Professional Service. This is essentially office employment.

5 Other includes institutional, educational, medical, and PDR (production, distribution, and repair) jobs.

SOURCE: San Francisco Planning Department, Land Use Allocation 2007, revised January 2010.

An increase of 6,100 households is forecast for the Plan area, about 40 percent of Downtown growth and 12 percent of the 51,500 additional households expected for the City as a whole over the same period. The population living in the Plan area would increase from about 1,500 to almost 11,000. The number of people working in the Plan area is forecast to increase by about 29,000—an increase of about 40 percent, representing about half of Downtown employment growth and 12 percent of total employment growth forecast for San Francisco between 2005 and 2030. The office sector would generate 85 percent of the employment growth in the Plan area.

Impact Analysis

California CEQA Guidelines, Section 15064(e) state: "Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment." In the case of the draft Plan, adoption of the proposed plan would not by itself result in direct physical change. After implementation of the Plan, new development allowed under the Plan, would be an indirect physical change that would accommodate population and employment and thereby increase economic activity in the City. This impact analysis addresses the question: would the physical change indirectly brought about by the proposed plan result in social or economic changes that would be considered

substantial, such that the physical changes would be considered significant effects on the environment. Social and economic effects are considered substantial when they are not anticipated in local plans.

The population and employment growth attributable to the proposed rezoning would result in secondary physical changes related to transportation, air quality, greenhouse gases, noise, and public services and utilities. These types of impacts are analyzed under the other environmental topic sections in this EIR. This growth would also result in physical changes related to the City's built environment, which are analyzed under the topic sections for aesthetics, cultural resources, wind, and shadow.

Impact PH-1: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would induce growth in population and employment, but the associated physical impact would not be substantial. (Less than Significant)

Employment Growth and Job Opportunities

The proposed rezoning would accommodate an additional 8,000 jobs in downtown San Francisco beyond what could be accommodated under existing zoning (including existing height limits), and would be expected to enable the addition of approximately 21,840 jobs overall in the Plan area. Market and development capacity analysis conducted for the Planning Department as background to development of the draft Plan concluded that, without an increase in Downtown development potential, San Francisco would not have the capacity to accommodate the demand for office space in San Francisco according to the "Smart Growth" policy scenario in *Projections 2007*.[113] The northern Financial District, the traditional location for the higher-end of the office market in San Francisco is essentially built-out. The proposed Plan, therefore, would allow this forecast office employment to be accommodated.

The 8,000 jobs represent about 40 percent more employment on the Plan area opportunity sites than would be the case without the rezoning and about 30 percent of the total employment growth projected for the Plan area. Development on Plan area opportunity sites would represent 75 percent of projected employment growth and 20 percent of projected total employment in the area by 2030. In the larger context, new Plan area employment would constitute 36 percent of growth in the C-3/Downtown and 9 percent of growth in San Francisco to 2030. The new jobs attributable to the proposed rezoning represent less than 15 percent of the employment growth scenario for the C-3/Downtown and less than 5 percent of total employment growth projected for San Francisco. While the proposed rezoning would result in an addition to economic activity and employment in San Francisco, this would not be beyond what is targeted in state, regional, and local policy documents, as described in more detail below. More importantly, the job growth would be consistent with City and regional forecasts, including regional air quality planning efforts.

[113] Seifel Consulting Inc. for the San Francisco Planning Department, *Downtown San Francisco: Market Demand, Growth Projections and Capacity Analysis*, May 2008.

Office Market Impact

Most office demand in the Plan area is likely to be from tenants that would otherwise locate elsewhere in the region but choose the Plan area because of transit access and location decision factors that may favor the competitive advantages of Downtown over suburban options: workforce preferences for the urban experience, the high cost of suburban commuting by car, and investments in the Downtown public realm and public safety. In addition, some component of the demand for this space would be businesses whose other location options are global financial center cities. With the proposed Transit Tower and other buildings taller than now currently permitted, San Francisco could gain some office inventory that would compete for tenants with other iconic buildings in other cities.

Because of the higher-end nature of this office market segment, the proposed rezoning would not be expected to have much effect on other segments of the office market or on other business locations in San Francisco. It would not be expected to attract a large number of tenants that would otherwise be the basis for absorption of space planned to attract technology and research firms. Therefore, the increase in development potential in the Plan area is unlikely to have a negative impact on the demand for space South of Market, in Mission Bay, or at Candlestick Point / Hunters Point Shipyard, because these locations tend to provide office and research and development space to users not interested in a central city location or the accompanying amenities, but who are instead interested in particular building types (e.g., technology firms in the South of Market) and in locations with concentrations of like users (SoMa tech firms again, or bioscience firms in Mission Bay).

Population Growth Impact

The proposed rezoning would increase housing development potential in this part of downtown San Francisco. There would be more people living Downtown near the Transbay Transit Center than would otherwise be the case. The additional population would not be as great as the additional employment, since the intent of the draft Plan is to increase office development potential to intensify business activity and employment in the City's central district. The same market and development capacity analysis referenced above concluded that there was ample development capacity under existing zoning Downtown to satisfy future residential demand under either the Baseline or the "Smart Growth" scenario.[114] The increase in residential development capacity (and therefore in households and population) is proposed as part of comprehensive planning to have a mix of land uses in this intense urban center.

The Plan area opportunity sites are expected to gain approximately 1,235 households and more than 1,900 residents, 20 percent of the expected residential growth in the Plan area. Some 800 of these additional households and 1,200 of the additional residents would be accommodated through the rezoning, representing 60 percent more population than would be expected under existing zoning on the opportunity sites. Most of the residential growth in the Plan area is expected to occur it in the new residential district represented by the Transbay Redevelopment Zone 1. The population growth attributable to the draft Plan is 6.5 percent of the population growth projected for the C-3/Downtown and

[114] Seifel Consulting, San Francisco demand and growth projections study; see footnote 113, p. 200.

1.4 percent of population growth forecast for San Francisco. While the proposed rezoning would result in population growth beyond what would be expected under existing zoning, the addition is not substantial in the context of San Francisco and its downtown, and is consistent with regional smart growth forecasts and the regional air quality planning efforts based on those smart growth principles, as described in more detail below[115]

Growth Anticipated in Local and Regional Plans

The population and employment growth accommodated by the draft Plan, including the increment of new development allowed under the proposed rezoning, is incorporated in ABAG's regional projections, which, since 2003, have been based on policy assumptions that include more infill and transit-oriented development, particularly around fixed transit stations. As the Association of Bay Area Governments has noted, "The Transbay Transit Center project will not only provide a central focus for many regional transit services, it will be an important economic stimulus to the city." San Francisco's central location, historic function as 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. The conceptual growth pattern behind ABAG's forecast for San Francisco builds more housing throughout the City, particularly in the Downtown area.[116]

The Transbay Terminal Area is a Priority Development Area (PDA) recognized by ABAG, MTC, and the BAAQMD—an infill location served by transit—where compact land development is promoted and supported by investments in community improvements and infrastructure. 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.[117] In addition, the City's *General Plan* Housing Element 2009 (adopted June 2011) identifies this 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.

Planning for more intensive new development on the few remaining underutilized blocks in downtown San Francisco to accommodate more employment and population 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. 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. For these reasons, the growth induced by the proposed rezoning is not considered substantial or adverse.

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115 In addition to comparing the draft Plan to existing conditions, this section compares the total amount of growth forecast in the Plan area without the Plan (i.e., under existing zoning) to growth with the draft Plan, to provide for more information regarding Plan-permitted changes.

116 Association of Bay Area Governments, *Projections 2007*, December 2006, pp. 140 – 142.

117 Association of Bay Area Governments and Metropolitan Transportation Commission, *Bay Area Plan – Initial Vision Scenario for Public Discussion*, March 11, 2011. Available on the internet at: http://www.onebayarea.org/pdf/Initial_Vision_Scenario_Report.pdf.

Mitigation: None required.

Impact PH-2: The new development allowed by the Plan's proposed rezoning, including the development of the proposed Transit Tower, would not displace a large number of people, involving either housing or employment. (Less than Significant)

The proposed plan would increase development potential on selected opportunity sites in the Plan area. This change would not result in demolition of a substantial amount of existing building space, compared to the new space that would be provided (about 550,000 square feet could be demolished, compared to 9 million square feet of new space that could be built), although to the extent that occupied commercial space is removed, there would be displacement of some businesses. However, several of the buildings on potential development sites in the Plan area are currently vacant, or partially vacant. To the extent that existing office tenants would be displaced, they would likely have to relocate elsewhere in San Francisco, or outside the City, because most of the building space in the Plan area that is anticipated to be replaced is considered Class C space, whereas new office construction would be Class A space, and commercial rents would be considerably higher. Displaced tenants could likely find comparable, lower cost space in older buildings outside the heart of the C-3 District, for example, in parts of Western SoMa, Mid-Market, and the Civic Center area.[118] At least some retail tenants displaced would be more likely to be able to stay in the Plan area, because retail rents are more closely tied to location than to building amenities. Therefore, while there would be some displacement of commercial tenants, the magnitude of the impact would not be such that this would be considered a significant impact.

No residential uses would be displaced by development pursuant to the draft Plan.

The largest existing building occupant on the opportunity sites is Golden Gate University, occupying 175,000 square feet. With development of this opportunity site, this institutional use might relocate elsewhere in the Plan area, or nearby, because the Downtown location well-served by transit is essential to attracting students, most of whom already work Downtown. It is also possible that this institutional use would be accommodated as part of new development on an opportunity site in the Plan area. Moreover, as the owner of its property, Golden Gate University has site control and thus would control whether it might relocate.[119]

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118 While the vacancy rate for Class C space is about 50 percent lower than that for Class A and C space, and there is a much smaller pool of Class C space overall (Colliers International, "San Francisco Research & Forecast Report—Office, Second Quarter 2011," available at: http://dsg.colliers.com/document.aspx?report=1603.pdf), it is also true that tenants in Class C buildings typically lease smaller spaces—in part, because the buildings themselves are smaller.

119 It is noted that no application has been filed with the Planning Department for development on the Golden Gate University opportunity site, although the school has publicly discussed future development plans. "Golden Gate University eyes new highrise," J.K. Dineen, *San Francisco Business Times*, June 8, 2009.

The site of the proposed Transit Tower is currently vacant, having been formerly occupied by the passenger waiting and loading area in front of the former Transbay Terminal (demolished in 2010). Therefore, no housing or employment would be displaced by the Transit Tower project.

In light of the above, displacement would not be considered a significant impact.

Mitigation: None required.

Impact PH-3: Neither the draft Plan nor the proposed Transit Tower would create substantial demand for additional housing beyond projected increases in housing supply in San Francisco, or substantially reduce the housing supply. (Less than Significant)

Housing Demand

By accommodating more development and therefore more employment growth than otherwise allowed under existing zoning, the draft Plan would increase demand for housing in San Francisco, but the increase would not be substantial, and required participation in the Jobs-Housing Linkage program would help reduce the impact of the increased demand on housing prices and rents and the need for affordable housing in San Francisco.

Employment growth in the Plan area by 2030—an estimated 29,300 jobs—would result in a demand for approximately 10,250 housing units in San Francisco.[120] The 10,250 housing units represents about 18 percent of the potential of approximately 58,000 units that could be developed under various areawide planning efforts and redevelopment plans identified in the 2009 Housing Element, including the proposed Transit Center District Plan, as well as recently approved plans such as the Market-Octavia Plan and the Eastern Neighborhoods rezoning, Hunters Point, and Treasure Island. If these forecasts hold, it would mean that a larger percentage of San Francisco workers would look for housing outside the City, that more workers would live in dual-worker households, that increased demand could increase prices for housing in the City (which might, in turn, generate increased supply), or some combination thereof.

It is important to note that the employment forecasts assume that all commercial development would generate new employment to San Francisco. In reality, it is always the case that some commercial tenants in new development relocate from other locations (both within San Francisco and without). To the extent that space vacated by tenants relocating from within the City is re-occupied at a similar density, then the employment can be considered new to San Francisco. On the other hand, such vacated space may be used at a different intensity, or converted to another use. For example, between 2006 and 2009, 18 Downtown commercial buildings (mostly former offices) containing an estimated 700,000 square feet of floor area

[120] Based on 56 percent of City workers who live in San Francisco, from 2000 Census data, 1.68 workers per worker household, and an assumed 5 percent vacancy factor.

were converted to residential use.[121] Moreover, despite the addition of nearly 20 million square feet of office space in the greater Downtown (12.6 million square feet in the C-3 Use Districts), employment in the C-3 Districts has declined since the Downtown Plan was approved in 1985. As noted in the Setting, employment is cyclical, and any instantaneous snapshot of employment reflects the current economic conditions. Downtown Plan monitoring data show that between 2002 and 2010, a period that encompassed both positive and negative economic cycles, employment in the C-3 districts fluctuated from a low of about 195,000 in 2004 to a high of about 220,500 in 2008, a swing of about 13 percent. Moreover, not all "new" jobs create demand for new housing, because some employees taking these jobs already live in San Francisco. Nevertheless, housing demand in the City would be expected to increase as a result of projected employment growth.

The large-scale non-residential development on Plan area opportunity sites would be subject to San Francisco's Affordable Housing-Jobs Housing Linkage Fee (*Planning Code* Section 413). The fee would apply to the gross square feet of net additional office and hotel space, to mitigate the documented impact of employment growth on housing supply and affordability. The fee would also apply to any retail space that exceeds 25,000 square feet in size. The Jobs-Housing Linkage Fee revenue would be deposited in the Citywide Affordable Housing Fund to be used to increase the supply of affordable housing in San Francisco.

At the current fee schedule of $19.96 per gross square foot of office space and $14.95 per gross square foot of hotel space, the net additional increment of building space allowed as a result of the proposed rezoning would generate total Jobs-Housing Linkage fee revenue of about $53 million.[122]

Housing Supply

The proposed rezoning would not reduce the housing supply. No existing housing would be demolished as a result of the new development allowed on opportunity sites in the Plan area, including the Transit Tower site.

The proposed rezoning undertaken as part of implementation of the draft Plan would increase the development potential for housing on Plan area opportunity sites, beyond what could be achieved under existing zoning: an additional 800 units of housing could be developed on the opportunity sites, increasing the total housing unit potential in this part of downtown San Francisco from 498 units to 1,298 units.

This increase in housing development potential would incrementally improve San Francisco's ability to accommodate housing demand, and is consistent with regional scenarios to accommodate future growth in infill locations well-served by transit and existing infrastructure. As noted, the Plan area is designated as a Priority Development Area (PDA) by ABAG and the Metropolitan Transportation Commission

121 San Francisco Planning Department, *25 Years: Downtown Plan Monitoring Report, 1985 – 2009.* June 2011. Available on the internet at: http://www.sf-planning.org/index.aspx?page=1663#downtown_report; p. 10.

122 San Francisco Department of Building Inspection, Citywide Development Fee Register (updated as of 11/15/2010). http://sfdbi.org/Modules/ShowDocument.aspx?documentid=717

(MTC). Furthermore, the additional housing supply in the Plan area could incrementally reduce demand pressure from employment growth on the existing, older housing stock in the City.

In addition, the developers of new housing allowed under the proposed Plan would be required to participate in San Francisco's Residential Inclusionary Affordable Housing Program (*Planning Code* Section 415). The Affordable Housing Fees required of these developer's 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 mitigate the documented impact of market-rate housing development on the demand for affordable housing in San Francisco.

Project sponsors of market-rate housing in the Plan area would be required to pay fees to help bridge the affordability gap for 160 affordable units (20 percent of 800), or to build that housing on-site or off-site. Assuming half of the 800 units were 1-bedroom units (fee amount of $248,210 per unit) and half were 2-bedroom units (fee amount of $334,478 per unit), total Affordable Housing Fee revenue would amount to $46.6 million.[123]

Some of the high-rise housing encouraged in the Plan area is likely to be purchased as second homes.[124] These units would be a response to one segment of the market for Downtown high-rise housing, but they would not contribute to San Francisco's ability to meet the demand for housing from people employed Downtown.

In light of the foregoing, because the draft Plan would provide for additional housing in the Plan area beyond what could be accommodated under existing zoning, because of the development and affordable housing fees that would be required, and because no existing housing would be eliminated, effects of the draft Plan on housing supply would be less than significant.

Mitigation: None required.

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123 Mayor's Office of Housing, Inclusionary Housing Fee Determination, effective July 15, 2008. The fee schedule was not updated for the 2010-2011 fiscal year due to continued review of the appropriate index. The July 15, 2008 schedule remains in effect until the Mayor's Office of Housing issues a 30-day notice of a schedule update. http://sf-moh.org/index.aspx?page=307

124 "More recent buyers of Downtown housing are affluent Bay Area households choosing to either relocate to Downtown or purchase a second home." Seifel Consulting Inc. for the San Francisco Planning Department, *Downtown San Francisco: Market Demand, Growth Projections and Capacity Analysis*, May 2008, page IV-14.

Impact C-PH: The draft Plan and proposed Transit Tower would not contribute considerably to a substantial growth in population or employment, to displacement of a large number of people, or to substantial demand for additional housing in San Francisco, nor would they reduce the housing supply. (Less than Significant)

The analysis above, in Impacts PH-1 through PH-3, discusses growth in the Plan area, including the proposed Transit Tower, in the context of cumulative growth in San Francisco through the year 2030. Given the foregoing conclusions, neither the draft Plan nor the proposed Transit Tower would contribute considerably to a cumulative significant impact related to population and housing or business activity and employment.

Mitigation: None required.

D. Cultural and Paleontological Resources

Introduction and Methodology

This analysis of the potential impacts to historical resources is based on a review of existing known resources and an evaluation of the potential effects on those resources. Because the draft Plan and accompanying rezoning would not directly affect historical resources (effects could result from subsequent development projects, including the Transit Tower), the impact discussion relative to the draft Plan evaluates whether the proposed policy and zoning changes could indirectly result in effects on historical resources in the Plan area. Subsequent development pursuant to the draft Plan, including the proposed Transit Tower, may have direct effects, which are also analyzed.

A "historical resource" is defined, under CEQA Section 21084.1, as one that is listed in, or determined eligible for listing in, the California Register of Historical Resources.[125] In addition, a resource that (i) is identified as significant in a local register of historical resources, such as Article 10 and Article 11 of the *San Francisco Planning Code*, or (ii) is deemed significant due to its identification in an historical resources survey meeting the requirements of *California Public Resources Code* Section 5024.1(g), is presumed to be historically significant "unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant." Finally, CEQA Section 21084.1 permits a lead agency to determine that a resource constitutes a historical resource even if the resource does not meet the foregoing criteria. Section 5024.1(g) sets forth guidelines for historical resource surveys, including, among other things, listing the results in the State Historic Resources Inventory and preparation of the survey according to State Office of Historic Preservation procedures. In general, project-specific historical resource surveys performed as part of CEQA review in San Francisco will meet these guidelines and, therefore, resources identified as having California Historical Resource status codes 1 through 5 on such surveys will normally be determined to be historical resources for CEQA purposes.

Both buildings (historic architectural resources) and archeological sites may be listed on the California Register or otherwise qualify as historical resources for purposes of CEQA analysis.

The Plan area has also been studied to identify known and potential archeological resources, including historic-period remains, and prehistoric/Native American archeological sites. Those resources are discussed here, followed by an assessment of Project impacts and recommendations for mitigation of the impacts. A more detailed discussion, including references, of these topics is available in the confidential

[125] Resources are listed in the California Register if they meet one of four criteria and also retain sufficient integrity. The four criteria are: 1 – Event (resource is associated with important historical events); 2 –Person (resource is associated with the lives of historically important persons); 3 – Architecture (resource embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values); and 4 – Informational Potential (resource has yielded, or has the potential to yield, information important to prehistory or history). (Criteria for the National Register of Historic Places are similar, but are lettered A – D.) Integrity entails the survival of characteristics or historic fabric that existed during the resource's period of significance; that is, the time it gained its historical importance. Integrity encompasses seven aspects: location, design, materials, workmanship, setting, feeling, and association.

Archeological Research Design and Treatment Plan (ARDTP) for the Transit Center District Plan area.[126] That report addressed the Plan area as a whole, project-level analysis for the Transit Tower, and parcel level analysis of five private project sites (five of the 17 "soft sites" discussed at the start of Chapter IV).

The historic architectural resources analysis in this section is based on a background report prepared by preservation architects Kelley and VerPlanck,[127] as well as additional surveys and evaluations by preservation architects at Carey & Co.[128] Additional information is included that has been derived from Planning Department surveys of downtown San Francisco and the South of Market area over the past several years.

Setting

This discussion includes sections on the archeological record followed by a consideration of historic architectural resources. The archeological setting includes consideration of prehistoric, ethnohistoric, and historic time segments. It is followed by a separate historic-era context tailored to architectural resources.

Archeological Context of the Plan Area

Generally, an archeological resource may be determined to be an "historical resource" due to its eligibility for listing on the California Register under Criterion 4; that is, because of the potential scientific value of the resource, that is, "has yielded, or may be likely to yield, information important in prehistory or history" (CEQA Guidelines Section 15064.5 (a)(3)). An archeological resource may also be California Register-eligible under other Evaluation Criteria, such as Criterion 1, association with events that have made a significant contribution to the broad patterns of history; Criterion 2, association with the lives of historically important persons; or Criterion 3, association with the distinctive characteristics of a type, period, region, or method of construction. Appropriate treatment for archeological properties that are California Register-eligible under criteria other than Criterion 4, information potential, may be different than that for a resource that is significant exclusively for its scientific value. As with historic architectural resources, a lead agency may determine that an archeological resource is a "historical resource," even if it is not listed on the California Register or one of the other qualified inventories identified in CEQA Guidelines Section 15064.5.

Integrity is an essential criterion in determining if a potential resource, including an archeological resource, is an historical resource. In terms of CEQA, "integrity" can, in part, be expressed in the requirement that the resource must retain "the physical characteristics that convey its historical significance" (CEQA Guidelines Section 15064.5 (b)). For an archeological resource evaluated under

126 Far Western Anthropological Research Group, Inc., Past Forward Inc., and JRP Historical Consulting, LLC, *Archaeological Research Design and Treatment Plan for the Transit Center District Plan area, San Francisco, California*; February 2010.

127 Kelley & VerPlanck, *Final Historic Context Statement Transit Center District Survey, San Francisco, California,* September 11, 2008. This report is available for review at the Planning Department, 1650 Mission Street, Suite 400, in File No. 2007.0558E.

128 Carey & Co. Inc., Supplemental DPR 523B Forms for selected properties, March 18, 2010. This material is available for review at the Planning Department, 1650 Mission Street, Suite 400, in File No. 2007.0558E.

Criterion 4, integrity is conceptually different than how it is usually applied to the built environment. For an historic building, possessing integrity means that the building retains the defining characteristics from the period of significance of the building. In archeology, an archeological deposit or feature may have undergone substantial physical change from the time of its deposition but it may yet have sufficient integrity to qualify as a historical resource. The integrity test for an archeological resource is whether the resource can yield sufficient data (in type, quantity, quality, diagnosticity) to address significant research questions. Thus, in archeology, "integrity" is often closely associated with the development of a research design that identifies the types of physical characteristics ("data needs") that must be present in the archeological resource and its physical context to adequately address research questions appropriate to the archeological resource.

Prehistoric Period Setting

Terminal Pleistocene (13,500-11,600 cal BP)[129]

Currently there is considerable agreement that humans entered the New World via multiple migrations using both coastal and inland routes. Most scholars view this as a post-glacial maximum process (after 21,000 cal BP), although some have argued for pre-glacial maximum incursions. The coastal route, referred to by some as "the Kelp highway," entailed travel by boat exploiting this corridor's highly productive marine resources.

The Terminal Pleistocene is largely contemporaneous with the Clovis and Folsom periods of the Great Plains and the Southwest and is generally considered to be represented by wide-ranging, mobile hunters and gatherers who periodically exploited large game. Throughout California Terminal Pleistocene occupation is infrequently encountered and poorly understood, and most often represented by isolated fluted points.

No fluted points or archeological deposits dated to the Terminal Pleistocene have been documented in the Bay Area. The Borax Lake site (LAK-36) situated near Clear Lake in the North Coast Ranges is the nearest locality with numerous fluted points. Isolated fluted points have also been documented at Tracey Lake in the Delta, at NAP-131 and Hidden Valley north of the Bay, and at the Wolfsen mound (MER-215), a major Late Holocene site along the middle San Joaquin River.

The absence of Terminal Pleistocene archeological remains is undoubtedly the result of several factors most notably the likelihood that initial human populations were small, highly mobile, and traveled rapidly across the continent. Therefore their archeological signature on the landscape was generally faint and wide-spaced. For coastal areas, sea level rise, coastal erosion, and localized subsidence have further reduced the likelihood of documenting initial occupation of the Plan area.

129 All dates use "cal BP" to indicate they are given in calibrated calendar years before present (i.e. 1950) rather than non-calibrated radiocarbon-dated years.

Early Holocene (11,600-7,700 cal BP)

In much of Central California, the Early Holocene occupation is indicative of semi-mobile hunter-gatherers exploiting a wide range of food resources from marine, lacustrine, and terrestrial contexts. Early Holocene assemblages often include stemmed points, crescents, and steep-edged formed flake tools that share many attributes with contemporaneous material of the Mojave Desert.

Early Holocene prehistoric material in the Bay Area has rarely been encountered in sites, resulting in few and poorly established archeological patterns. Four dated Early Holocene sites have been documented in the general Bay Area region including two sites at Los Vaqueros reservoir (CCO-696 and -637) in the East Bay, the Blood Alley site (SCL-178) in the Coyote Narrows of the Santa Clara Valley, and SCR-177 at Scotts Valley in the Santa Cruz Mountains. All were recovered from buried terrestrial contexts, while none have been documented in bay or coastal settings.

Diverse resource exploitation is indicated by the artifact and ecofact assemblages from these sites. They include hand stones and milling slabs (but not mortars and pestles), large flaked cores and cobble tools, flake tools, well-made bifaces, and a single crescent. Trace amounts of marine shellfish have been recovered from some inland sites, while faunal assemblages include varied remains including deer, elk, rabbit, ground squirrel coyote, and grizzly bear. Carbonized plant remains from CCO-696 were dominated by acorn and wild cucumber (*Marah* sp.), indicative of fall-winter occupation. Each Los Vaqueros site also included a single human burial. These Early Holocene deposits demonstrate that the general region was occupied throughout this time segment, but strong insight into the nature of early occupation trends will require much more data.

Middle Holocene (7,700-3,800 cal BP)

Comparatively, Middle Holocene occupations are much more ubiquitous than in earlier time segments. More than 30 Bay Area archeological sites have produced radiocarbon dates indicating occupation during the Middle Holocene. Both surface and buried sites are present, including a number of substantial residential settlements. Notably the Middle Holocene includes a series of buried sites with diverse cultural assemblages and occasional burials, such as ALA-483 in the Livermore Valley, the Marsh Creek Site (CCO-18/548) in the northern Diablo Range, and MRN-17 on de Silva Island in Richardson Bay. In addition, several isolated human burials have been found in buried contexts including several in the northern Santa Clara Valley (such as SCL-33, -484, -674, and -832) and on the San Francisco peninsula (SFR-28 and SMA-273). SMA-273 was an isolated buried dated to around 4200 year ago discovered during dredging about 12 feet below the surface of San Francisco Bay off Coyote Point. SFR-28 was a 5,000-year-old human skeleton discovered in buried marsh deposits within a former arm of Mission Bay. The buried skeleton was discovered at a depth of approximately 60 feet below the modern ground surface during construction of the BART tunnel in the City.

Artifact assemblages are varied and include ground stone (some only with milling slabs and hand stones, some with mortars and pestles, and some with both); side-notched dart points, cobble-based chopping, scraping, and pounding implements, and shell beads and ornaments. Notably, Type N grooved

rectangular *Olivella* beads are present at the San Bruno Mountain Mound site (SMA-40) and at CCO-474/H along the eastern edge of San Pablo Bay. These beads are well-dated to the Middle Holocene across a large region from the northwestern Great Basin to San Clemente Island and indicate the presence of an extensive regional interaction sphere.

Resource exploitation began to shift toward a lacustrine and maritime focus with the expansion of San Francisco Bay's estuary, mud flats, and freshwater tidal marshes in the Middle Holocene. Shellfish exploitation included bay oyster (*Ostrea*) and mussel (*Mytilus*), while inland East Bay sites exploited freshwater shellfish. Faunal remains reveal diverse, local niche-based exploitation strategies that included exploitation of seasonal waterfowl.

The presence of a diverse range of habitation sites, including the basal layers of some Bay margin shell mounds, suggests higher population levels, more complex adaptive strategies, and longer seasonal occupation than took place during the Early Holocene. Along with burial by alluviation, undoubtedly the earliest sites situated along the Bay margins have been inundated by subsequent sea level rise.

Late Holocene (3,800-170 cal BP)

The Late Holocene is generally divided into the following five main time slices: Early (4500/3800-2450 cal BP), Early-Middle Transition (2450-2050 cal BP), Middle (2050-900 cal BP), Middle-Late Transition (900-700 cal BP), and Late (700-170 cal BP). The Middle and Late periods have been further subdivided (into four and two subdivisions, respectively), based largely on the dating of specific types of shell beads.

The Late Holocene is very well-documented in the Bay Area with more than 200 dated sites, and this time period is dominated by complex hunter-gatherers. The vast majority of occupation deposits from Bay Area surface shell middens and shell mounds date to the Late Holocene. Early site recording and survey by Nels Nelson identified more than 400 such sites along the margins of San Francisco Bay. Of these, less than 10 shell mounds were noted in the northern San Francisco peninsula area: most south of Hunters and Candlestick points on the bay side, along with a few near Lands End on the northwest. Many more mounds were certainly present in the area based on other investigations.

Early in the 20th century, a series of Bay Area shell mounds was excavated, documenting their depths and composition. The data that was generated formed the basis of subsequent Late Holocene cultural typologies and sequences for the region based on changes in artifacts, mortuary practices, and shellfish remains. Among these early excavations were Nelson's excavations at SFR-7 (the Crocker/Bay Shore Mound) and Loud's fieldwork at SFR-6 (the Presidio Mound) on the northern San Francisco peninsula. Very little work was then carried out in the northern San Francisco peninsula until the enactment of environmental laws and the emergence of cultural resource management in the mid 1970s.

Since then a series of prehistoric sites have been investigated, most of which have been discovered during urban redevelopment projects and underlying the city of San Francisco, some within or near the Plan area. Currently, at least 16 Late Holocene prehistoric sites have been subjected to formal archeological testing or data recovery excavations. Excavated sites are mainly clustered between Yerba Buena Cove and

Mission Bay (eight sites: SFR-112, -113, -114, -135/H, -147, -148, -154/H, and -155), along with six near the northern end of the peninsula (SFR-6/26, -21, -29, -30, -31, and -129), one south of Candlestick Point (SFR-7), and one on Yerba Buena Island (SFR-4). The excavated sites are mainly shell middens (n=14), along with two shell mounds (SFR-6 and -7). They are typically situated within sand dunes, and some are well-buried by natural sediments as well as by historic-era fill. Although their full areal extent has not always been fully defined owing to their urban settings, each site is typically a single continuous midden. A notable exception is SFR-113 which is comprised of eleven small midden concentrations or loci.

These sites vary widely in size. Most are either small or medium-sized (less than one acre), along with two large sites (3 to 5 acres). The latter include the Crocker/Bayshore mound (SFR-7) and SFR-113, where none of the 11 loci are larger than 1,600 square feet. Midden thickness also varies greatly between sites, ranging from thin lenses (less than one inch thick) at two loci of SFR-113 to thick (16 feet) at SFR-7. Most middens fall into one of two size ranges: 18 inches or less in thickness, and between 2 and 5 feet in thickness.

The amount of intact midden that has been excavated differs greatly between sites, ranging from as little as 15 cubic feet at SFR-155 to 17,000 cubic feet at SFR-7, and as a result insights into site structure are highly varied. A total of 80 radiocarbon samples has been obtained from 13 of the excavated sites. They include sites from the Early, Middle, and Late period, although Early period occupation is currently only documented on Yerba Buena Island. Large numbers of burials have been recovered from three sites: SFR-4 (mostly Early period), SFR-7 (probably Middle period), and SFR-114 (Middle period). Despite the impact of historic-era and modern development, these sites generally contain well-preserved features, intra-midden stratigraphy, and diverse cultural assemblages. Many also appear to represent relatively short-term and discrete occupation events. As such, new research in the region has considerable potential to unravel diachronic and spatial trends in prehistoric hunter-gatherer occupation within the region and refine our understanding of the current status Late Holocene occupation summarized below.

The Early Period marks the establishment of a number of large shell mounds. Prominent sites along the Bay margins that have produced particularly early dates—including dates at the end of the Middle Holocene—include the University Village (SMA-77), the Ellis Landing site (CCO-295), the San Bruno Mountain mound (SMA-40), the Stege mound (CCO-298), the West Berkeley Mound (ALA-307), and ALA-17.

The earliest shell mound typically had artifact assemblages that included projectile points of varied forms (including stemmed, broad-leafed, and square-based), mortars, pestles, charmstones (typically perforated); bones tools such as awls, net sinkers; *Olivella* shell beads (rectangular and spire lopped), and *Haliotis* sp. rectangular beads and pendants. Bay margin sites reveal a strong emphasis on marine shellfish (particularly bay mussel and oyster), marine fishes, and marine mammals. In contrast, interior sites emphasized freshwater fish and shellfish along with terrestrial mammals. Nuts and berries appear to have been particularly important plant resources.

Burials are common, tend to flexed, and the regular use of grave offerings, suggests well-developed mortuary practices. Artifacts recovered mostly from burial contexts suggest that an extensive trade

network provided access to finely crafted implements made of obsidian originating east of the Sierra Nevada and from Napa County. *Haliotis* (abalone) and *Olivella* (olive snail) beads and ornaments may also represent trade items.

The Middle Period appears to have witnessed greater settlement permanence—characterized either by sedentary or multi-season occupation. This time interval is considered to have been the heyday of mound building and correlated with greater social complexity and ritual elaboration. A series of changes in artifact types have been documented including barbless and single-barbed bone fishing spears, large mortars, ear spools, and varied forms of *Haliotis* and *Olivella* ornaments. Mortuary practices were often highly ritualized and some individuals, typically males, were buried with thousands of shell beads. Terrestrial resources appear to have been more heavily exploited than previously, based on food remains and isotopic analysis of human bone. Shifts in resource emphasis included greater exploitation of deer, less reliance on oysters and greater exploitation of mussels, and an increase in acorn exploitation.

The Late Period is the best-documented Late Holocene time segment, although some have suggested a decline in the number of settlements. Near the end of the period artifact assemblages included flanged steatite pipes, chevron-etched bone whistles and tubes, elaborately finished mortars, thin awls for basketry, clamshell disk beads, and very distinctive *Haliotis* pendants. The bow and arrow also make its appearance in the Late Period. Archeobotanical remains reveal heavy reliance on small seed exploitation, while the faunal evidence indicates a wide range of resources notably sea otters, rabbits and deer. Clams (*Macoma*) and horn snails (*Cerethedia*) also were increasingly important to the diet. Funerary rituals were strongly patterned, and included flexed interments and "killed" grave offerings, along with occasional cremations. Extensive trade relations also appear to have flourished with neighboring groups.

Ethnohistoric Setting

The Plan area falls within the aboriginal territory of the Ohlone, once referred to by the Spanish as *Costanos* (for "coastal people"). The aboriginal way of life for the Ohlone was disrupted by the influx of explorers and the establishment of missions by the Spanish in the late eighteenth century. Colonization and occupation of their land by Spanish, Mexicans, and then Anglo-Americans substantially reduced native populations, displaced them, and dramatically altered their traditional way of life. As a result the Ohlone are not well-known ethnographically.

Most of what we know about the Ohlone comes from early Spanish accounts—both explorers and mission staff—along with a few 20th century interviews by anthropologists who gathered information on remembered lifeways. Recent interpretations of Ohlone lifeways, sometimes contradictory with earlier studies, are largely based on mission records research.

Costanoan is a linguistic subfamily of the Penutian language stock. Miwok (such as that spoken by the Coast Miwok north of Golden Gate) is the closest related language. According to early linguists, there were eight branches of the Costanoan language, each associated with a geographic location and the tribelet(s) that inhabited the locality. Whether these were distinct languages or dialects is uncertain. The Plan area lies within the northern portion the *Ramaytush* linguistic territory.

At the time of Spanish contact, the Bay Area and the Coast Range valleys were dotted with native villages. The Ohlone aboriginal population has been estimated to be between 7,000 and 10,000. It is estimated that there were approximately 1,400 Ohlone inhabiting the area of modern San Francisco and San Mateo counties and speaking *Ramaytush* in AD 1770.

The northern portion of the San Francisco peninsula (including the city of San Francisco) is considered to have been the tribal/regional community area of the *Yelamu*, one of seven tribal areas on the San Francisco peninsula (north of San Francisquito Creek). The *Yelamu* is estimated by scholars to have had a population of 160 and population density of 2.7 persons per square mile at the time of contact.

For the Ohlone as a whole, the basic unit of political organization was a territory-holding group of one or more associated villages and smaller temporary encampments. Often referred to as a tribe or tribelet, these groups were generally considered independent, multi-family, landholding groups. Each regional community was a largely autonomous polity numbering typically between 150 and 400 people falling under the jurisdiction of a headman and council of elders who served as advisors to the villagers. Permanent villages were established near the coast and on river drainages, while temporary camps were located in prime resource-processing areas. Some tribes occupied a central village, while others had several villages within a few miles of each other. Three different semi-sedentary groups lived in this area: one group near have a village near Mission Creek (*Sitlintac*) and a village 2 – 3 miles inland (*Chutchui*); a second was centered at the villages of *Amuctac* and *Tubsinte* near Visitation; and third group lived at a village (*Petlenuc*) near the beach on the north side of the peninsula.

Prior to European contact, native people of the Bay Area were hunters, gatherers, and fisherfolk. Subsistence activities centered around the seasonal availability of gathered resources such as acorns, nuts, seeds, greens and bulbs; hunting deer, pronghorn, tule elk, smaller animals, sea mammals and waterfowl; fishing; and collecting shellfish (oysters, mussels, and abalone). The proliferation of shell middens throughout the Bay Area attests to the heavy reliance on marine food resources. Although they did not cultivate crops, the Ohlone practiced burning on an annual basis to ensure an abundance of seed-bearing annuals and forage for large game, and to facilitate the gathering of fall-ripening acorns. Their only domesticate was the dog, which presumably served as a companion and camp protector, and may have played an important dietary role (a "walking larder") when times were bad.

The most common type of housing consisted of small hemispherical huts thatched with grasses and rushes. Other types of village structures included sweathouses, dance enclosures or plazas, and assembly houses. A variety of stone tools were used, including knives, arrow and spear points, hand stones and milling stones, mortars and pestles, net sinkers, anchors, and pipes. Chert was obtained from local quarries, and obsidian was acquired in trade. Many perishable items were made from tule (e.g., canoes, mats, and baskets), plant fibers (e.g., cordage, nets, and baskets), and animal skins (sea otter, rabbit, and duck skin blankets). Pottery was not made. Mortars, both bedrock and portable variants, were important components of acorn processing technology. Tule balsas were used for transportation, fishing, and duck hunting. Shell beads were gaming and trading commodities as well as ornamental items. Trade relations with neighboring villages and groups were well established. Likely trade items included bows, arrows,

basketry materials, paints, and feather blankets, procured from the east, while the Ohlone traded mussels, dried abalone, salt, and abalone shells to the neighboring Yokut groups and provided the Sierra Miwok with *Olivella* and abalone shell beads.

Historical Period Setting

The Plan area is part of the larger South of Market neighborhood, and has historically supported mixed commercial uses dominated by industrial businesses and oriented toward the railroad tracks and the nearby shipping facilities on the Bay. At the onset of the Gold Rush in 1848-1849, First Street marked the easternmost street at the water's edge on Yerba Buena Cove, a gentle half-moon-shaped inlet that extended from Clarks Point on the north to Rincon Hill on the south (see **Figure 53**). The portion of the Plan area west of this original shoreline has been intensively settled since the early 1850s. The east portion—originally under water—developed incrementally throughout the 1850s and into the 1860s as Yerba Buena Cove was filled, and as wharves and city streets were extended into the former Bay.

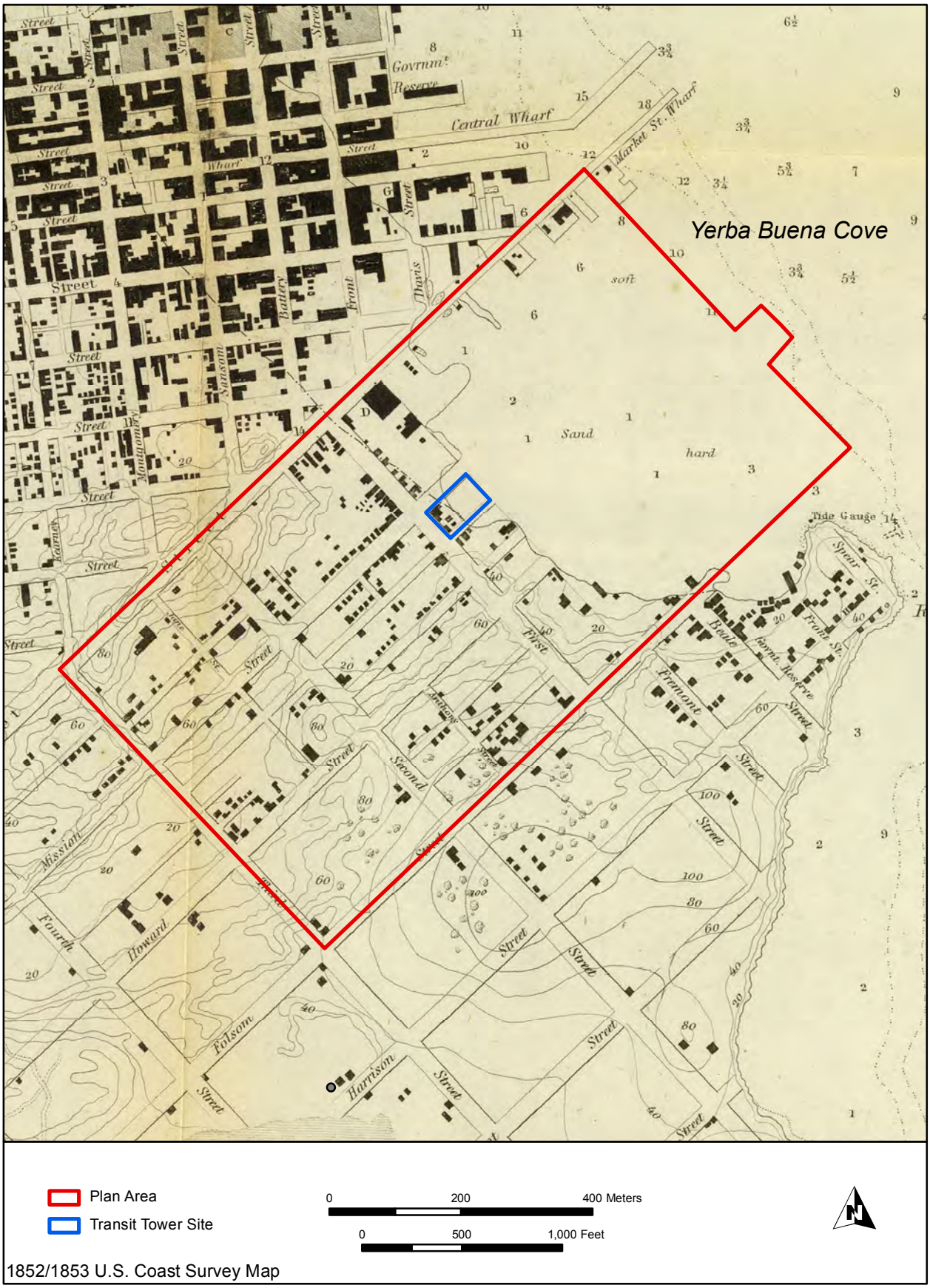
Yerba Buena during the Spanish, Mexican, and Early American Periods (1776-1848)

Spanish colonial policy throughout the late 1700s and early 1800s was directed toward establishing outposts in all lands held by Spain. Spanish explorations of San Francisco Bay began in 1769, and in 1776, the Juan Bautista de Anza expedition traveled into the area of modern San Francisco in the search for a suitable location for a Spanish settlement. Similar to other Spanish settlements in Alta California, colonial San Francisco (known as Yerba Buena) was organized around three frontier institutions: the fortified military garrison or presidio; the mission, the religious component founded by Franciscan padres; and the pueblo, the civilian village. Established in late June 1776, the San Francisco Presidio was situated along the northern edge of the peninsula. Mission San Francisco de Assisi at Dolores (generally referred to as Mission Dolores) was located west of Mission Bay with the pueblo, or town, established on lands surrounding the mission.

With the founding of the missions, Old World plant and animal domesticates were introduced to California. Spanish occupation of Alta California was the driving force behind tribal disintegration, with native people enlisted as laborers at the missions, where padres controlled their daily lifestyles, work, diet, and religious expression. The Ohlone suffered numerous hardships during the Spanish colonization, death rates greatly increased, and a quarter of the population died in the 1806 measles epidemic.

For 60 years after their founding, the areas immediately around Mission Dolores and the Presidio remained San Francisco's principal areas of settlement. The Spanish Period in this area lasted until 1821, when the Mexican government gained control over Alta California. During the 1820s, the mission system declined as Indians abandoned the missions, and land formerly held by Spain was divided into vast ranchos owned by individuals. Secularization grew with the creation of these land grants, the rise of a ranching class, and the growth of pueblo populations.

From 1776 to 1835, there was no permanent settlement at Yerba Buena Cove. The primary activity was maritime, with one to two ship landings each year during the Spanish period, which then increased to



Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

SOURCE: Far Western Anthropological Research Group
(detail from 1853 US Coast Survey)

Figure 53
Historic Shoreline

twelve or more each year in the Mexican period as it became the region's principal anchorage. Harbor activities accelerated during the 1830s following the establishment of Yerba Buena village, and peaked during the frenzied Gold Rush years of 1848-1849, when the small cove was packed with hundreds of vessels. Other nearby activities included cattle grazing, and recreational hunting and picnicking. By 1826 there were footpaths and trails around the perimeter of Yerba Buena Cove, and a horse path, forerunner of today's Mission Street, ran from to the Mission.

The first permanent historic-era settlement of Yerba Buena Cove occurred in 1835, when Captain William Richardson established a hide and tallow trade there. For the next decade all settlers located their residences and businesses on the north side, above the Market Street alignment. Initially tents were common, followed by frame houses. Construction of these early structures preceded the first survey and plat of Yerba Buena, and the Mexican *alcalde* (mayor) conveyed title to the lots in a random and haphazard manner. In 1839, Jean-Jacques Vioget, a Swiss immigrant, prepared the first survey, incorporating the existing grants, in a twelve-block grid north and outside of the Plan area. Permanent settlement of the Plan area did not occur until the 1840s, coinciding with the first mass immigrations of the Gold Rush. The area that would become South of Market was characterized historically by rolling and often very steep sand hills and dunes. The shoreline originally hugged the line of First Street south of Market, and consisted of sandy beaches that gave way to shallow tidal mudflats that ringed the cove.

The region came under American control in 1847, and Yerba Buena was officially renamed San Francisco. A second plat of Yerba Buena was then undertaken by Jasper O'Farrell to extend the grid into the hills surrounding a small flat of land covered by the original survey. Market Street became the principal artery; it paralleled the southwest-to-northeast orientation of the old route to Mission Dolores. North of Market, streets ran in the cardinal directions, but south of Market they ran northeast, northwest, southeast, and southwest.[130] The lots on the south side of Market were 100 by 100 *varas*, four times as large as those on the north (50 by 50 varas), with the exception of 444 much smaller beach and water lots platted in and along the margin of the cove. Nearly half of the new lots sold when the city put them up for auction in August 1847, including many of the beach and water lots, while the rest were sold during the Gold Rush days of 1848-1850 for much higher prices

The Early Days of the Gold Rush (1848-1850)

Until the advent of the Gold Rush, settlement around Yerba Buena Cove was almost entirely restricted to the area north of Market, which was already becoming San Francisco's commercial district. The southern half of the cove remained virtually unused. The Plan area received its first permanent settlers during the massive migrations of 1848-1849. These South of Market pioneers established a tent city in areas known as "Happy Valley" and "Pleasant Valley." Although the exact locations of the tent cities are uncertain, the two valleys stretched from the shoreline of the cove west to about Second or Third street, with Happy Valley located north of Mission Street and Pleasant Valley located south of Mission to Folsom Street. By

[130] Consistent with San Francisco convention, Market Street and streets parallel to it are considered to run east-west, while First Street and streets parallel to it are considered to run north-south.

1849, as many as two thousand tents had been erected in this area, and houses of a more permanent character were minimally constructed.

Despite the influx of settlers, the small city retained a rough and primitive character. In the summer of 1849, the city lacked grading, planking, or paving. The beach front was either mud or sand. Only shallow water small wharves existed, and the only deep water landing took place at Clark's Point, near the intersection of Broadway and Battery streets, because deeper water came close to this rocky shore.

The Emergence of South of Market (1850-1860)

In 1850 infrastructural improvements began along the streets and shoreline surrounding Yerba Buena Cove that would "pave the way" for more intensive future land use. A system of uniform street grades was adopted by the City to facilitate adequate drainage, and over the next three years street leveling proceeded in a somewhat orderly fashion, particularly to the north of Market Street. At this time, most of the principal streets were wood-planked.

Although street building was slower south of Market in the early 1850s, a few major construction projects were completed that played a major role in the development of the neighborhood. Chief among these was the Mission Dolores Plank Road, a roughly three-mile long wooden toll road connecting the Mission with California Street, via Kearny, Third, and Mission streets. A second, parallel plank toll road was constructed along Folsom Street in 1852. These "plank highways" were crucial to the development of South of Market because they facilitated movement within the neighborhood and provided longer-distance travel between the harbor and the rest of the city. An omnibus stagecoach service that ran along Third Street, established not long after Mission Dolores Road was completed, further added to the mobility of the South of Market population and encouraged "suburban" settlement on the periphery of downtown San Francisco north of Market.

Development of local streets within the South of Market grid was much slower in the early 1850s than in the commercial district north of Market, yet the changes still occurred at a remarkable pace. This was in large part because most improvements were privately planned and financed by interested parties, usually property holders who petitioned the Council for approval.

Some of the few streets within the Plan area that were graded and planked in the 1850s were First Street between Mission and Market, and portions of Second Street. Even Market Street, principal thoroughfare that it was, was not passable between Second and Third streets well into the 1850s, because it was blocked by an eighty-foot sand dune. As street construction progressed, private contractors also built several miles of redwood and brick sewers and cisterns along most major alignments beginning in about 1858 and continuing throughout the 1860s.

Another form of street improvement was construction of wharves into the Bay. In addition to providing docking facilities, wharves also served as extensions of the street grid, thus expanding the city out onto the Bay. By 1850 nearly a dozen wharves had been built on pilings extending into Yerba Buena Cove.

Market Street Wharf, the foot of which was located at First Street, was the southernmost of these early wharves; by the summer of 1850 it had already been extended 600 feet into the Bay.

Also during the summer of 1850, several water lot owners began to build houses or businesses on piles over the water. Pilings also demarked water lot lines and helped establish property rights. This provided an expedient means of putting the water lots to productive use, but the solution these structural features rapidly deteriorated in the Bay waters. Access streets to the water lots were also erected on pilings. These streets were notoriously dangerous—there are many tales of people and horses falling through the planks into the harbor

Water lots then began to be filled in. South of Market Street the original shoreline of Yerba Buena Cove more or less followed the alignment of First Street, curving to cross Fremont Street between Howard and Folsom. The Bay here was relatively shallow and had a sandy bottom. Beginning in about 1850 and continuing unabated for more than a decade, Yerba Buena Cove was filled with earth and debris, eastward to today's waterfront at the Embarcadero (Front Street).

The filling of Yerba Buena Cove was continuous, and often on a *ad hoc* basis by individual water lot owners. As well, it was related to grading activities that aimed to remove the area's sand dunes that blocked thoroughfares and encumbered development of individual lots, but also provided a seemingly endless supply of fill material. At first horse carts transported most of the material to fill sites, but beginning in 1851 a powered shovel known as the "steam paddy" speeded up the process since it could move up to 2,500 tons in a day.

By late 1853, fill activities were still concentrated north of Market Street. South of Market the original shoreline was still mostly intact, and many portions of the Plan area remained partially submerged. The only filled area at this time was the block bounded by Market, First, Mission, and Fremont, and the north half of the block on the south side of Market between Fremont and Beale. Grading and filling activities accelerated after 1853, following the adoption of the city's second system of street grades. The city was forced to reset the grades because filling of Yerba Buena Cove had pushed the waterfront more than 1,000 feet east, thus making it necessary to raise the levels of city streets in order to facilitate adequate drainage. These new grades set the base (zero) elevation at 6.7 feet above the ordinary high water mark on a wooden pile at the boat stairs at Pacific and Davis streets - the city grade is still computed from this point.

The recalculation of the grades required street levels to be raised and lowered, and as a consequence, the levels of individual lots—even those with buildings already on them—had to be adjusted accordingly, often at great expense. Many buildings throughout the city were raised through addition of new basement levels, even large brick buildings in the commercial districts. The amount of earth moved—most of which ended up in the harbor as fill—was also substantial: one source estimates that establishment of the new grade ultimately resulted in the removal of 21 million cubic yards of land, most of which went into the cover. While sand made up the bulk of the fill material tossed into the Bay, any available solid material would suffice including trash, building rubble, and even hulks of abandoned Gold Rush-era ships.

At the peak of the Gold Rush, Yerba Buena Cove teemed with vessels, many of which were abandoned by their crews, eager to set out to the gold fields. In the summer of 1850, there were some 500 vessels (ships, barks, brigs, and schooners) in the port. Most eventually returned to sea, but scores of abandoned vessels remained anchored in the cove well into the 1850s. Most of these were broken up and salvaged by a ship-breaking enterprise based at Rincon Point, but the best preserved and intact were reused as floating storehouses and occasionally hotels or boarding houses. As many as forty or more vessels may still exist encased within the filled lands of old Yerba Buena Cove, extending from Montgomery Street south to Rincon Point, including perhaps half a dozen in the Plan area.

By 1857, the filling of Yerba Buena Cove south of Market Street had pushed east to the Beale Street alignment, with the exception of a small lagoon at Mission and Fremont streets and a larger one at the foot of Howard Street. Fingers of fill extended even beyond Beale Street as far east as Main along Market, Mission, and Folsom streets. In 1857, much of the cove still remained unfilled, but it was entirely enclosed: Steuart Street, with its many wharves extending into the open waters of the Bay, completely bridged the cove from Market Street south to Folsom. Much of the Plan area was completely filled by that time.

Happy Valley/Pleasant Valley During the 1850s

Major infrastructural developments in the Plan area began in 1850, coinciding with the start of Happy Valley's transformation from a glorified tent city to a permanent, mixed-use neighborhood. Other residential pockets began to develop throughout the Plan area during the early 1850s, and prominent inhabitants included New Englanders and, boarding in a two-story house, army officers. Interspersed among and surrounding the residential pockets in the early to mid-1850s were several civic, public, and religious institutions. These included Happy Valley's first free school, the City's first orphan asylum, and St. Patrick's Church, on Market Street between Second and Third Streets (the current location of the Palace Hotel).

The industrial character of South of Market and the Plan area also emerged as the area became dotted with a multitude of foundries, lumber and flour mills, shipyards, and warehouses, particularly near the beach along First Street between Mission and Folsom. The rapid rise of industry in South of Market is not surprising, given several factors: that the older portion of San Francisco, on the north side of Market Street, was already established as the city's commercial and financial district; that Happy Valley lay adjacent to the California's principal harbor, served at the time by Market Street Wharf; and that the burgeoning city, the principal supply and transshipment center for the goldfields in California's interior, was in desperate need of production and storage facilities for durable and consumable goods.

The first and principal industry of South of Market was iron foundering. The mining boom created a lucrative opportunity for individuals who could establish the heavy manufacturing necessary to supply the mines, railroads, and shipbuilders. From its inception in the 1850s throughout the half century that followed, the foundry industry was centered in the South of Market district, near the waterfront in an area roughly bounded by First, Mission, Main, and Folsom streets. Being situated near the waterfront enabled the foundries to receive shipments of bulky equipment without having to then transport it far

across land. Prominent early foundries included Union Iron Works, Brooklyn Iron Foundry, Pacific Foundry, and the Vulcan Foundry.

Soon, other industries were founded along the shoreline, most in close proximity to the metal foundries. These included flour and timber mills, the latter—along with the iron foundries—providing the much needed raw materials for Happy Valley's flourishing shipbuilding and repairing industry. As early as 1850, San Francisco's shipyards produced dozens of steamers and were soon manufacturing schooners, scows, and other sailing vessels.

The San Francisco Gas Company plant was established in 1854 on the block bounded by First, Natoma, Howard, and Fremont streets. The company provided the earliest large-scale gas-powered lighting to the city, and used coal to produce the gas, the by-product of which was coal tar. The waste was dumped in a depression in the vicinity of Beale, Mission, Howard, and Spear streets. The area soon became known as "Tar Flat"; the nickname stuck and gradually replaced "Happy Valley" as the popular name of the industrial portion of the South of Market district. In addition to the tar slurries near the gas works, there was a fairly substantial "waste depot" at the corner of Market and First streets where anyone and everyone would dump their trash; some of this trash may have eventually made its way to the Bay as fill material.

South of Market Matures (1860s-1906)

The permanent, mixed-use character of South of Market and the Plan area had begun to assert itself during the early 1850s. At this time, the land-use patterns were somewhat segregated—light and heavy industry was concentrated near the harbor; retail establishments, churches, and schools were aligned more or less with Market Street—but residences were still scattered throughout the neighborhood. By 1860, land use on a block-by-block basis became increasingly more segregated, with foundries dominating the southeast corner of the Plan area; factories, mills, and warehouses in the northeast corner; retail and wholesale businesses in the northwest corner; and residential neighborhoods in the southwest corner. This trend intensified in the 1860s and persisted until the earthquake and conflagration of 1906.

The city built and extended sewer lines in step with land filling activities and street improvement. Redwood sewers were located beneath Howard, Mission, and Market streets east of Fremont by 1865, while the brick sewers covered a large portion of the grid west of Fremont. All major streets in the Plan area between Third and Fremont had brick sewers before 1876, as did Stevenson, Jessie, and Minna streets. The Tehama Street and Natoma Street sewers were brick between First and Second streets, but wooden west of Second Street by the mid 1870s as well.

South of Market in the late 1850s and the early 1860s witnessed the concurrent rise in heavy industry and the exodus of many of its wealthiest residents. These residents, many of whom established successful businesses on the periphery of Yerba Buena Cove, gradually moved out of the flats and into surrounding neighborhoods. The exodus was driven in part by the transportation improvements which facilitated easier access to the hills surrounding the cove; at the same time, many members of the wealthy class were fleeing the industrial environment that they created. By 1860, the residential population of the Plan area had taken on a decidedly working-class character.

By the end of the 1870s the population of the Plan area was predominantly of Irish and German stock, and these two ethnic groups remained in the majority until the 1906 earthquake. It appears that the Irish were overwhelmingly Catholic and members of the Democratic Party, while the Germans were nearly all Protestants and Republicans. Both groups included a large force of skilled and unskilled laborers, most of whom worked in the various South of Market industries.

Land-use patterns were clearly segregated and firmly established by the 1880s, with First Street—the original shoreline—marking the dividing line between industrial on the east and commercial and residential on the west. On the industrial side and concentrated south of Mission and west of Main were iron, copper, and other metallurgical foundries. Surrounding the foundries were factories and light manufacturers, warehouses, the gas works, and lumber mills, the latter being located primarily between Main Street and the Embarcadero (Front Street). In general, west of First Street, on the south side of Mission to Folsom Street, was the residential sector. The blocks north of Mission and fronting on Market Street formed a commercial district comprised primarily of hotels, retail shops, and wholesalers.

South of Market in the Post-Earthquake Era

The 1906 earthquake and fire devastated many areas of the city, but perhaps none more profoundly than the industrial South of Market. The severe damage sustained to its unreinforced brick buildings, as well as timber frame buildings, during the earthquake was substantial, and neither the weakened structures nor the surviving buildings could withstand the fires that followed. The fires that swept through the South of Market and other neighborhoods were the result of damaged gas lines, untended boilers or stoves, and well-intentioned but poorly executed efforts at fire suppression by the U.S. Army. An estimated 28,800 buildings were destroyed in the conflagration, covering an area measuring almost five square miles.

The efforts that San Franciscans made to rebuild during the months and years immediately following the disaster were widely praised and their accomplishments were admired. An estimated $300 million had been spent rebuilding the city by the end of 1913; thereafter construction returned to a more normal pace. San Francisco merchants did not hesitate to reestablish shipping and commerce, opening temporary offices within days of the disaster. These new buildings throughout the burned district were designed with fire protection in mind.

The nearly total devastation followed by rapid reconstruction gives the building stock in the South of Market area distinct characteristics, one of which is the age of the resources. There are almost no buildings that pre-date 1906, while a large number of buildings date to the immediate post-earthquake era. The new construction also included far fewer timber structures. Most of the new buildings were reinforced concrete warehouses and factories, although brick was still used for many buildings; and steel-frame structures sided in corrugated metal were also relatively common. Although the construction itself had changed, the area along the northern half of Second Street continued to be known as a wholesale center that shared space with other small industrial business like printing, binding, or garment factories through the 1930s.

One of the most striking changes to the Plan area in the aftermath of the 1906 disaster was the nearly complete disappearance of family housing. On the eve of the earthquake, the quadrant bounded by Folsom, Mission, First, and Third streets was comprised predominantly of densely packed wood-frame residences. The fires completely obliterated these neighborhoods, permanently driving out most of the families that lived there. The population in South of Market dropped from 62,000 in 1900 to 24,500 in 1910; of those that remained, nearly 80 percent were male, and almost all lived in residential hotels, boarding houses, or flats above places of business.

Another key date in the general development of the South of Market area was 1939, the year of completion of the rail lines associated with the San Francisco-Oakland Bay Bridge. The bridge not only revolutionized transportation in the San Francisco Bay Area but it had a major effect on San Francisco. Within the Plan area, these effects included construction of infrastructure, long-term impacts on freight traffic, and separation of certain portions of the industrial area from other parts of the city.

The new infrastructure that was introduced into the Plan area in the mid-1930s produced a large number of historical resources in the South of Market area. The bridge was anchored in Rincon Hill and its major viaduct built from Rincon Hill to a touchdown point at Fifth Street. The bridge originally carried a trolley line on its lower level from Oakland to the Transbay Terminal Building on Mission Street. This electrified rail line was supported in San Francisco on a series of elevated structures arranged in a large "loop" that brought Key System and other trolley cars from the bridge without intermixing with city street traffic. The rail system has since been removed and both the terminal and ramps converted the late 1950s and early 1960s for use by uninterrupted bus connections that continue to serve the eastern side of the Bay.

The bridge-related historic-era resources that exist within the Plan area included, until recently, the Transbay Terminal and the bus ramps described above. The Transbay Terminal, which opened for service in January 1939, occupied parts of three city blocks and straddled two streets (First and Fremont) just south of Mission Street, until it was demolished beginning in 2010. (Portions of the east half of the looping bus ramp had been demolished earlier.)

The vehicle access provided by the Bay Bridge reoriented the distribution system for goods in the Bay Area, diminishing the importance of San Francisco's port and railroad connections and ultimately spelling the end of this area as the prime warehousing and industrial district for the region. San Francisco industry had been on the decline since the disaster of 1906, being out competed during the 1910s and 1920s by the major manufacturing center that rapidly developed in the East Bay. Businesses such as electrical and industrial supply houses, grocery wholesalers, and clothing manufacturers still operated successfully in the South of Market area, but fewer and fewer companies saw the need to maintain or open branches in San Francisco.

As it had been with other historical trends, this evolution was reflected in the types of buildings of the South of Market area, where larger commercial buildings and offices crowded around the northern boundary at Market Street, and wholesale operations and loft industries were arranged along Second Street. The

economic slowdown of the 1930s, followed by the limitations on civilian construction during the war, resulted in very little new construction in the South of Market area during this.

After World War II, South of Market foundered and many of the buildings suffered from vacancies and neglect. Despite opposition from locals, modern development in the area was eventually approved; multi-story office buildings were completed in the 1980s and began to change its architectural atmosphere. Among the most ambitious recent projects to be completed near (but not within) the Plan area are the arts and cultural facilities at Yerba Buena Center and the new San Francisco Museum of Modern Art Building in the blocks south of Mission between Fourth and Third streets. These new developments bring modern architecture which contrasts sharply with the otherwise reserved warehouses and lofts of South of Market.

Documented Archeological Resources

Archeological records searches were undertaken in August 2008 at the Northwest Information Center at Sonoma State University (NWIC File No. 08-0047) and at the Environmental Planning division in the San Francisco Planning Department to identify prior archeological studies and resources for the Transit Center District Plan area. The records search also included a 1/2-mile radius around the Plan area.

A total of 45 substantive archeological studies reports have been conducted within or abutting the Plan area. Some of the most significant projects that entailed either detailed archival research or produced substantive results are as follows: the Yerba Buena Center project, the SF-480 terminal separation rebuild project; the San Francisco-Oakland Bay Bridge West Approach replacement project; and excavations at prehistoric shell midden sites SFR-112 and SFR-135.

The Information Center listed another 199 reports that had been conducted in the ½-mile buffer zone around the Plan area. Overall these 244 projects include archeological surveys, treatment plans, and archival research prior to new building construction; archeological testing reports for building demolition and construction; monitoring; or data recovery. Recently, there have also been a number of small-scale studies, typically for cell towers, that include consideration of potential cultural resources.

Seven formally recorded cultural resources have been identified by the Information Center within the Plan area, including four historic-era sites, two prehistoric sites, and one site with prehistoric and historic-era components. The four historic-era sites include three with Gold Rush-period debris and structural remains (SFR-27H, -119H, and -166H), and one with later 19th-century ground surfaces, building foundations, and hollow-filled features (SFR-150H). The two prehistoric sites are both shell middens (SFR-112 and -135). The multi-component site (SFR-151H) has late 19th-century ground surfaces, building foundations, and hollow-filled features, and a prehistoric shell midden buried in a sand dune (the latter components was documented during the ARDTP coring). None of these sites are listed or have been formally determined eligible for listing on the National Register of Historic Places or the California Register of Historical Resources.

Another 29 formally recorded cultural resources have been identified by the Information Center as situated within the 0.8 km buffer zone around the Plan area. Six are prehistoric resources, of which five are shell middens (SFR-2, -113, -114, -147, and -155). The other prehistoric resource (P-38-004499) was designated based on a 1920s newspaper article that reported human remains and prehistoric artifacts during road work. The full extent of several of these prehistoric sites is uncertain, since only the portions within the relevant construction areas were studied and additional portions extend beyond those limits.

The 23 historic-era sites adjacent to the Plan area vary widely in size and character. Their boundaries are most often reported as either city blocks or the entire the area under construction, rather than defined by the extent of actual deposits within these areas. They include one possible 1840s Mexican customs house (P-38-004401) reported in a newspaper article; 11 sites with Gold Rush-period deposits (SFR-33H, -81H, -116H, -117H, -118H, -122H, -123H, -127H, -166H, and P-38-004262); and 12 sites with late 19th century or early 20th century remains (SFR-115H, -120H, -128H, -130H, -137H, -138H, -152H, -153H, -161H, -165H, P-38-004294, and P-38-004357). Site SFR-154/H includes both a prehistoric shell midden and 1860s-1880s historic-era remains. Building foundations and floors, earlier ground surfaces, trash pits, and privies are common, and several sites include remnants of ships (SFR-33H, -81H, and -127H). None are listed or have been formally determined eligible for listing on the National Register or the California Register; SFR-81H, however, is a California Point of Historical Interest.

All 36 archeological resources within and adjacent to the Plan area were encountered below the current urban land surface. They were typically documented during formal archeological excavations, and many of the prehistoric sites were also buried under natural dune sand. It should be noted that additional historic-era remains were encountered during a variety of projects within and adjacent to the Plan area, but were considered not substantial enough to be formally recorded. The nature and extent of these remains can be determined only through individual reviews of the archeological reports.

Recently, five small prehistoric midden deposits were discovered along Fourth Street between Folsom Street and Howard Street in the records search area. Although the technical report on these sites is not yet available, these deposits have been determined eligible for the National Register individually under Criterion D and as part of a larger district under Criterion A.[131] The proposed District also includes previously documented prehistoric sites SFR-2, -113, -114, -147, -155, -154/H, all of which lie in the records search area west of the District Plan area.

The Native American Heritage Commission also conducted a search of their Sacred Lands files to determine if there were known traditional cultural properties or areas of Native American concern within or near the Plan area. The Commission stated that no Native American cultural resources were reported from the sacred lands file records search. The Commission also provided a list of six interested Native American groups and individuals. All six contacts were sent letters requesting their input on the proposed project. Mr. Andrew Galvan responded requesting that a Native American monitor be present during excavations, given the

131 Anthropological Studies Center, *Site Specific Archaeological Research Design, Evaluation, and Data Recovery and Treatment Plan for Prehistoric Midden Deposits at Fourth and Howard Streets, San Francisco. Report Revision 0*, September 29, 2010. (Prepared for the Central Subway Project).

considerable number of prehistoric sites that have been previously documented in the area. Ms. Anne-Marie Sayers also responded requesting a Native American monitor be present during any testing or data recovery excavations at prehistoric sites. No other responses have been received.[132]

The potential for additional archeological resources to be present within the Plan area is discussed in the Impacts analysis, below.

Historic Architectural Context of the Plan Area

A "historical resource" is defined, under CEQA Section 21084.1, as one that is listed in, or determined eligible for listing in, the California Register of Historical Resources. In addition, a resource that (i) is identified as significant in a local register of historical resources, such as Article 10 and Article 11 of the *San Francisco Planning Code*, or (ii) is deemed significant due to its identification in an historical resources survey meeting the requirements of *California Public Resources Code* Section 5024.1(g), is presumed to be historically significant "unless the preponderance of the evidence demonstrates that the resource is not historically or culturally significant." Finally, CEQA Section 21084.1 permits a lead agency to determine that a resource constitutes a historical resource even if the resource does not meet the foregoing criteria. Section 5024.1(g) sets forth guidelines for historical resource surveys, including, among other things, listing the results in the State Historic Resources Inventory and preparation of the survey according to State Office of Historic Preservation procedures. In general, project-specific historical resource surveys performed as part of CEQA review in San Francisco will meet these guidelines and, therefore, resources identified as having California Historical Resource status codes of 1 through 5 on such surveys will normally be determined to be historical resources for CEQA purposes.

Historic Context

The following historic context for the Transit Center District Plan area has been summarized primarily from the *Historic Context Statement* developed for historic architectural resources (see footnote 127).

The discovery of Gold at Sutter's Mill, in Coloma, in January 1848 unleashed a population explosion in San Francisco. By the end of 1848, thousands of gold-seekers from all over the world—dubbed "Forty-niners"—had come to San Francisco. Between 1848 and 1852, the population of San Francisco grew from less than one thousand inhabitants to almost 35,000.

During the Gold Rush, American settlers began to move away from the waterfront real estate of Yerba Buena Cove to south of Market Street, which was protected by sand dunes from harsh onshore winds, and enjoyed some of the best weather in San Francisco. Especially attractive was access to well water which became available among the sand dunes bounded by Market, Howard, First, and Second Streets, called "Happy Valley" by the Forty-niners who erected tents and temporary wood houses in the area.

[132] Correspondence with the Native American Heritage Commission and Native American groups is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0558E. Both responses noted in the text were by telephone, and accordingly no further written record is available.

The character of what is now the Plan area evolved rapidly, and by 1850, residents had begun erecting more permanent stores and houses around First and Mission streets. However, the transformation of the South of Market area from a temporary gold miner's encampment to a permanent neighborhood required substantial work to remove the sand dunes that divided Happy Valley from Market Street. Prior to the adoption of the "steam paddy" in 1852, heavy manual labor was required to move the sand. The steam paddy (named for the primarily Irish laborers it displaced) sped up the process, with the last major dunes cleared from Happy Valley in 1858, although sand removal elsewhere South of Market Area continued into the 1870s.

With the removal of sand hills came grading of new streets in the Plan area. In 1853, the first surfaced road in the Plan area was constructed of wooden planks atop the dunes in the alignment of present-day Mission Street, and became known as the Mission Street Plank Road. By this time the Plan area was becoming San Francisco's industrial district, with early foundries such as Union Iron Works, Vulcan Iron Works, Sutter Iron Works, the Alta Foundry, and Pacific Iron Works established along First Street, facing Yerba Buena Cove. By 1875, there were 42 iron foundries in the Plan area, supplying the West Coast with mining equipment, heavy machinery, and other industrial equipment.

In addition to industrial development, the Plan area was also had a growing residential district centered on Second and Folsom Streets in the mid to late-1800s. Lots continued to be subdivided, and submerged lots at the edge of Yerba Buena Cove were filled. The Second Street Cut in 1869 lowered the grade of Second Street, demolishing many fine residences which had previously occupied Rincon Hill, located just south of the Plan area. (The wealthy had begun moving to Nob Hill, made accessible by the cable car.)

During the last quarter of the 19th century, the South of Market area including portions of the Plan area evolved into a prosperous southerly extension of the downtown commercial district. During the 1870s, speculators watched as San Francisco's downtown commercial and financial district moved south from Jackson Square, along Montgomery, Sansome, and Kearny streets. Jasper O'Farrell's 1847 survey made expansion south of Market Street very difficult because the north-south streets on either side of Market Street did not align. In the early 1870s, businessman Asbury Harpending and banker William Ralston began buying properties on the south side of Market Street and made plans to extend Montgomery Street south of Market. They envisioned the extension, which they called New Montgomery Street, as a fine new office, banking, retail, and hospitality district. Ralston envisioned the street eventually extending all the way south to his properties at Hunters Point. The two men bought up all the land on either side of the proposed street as far south as Howard Street and began demolishing buildings to construct a new street.

New Montgomery Street was developed largely along the lines envisioned by Harpending and Ralston, although they were unable to convince property owners south of Howard Street to sell, resulting in the two-block long extent of New Montgomery Street. Prominent structures soon arose on the sites of former frame houses and industrial buildings, including the Palace Hotel, which opened for business in 1875 on the corner of Market and New Montgomery streets. Designed by New York architect John P. Gaynor, the Palace was the largest and best-appointed hotel in the United States. The Grand Hotel, also designed by Gaynor, opened nearby. The block of New Montgomery Street between Mission and Howard streets

acquired three elegant brick commercial buildings that conformed to a unified design scheme of classically detailed facades and mansard roofs, and other important buildings—all destroyed in the 1906 earthquake and fire—also were built. The development increased real estate prices in adjoining areas along Mission, Howard, First, and Second streets, leading to the gradual replacement of lower-value industrial and residential structures with more substantial commercial, entertainment, and civic structures. One of the most impressive of these projects was the Grand Opera House which opened at Third and Mission in 1876. The luxury hotels and Opera House, in turn, attracted milliners, jewelers, and other businesses that catered to the "carriage trade." By the late, 1870s, Mission Street between Second and Third streets had a number of large wholesale furniture, carpet, and bedding businesses.

By 1900, the Plan area was entirely built out and urban in every respect. The 1899 Sanborn Map shows a general pattern of development included of a large concentration of substantial masonry commercial buildings along Market Street between First and Third streets and along New Montgomery and the numbered cross streets as far south as Howard Street. The commercial buildings attracted several large wholesale furniture, carpet, and bedding businesses, and were interspersed among wood-frame tenements and hotels as one moved further away from Market Street. Meanwhile, industrial plants and warehouses dominated the area east of First Street as far as Steuart Street.

Post-1906 Earthquake and Fire Reconstruction

On April 18, 1906, San Francisco was devastated by a magnitude 7.9 earthquake. The South of Market area was especially hard hit by the temblor, which liquefied the extensive filled ground, and the dozens of fires that broke out as a result of ruptured gas mains. The fires quickly grew out of control, fed by the densely packed frame buildings. The Earthquake and Fire destroyed virtually every building and structure in the Plan area, although the shells of several buildings remained standing. Only one building appears to have emerged from the earthquake fully intact—the two-story brick Burdette Building (still extant) at the northwest corner of Second and Mission Streets.

Reconstruction of downtown San Francisco, including the Plan area, began with an initial flurry of building activity occurring between 1906 and 1913, with more construction occurring after the First World War between 1918 and 1920, and culminating with a major real estate boom in the mid-1920s. The industrial area east of First Street was rebuilt in one and two-story heavy timber framed industrial buildings, most of which were clad in corrugated iron or masonry to reduce fire risk. West of First Street along Mission and Howard and the intersecting numbered streets were many substantial new and reconstructed steel and heavy timber-frame loft buildings housing light manufacturing, paper companies, printers and binderies, and wholesale warehouses. Some were pre-quake survivors such as the Wells Fargo Building at 71-85 Second Street, which was restored in 1907 (extant).

By 1908, the Aronson Building, which still stands at 700 Mission Street, was outfitted with a new interior and in 1910, the Rialto Building was recommissioned (extant). Others were newly constructed. Perhaps the first masonry loft building completed after the disaster was the Greenwood Estate Building at 545 Mission Street. Planned in May 1906, this five-story brick building, constructed to house a paper company, still stands, and is the last of its type on the 500 block of Mission Street.

The most valuable real estate in the Plan area remained along Market and New Montgomery Streets. Much of the land in this area remained in the hands of wealthy investors, family estates, and realty companies such as the Sharon Estate Company. Formed in 1885 by Francis G. Newlands after the death of Nevada Senator William Sharon (former business partner of banker William Ralston), the Sharon Estate rebuilt the Palace Hotel in 1909 and the Sharon Building in 1912 (both still standing), along with many of the more important buildings that remain on New Montgomery Street.

The transformation of much of the Plan area and vicinity into a southerly extension of downtown was reflected in the large number of skyscrapers built along Mission and Market streets. Market Street acquired several new and repaired pre-1906 skyscrapers between 1906 and 1910. Extant examples include the Metropolitan Trust and Savings Bank, built in 1907 at 625 Market Street; the Hearst Building, built in 1909 at 691 Market Street; and the Spreckels Building, rebuilt in 1907 at 703 Market Street; all three structures remain today. The intersection of Third and Mission Streets, just west of the Plan area, evolved into the most important intersection in the vicinity, bracketed on three corners by important early skyscrapers, including the rebuilt Aronson Building on the northwest corner (extant), the Williams Building on southeast corner (extant), and the Gunst Building (demolished) on the southwest corner.

The initial flurry of post-quake reconstruction was followed by a brief recession. By the First World War, construction had picked up again, with several new office buildings and hotels constructed in the Plan area. Examples include the new Call Building, built in 1914 at 74 New Montgomery Street (extant), and the Santa Fe Building, constructed in 1917 at 601 Market Street (extant). After subsiding for several more years, the market picked up again in the early 1920s. Two of the most important surviving high rise buildings were constructed during this period: the Matson Building at 215 Market Street (1921) and the PG&E Building, built in 1922 at 245 Market Street.[133]

The Plan area achieved build out by 1930. The building boom of the mid-to-late 1920s resulted in the construction of several buildings as infill projects on the few remaining vacant parcels. In some cases, older buildings were demolished and replaced with new larger buildings, in particular close to Market Street. The Great Depression slowed new construction to a halt, limiting work to façade remodels. Important buildings erected during this period include the Pacific Telephone & Telegraph Building at 134-40 New Montgomery, (1925), the Philips & Van Orden Building at 234 First Street (1929), and the William Volker Building at 625 Howard Street (1929 and 1939).

Transbay Terminal

The only major new construction projects to occur in the Plan area during the Depression were public works projects associated with the completion of the San Francisco-Oakland Bay Bridge (Bay Bridge) in 1936. The most important of these was the Transbay Terminal. Designed jointly by Timothy Pflueger and Arthur Brown, Jr., the Transbay Terminal was built as the transit depot for East Bay rail commuters traveling to San Francisco on Key System streetcars. At its peak around the end of World War II, the terminal handled 26 million passengers annually. After the war ended and gas rationing was eliminated,

[133] These two buildings were combined in a renovation and seismic retrofit project completed by PG&E in 1995.

use of the terminal's declined along with Key System ridership. In 1958, the Key System was dismantled, and by 1959, the Transbay Terminal was converted into a regional bus station. The 1930s construction of the Transbay Terminal and viaducts for the Key Route and vehicular onramps had led to substantial physical changes in the Plan area, as dozens of buildings were demolished and some lot lines reconfigured portions of seven blocks.

Post-War Development

In the years following World War II, city authorities began to envision a different future for the South of Market area, including the Plan area. Since the achievement of build-out in the late 1920s, little new construction had occurred aside from the Transbay Terminal and its associated viaducts. After the war, the South of Market area, in particular the western portion of the Plan area, resumed its role as a refuge for the poor and working-class single men. The San Francisco Redevelopment Agency declared a large portion of the South of Market an urban renewal zone, and began to assemble parcels for what would ultimately become Moscone Center and Yerba Buena Gardens, located just west of the Plan area.

By the late 1950s, new office space began to be conceived and built in downtown San Francisco. The overwhelmingly favorite architectural mode was Corporate Modernism. This style derived from European Modernism of the first decades of the 20th century by way of the International Style. It generally featured flat planes of glass and steel paneling, and unadorned orthogonal forms. The Crown Zellerbach Building, an International Style building at 20 stories, was not out of keeping with the 1920s generation, but by 1971 the new PG&E Building at 77 Beale Street, within the Plan area, attained 34 stories, or 492 feet tall. Such towers required a larger footprint than had older, smaller structures, and the PG&E Building covered what had been six separate lots on Mission Street. As such, the former small-scale streetscape was enlarged, with a resulting reduction of visual diversity and diminished pedestrian sensibility. This building also was an early example of downtown high-rise office construction moving south of Market Street, occurring shortly after the first such development, the Bechtel Building at 50 Beale Street (1967).

The 1971 *General Plan* Urban Design Plan and later the 1985 Downtown Plan confirmed the South of Market area, including the Plan area, as one suitable for high-rise development, permitting buildings up to 550 feet in the Plan area, as City policy focused favored a southward expansion of Downtown, rather than permitting office towers to encroach upon Chinatown and North Beach. The design policies of the Downtown Plan, in particular, were strongly influenced by the contemporary Postmodernist architecture, which advocated a return to historic precedent in regard to design. Such policies led to a return of the 1920s-era 'Wedding Cake' silhouette, firm street walls rising in recessed tiers to slender towers. Within the Plan area, these Postmodern office building designs include: 33 New Montgomery Street (1986), 100 First Street (1988), 455 Market Street (1988), and 71 Stevenson Street (1986). The Downtown Plan established an annual limit of 950,000 square feet of new office space, and Proposition M, passed by the voters in 1986, reduced the amount of new construction allowable by half, temporarily, to 475,000 square feet, until all buildings approved since adoption of the Downtown Plan had either received building permits or their approvals expired.

Today the Plan area contains a broad mix of building styles spanning 20th century architecture, including masonry commercial buildings from the post-1906 reconstruction era, mid-rise skyscrapers from the 1910s through the 1930s, and Modern post-war high-rise office development, along with several remaining surface parking lots generally south and east of the now-demolished Transbay Terminal. In particular, the area that was contained within the loop ramps serving the terminal is notable for its relative lack of new construction and remaining small-scale structures, along with several parking lots.

Historical Resource Surveys in the Plan Area

A number of historical resources surveys have been conducted within the Transit Center District Plan area. Some of these surveys constitute local registers of historical resources, having been formally adopted by the Board of Supervisors and/or the Planning Commission. Buildings identified in these surveys as having historical significance are considerer historical resources under CEQA.[134] Other surveys have not been formally adopted by the City, and therefore are not considered local registers of historical resources. Buildings identified as historically significant in those surveys are considered potential historical resources, for which further consultation and review is required prior to a determination being made as to whether the building is historical resource.[135] Historical resources surveys applicable to the Plan area are described below.[136] For each survey, the criteria that surveyed buildings were required to meet to be included is also presented, and the number of designated and potential resources is given.

Junior League Survey (Here Today)

In 1968, the Junior League of San Francisco concluded a five-year-long survey of historic buildings in San Francisco, San Mateo and Marin counties. The most important buildings identified in the survey were included in the book *Here Today*, which contains information on approximately 2,500 properties within San Francisco.[137] The survey (as reflected in the text and index of *Here Today*) was adopted by the Board of Supervisors in 1970, and therefore buildings included in the book are identified as historical resources for CEQA purposes, by virtue of their listing on an adopted local register. The Junior League Index, which includes the full results of the survey, includes additional buildings of historical significance that were not included in *Here Today*; properties in the survey but not included in *Here Today* are considered potential historical resources for which more analysis is required before a formal determination can be made.[138]

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134 Included in the list of designated historical resources are those properties identified in *Planning Code* Article 10 (City Landmarks) and Article 11 (historical resources in the C-3 [Downtown] zoning districts, including portions of the South of Market area formerly zoned C-3, generally bounded by Mission, Howard, Sixth, and Tenth Streets, and subsequently designated as the South of Market Extended Preservation District).

135 San Francisco Preservation Bulletin 16, "CEQA Review Procedures for Historic Resources," http://www.sf-planning.org/Modules/ShowDocument.aspx?documentid=5340.

136 Much of the language describing the surveys is taken from Preservation Bulletin 11, "Historic Resource Surveys."

137 Junior League of San Francisco, *Here Today*. San Francisco: Chronicle Books, 1968.

138 Junior League Index, available on the internet at: http://sfpl.lib.ca.us/librarylocations/sfhistory/pdf/juniorleague.pdf

Here Today lists three buildings within the Plan area: the Sharon Building at 55 New Montgomery Street and the Call Building at 74 New Montgomery Street (page 281),[139] and the California Farmer Building at 83 Stevenson Street (page 296).[140] The Aronson (Mercantile) Building at 86 Third Street/700 Mission Street (page 298) is just outside the Plan area, at the northwest corner of Third and Mission Streets.[141]

Unreinforced Masonry Building (UMB) Survey

In November 1990, the Landmarks Preservation Advisory Board (Landmarks Board) completed *A Context Statement and Architectural/Historical Survey of Unreinforced Masonry Building (UMB) Construction in San Francisco from 1850 to 1940*. The survey examined more than 2,000 privately owned, unreinforced masonry buildings in San Francisco. The survey was evaluated by the California Office of Historic Preservation (OHP) and National Register of Historic Places determinations of eligibility were made by the OHP for many of the 2,000 buildings surveyed; those rated 1 – 5 are considered historical resources (as described below under "California Register of Historical Resources/National Register of Historic Places"). Because the UMB survey has not been adopted by the Planning Commission or Board of Supervisors, it is not a local register of historical resources. According to Preservation Bulletin 16, because of their age and the time period in which most were built, UMBs as a class have a high degree of historical and architectural interest; however, the determination of whether the property is a historical resource needs to be made from original source material and/or listings and surveys.

According to the UMB *Context Statement*, there were 343 unreinforced-masonry buildings in Area 1 (Downtown), and 194 in Area 3 (South of Market). Most of the Plan area falls within Area 1 with a smaller portion falling within Area 3, including the portion of the Plan area south of Howard Street. A count of listed UMBs in areas 1 and 3 yields 100 UMBs in the Plan area. Since 1990, approximately one third of these properties have been demolished.

1976 Citywide Architectural Quality Survey

Between 1974 and 1976, the San Francisco Planning Department conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, which became an unpublished 60-volume inventory (on file at the Planning Department). Both contemporary and older buildings were surveyed, but historical associations were not considered. The inventory assessed architectural significance, which included design features, the urban design context and overall environmental significance. Each building was assigned a rating, from a low of "-2" to a high of "5," generally correlated with architectural quality (from "detrimental" to "extraordinary"). When completed, the 1976 Architectural Survey was believed to represent the top 10 percent of the city's architecturally significant buildings. Buildings rated 3 or higher represent approximately the top 2 percent of all of

139 The Call Building has been converted to residential use and is now known as "The Montgomery."
140 The California Farmer Building was rehabilitated and incorporated as indoor public open space into the 55 Second Street project, completed in 2002.
141 The Aronson Building is proposed to be incorporated into a mixed-use project at 706 Mission Street that would include residential and retail use and space for the Mexican Museum.

San Francisco's buildings in terms of architectural importance, while ratings of 0 or 1 are generally interpreted to mean that the property has some contextual importance. Because the 1976 Survey has not been adopted by City action, it is not a local register of historical resources. However, a building's inclusion in the 1976 survey indicates that the building may be a resource and more information is needed.

There are some 40 individual properties within the Plan area that have 1976 Survey ratings. This list is based on an inventory of original survey forms checked against the Planning Department's current historic resources inventory and accounts for demolished buildings and merged lots. Since the 1976 Survey was completed, 13 survey-rated properties in the Plan area have been demolished.

San Francisco Architectural Heritage Surveys

For the past 30 years, San Francisco Architectural Heritage (Heritage) has commissioned a number of historical resource surveys. To date, Heritage has conducted a comprehensive survey, research and evaluation of the city's Downtown and other areas. The findings of the Downtown survey served as the genesis of the book *Splendid Survivors*,[142] which led to the historic preservation portion of the Downtown Plan and adoption of Article 11 of the *Planning Code*. Heritage developed a rating system for its surveys while conducting the Downtown survey, using an alphabetical rating system of A through D, with buildings of highest importance rated A and buildings of minor importance rated D. Buildings rated B were deemed of Major Importance, while C-rated buildings were of Contextual Importance. The Downtown survey resulted in an inventory that assessed the importance of over 800 buildings surveyed according to a set of 13 criteria in four main categories: architectural significance, historical significance, environmental significance (including visual prominence and importance as part of a row or cluster of buildings), and integrity (the degree to which the original design had survived later alterations).[143] The Heritage surveys have not been adopted as a local register of historical resources, although many Heritage-rated buildings have been otherwise designated as landmarks or otherwise determined to be historical resources. Heritage ratings are not easily obtainable en masse. Ratings are only available in hard copy, and are organized by street address, not neighborhood.

There are 10 'A'-rated buildings within the Transit Center District Plan area. The majority are substantial buildings designed by well-known architects and located along important streets. Two are located on Market Street—the Matson Building at 215 Market and the PG&E Building at 245 Market. Most other A-rated buildings are located along New Montgomery Street. These include the Palace Hotel at 2 New Montgomery Street, the Sharon Building at 57-61 New Montgomery Street, the Call Building at 74 New Montgomery Street, the Rialto Building at 116 New Montgomery Street, and the Pacific Telephone & Telegraph Building at 134-140 New Montgomery Street. Further A-rated buildings in the Plan area include

142 Michael R. Corbett, ed., *Splendid Survivors: San Francisco's Downtown Architectural Heritage*. San Francisco: Foundation for San Francisco's Architectural Heritage; California Living Books, 1979.

143 The 13 criteria, by category, are: Architecture (Style, Construction, Age, Architect, Design, Interior); History (Person, Event, Patterns); Environment (Continuity, Setting, Landmark); and Integrity.

the Wells Fargo Building at 85-91 Second Street, the Philips & Van Orden Building at 234 First Street, and the Aronson Building at 86 Third Street (700 Mission Street).

In addition to the A-rated buildings, there are 21 B-rated buildings and 77 C-rated buildings. B-rated buildings consist of individually important buildings that are less architecturally distinguished than A-rated buildings. Examples include the Monadnock Building at 681-5 Market Street and the Williams Building at 101-7 3rd Street. When Splendid Survivors was published, there were 21 B-rated buildings. Since then, seven or one-third of the total, have been demolished. The majority are C-rated are one- to four-story masonry commercial or loft buildings completed in the years following the 1906 Earthquake. C-rated help provide the "setting," or context, for A- and B-rated buildings. Concentrations of C-rated buildings still stand along the 500 block of Howard Street, the 600 block of Mission Street, and the first two blocks of First and Second Streets.

Adopted Local Registers of Historical Resources

Planning Code Article 10

Article 10 of the *Planning Code* identifies city landmarks and historic districts. Article 10 is considered an adopted local register of historical resources under CEQA, as it is part of the *Planning Code* and is therefore subject to formal action by the Board of Supervisors. San Francisco City Landmarks denote buildings, properties, structures, sites, districts and objects that are of "special character or special historical, architectural or aesthetic interest or value and are an important part of the City's historical and architectural heritage."[144] Adopted in 1967 as Article 10 of the *Planning Code*, the City Landmark program protects listed buildings from inappropriate alteration and demolition through review procedures overseen by the Historic Preservation Commission. The Plan area has two city landmarks, each of which is a historical resource under CEQA; the Hoffman Grill at 619 Market Street (Landmark No. 144) and the Palace Hotel and Garden Court at 2 New Montgomery Street (Landmark No. 18). The Plan area has no Article 10 historic districts, but does have a conservation district as designated under Article 11.

Planning Code Article 11

Article 11 of the *Planning Code* classifies buildings in the C-3 Downtown Commercial districts in five Categories reflecting their architectural, historical, and aesthetic value, as established in the Downtown Plan. Category I and II buildings are identified as Significant Buildings and, in general, may not be demolished unless it can be demonstrated that they have no substantial market value or reasonable use, after taking into account costs of rehabilitation and any development rights transferred to another site; Category II buildings permit additional height to be added, but only on certain portions and generally with reference to nearby buildings. Category III and IV buildings are identified as Contributory Buildings, and their retention is encouraged, but not required. Category V buildings are Unrated.

144 San Francisco Planning Department, Preservation Bulletin No. 9 – Landmarks (San Francisco: January 2003)

There are 20 Category I buildings in the Plan area. Most are prominent buildings such as the Sharon, Call, Rialto, and Pacific Telephone & Telegraph buildings. Others are less well-known but unusual or rare examples of a particular style or building type such as the Drexler Estate Building at 121 Second Street or the Philips & Van Orden Building at 234 First Street. There are only two Category II buildings in the Plan area: the Palace Hotel and the William Volker Building at 631 Howard Street. The Plan area contains seven Category III Buildings.

Another important provision of Article 11 was the establishment of conservation districts. Section 1103 of the *Planning Code* defines conservation districts:

> Portions of the C-3 District may be designated as Conservation Districts if they contain substantial concentrations of buildings that together create sub areas of special architectural and aesthetic importance. Such areas shall contain substantial concentrations of Significant and Contributory Buildings and possess substantial overall architectural, aesthetic or historic qualities justifying additional controls in order to protect and promote those qualities.

There are currently six conservation districts within downtown San Francisco. The only conservation district situated within the Transit Center District Plan area is the New Montgomery-Second Street Conservation District (see Figure 7, p. 33 in Chapter II, Project Description). Approved by the Board of Supervisors in 1985, the New Montgomery-Second Conservation District was established because the area "possesses concentrations of buildings that together create a sub-area of architectural and environmental quality and importance which contributes to the beauty and attractiveness of the City."[145]

Federal and State Resources

National Register of Historic Places

Historical resources within the Plan area are also listed on federal and state historic registers, including the National Register of Historic Places, the California Register of Historical Resources, and certain California Historical Landmarks. The National Register of Historic Places is the official federal list of historical resources that have architectural, historic or cultural significance at the national, state or local level. The National Register of Historic Places is administered by the National Park Service, an Agency of the Department of the Interior. Listing of a property on the National Register of Historic Places does not prohibit demolition or alteration of that property, but does denote that the property is a resource worthy of recognition and protection.

There are two individually listed National Register properties within the Plan area: the Matson Building and Annex, at 215 Market Street; and the PG&E Office Building and Annex, at 245 Market Street.

[145] Ordinance 414-85, Approved September 17, 1985.

The Plan area also contains the Second and Howard Streets Historic District, listed in the National Register in 1999, containing 19 contributing buildings. This District is generally contained within boundaries of the much larger New Montgomery-Mission-Second Street District described above, except that the National Register district extends eastward the distance of a few lots' width along both sides of Howard Street to the east of the local district (see Figure 7).

The Second and Howard Streets District and the New Montgomery-Second Street District share some degree of architectural character and have a common history in that almost all their buildings were constructed as part of the rapid rebuilding of downtown San Francisco in the aftermath of the 1906 earthquake and fire. However, the buildings in the Second and Howard Streets District are generally smaller than those in the local conservation district, inasmuch as the buildings in the National Register district were typically constructed as loft-style buildings, suitable for a variety of uses, including storage, wholesale display or light manufacturing, whereas New Montgomery Street housed more traditional office buildings.

California Register of Historical Resources

The State Office of Historic Preservation administers and maintains the California Register of Historical Resources. The California Register includes resources listed in, or formally determined eligible for, the National Register of Historic Places and California Historical Landmarks numbered 770 and higher. The California Register can also include properties designated under local ordinances or identified through local historic resource surveys. The two designated National Register-listed properties in the Plan area described above, the Matson Building and Annex, at 215 Market Street; and the PG&E Office Building and Annex, at 245 Market Street, as well as the Second and Howard Streets Historic District, are also listed in the California Register. As discussed below, a number of buildings in the New Montgomery-Second Street District are also individually eligible for listing in the California Register. No California Historical Landmarks are located within the Plan area.

Transit Center District Survey

The Planning Department commissioned preservation architects Kelley & VerPlanck to undertake a survey and historic context for Transit Center District Plan area in 2008, and asked Carey & Co. to conduct additional analysis in 2010 (see footnotes 127 and 128, p. 207). The geographical area under study encompassed the entire Transit Center District Plan area and several surrounding blocks where new construction is anticipated. At the heart of the Plan area is the new Transbay Transit Center, construction of which began in 2010 with the demolition of the former Transbay Terminal. The survey found that despite post-WWII construction and demolition activities, the Plan area retains a concentration of contiguous historic resources within an area roughly bounded by Market Street to the north, Second Street to the east (including the properties on the east side of Second Street), Tehama Street to the south, and Third Street to the west. The survey newly identified a number of resources, both within this concentration and elsewhere in the Plan area, as appearing to be individually eligible for listing in the

California Register.[146] These buildings include 62 and 88 First Street; 85, 90, 121, 132, 141, 182, and 240 Second Street; 86 Third Street; 572, 606, and 666 Folsom Street; 40 Hawthorne Street; 531, 580, 606, and 657 Howard Street; 40 and 96 Jessie Street; 685 Market Street; 545, 601, 602, 647, 658, 678, and 693 Mission Street; 116 and 147 Natoma Street; 111, 137, and 140 New Montgomery Street; 79 Stevenson Street; and 78 Tehama Street. The buildings at 217 Second Street, and 77-79 Natoma Street[147] were identified as individually eligible by Carey & Co.

The Kelly & VerPlanck survey was adopted by the Landmarks Preservation Advisory Board, predecessor to the Historic Preservation Commission, in 2009.

As a result of these analyses, the Department is proposing in the draft Plan to expand the existing New Montgomery–Second Street Conservation District, to recommend additional individual resources for Landmark designation under *Planning Code* Article 10, and to revise the Article 11 historic ratings of several individual resources. The proposed expansion of the conservation district would encompass areas along both sides of Mission Street between New Montgomery and Third Streets (except the northeast corner of Third and Mission Streets), and would cross Third Street to include the Aronson Building on the northwest corner of Third and Mission Streets. The expansion would also extend westward on Natoma Street to Hunt Street. The Department proposes to rename the expanded district the "New Montgomery–Mission–Second Street Conservation District." **Figure 7**, p. 33, shows the existing and proposed historic district boundaries and other buildings proposed for landmark designation in the draft Plan.[148]

The Kelly & VerPlanck *Context Statement* also identified an additional potential historic district around First and Mission Streets that was determined eligible for listing on the California Register, a finding that was concurred in by the Landmarks Preservation Advisory Board (predecessor to the Historic Preservation Commission). This potential district, which is not listed on the California Register, is nevertheless considered a historical resource for purposes of CEQA review. This district contains seven buildings and "comprises a rare enclave of early twentieth-century commercial loft buildings within an area of the South of Market that has been and will continue to be redeveloped with modern high-rise

146 Previously identified resources in the Plan area that are listed in the California Register as individual resources, or determined eligible for such individual listing, include several of the more noteworthy buildings in the existing New Montgomery–Second Street Conservation District (this is in addition to their listing as district contributors), such as the Palace Hotel and the Sharon, Call, Crossley, Rialto, and San Francisco Furniture Exchange buildings, all on New Montgomery Street; the Schwabacher Building at 20 Second Street, the Volker Building at 625 Howard Street; and four buildings on Market Street between Second and New Montgomery Streets; as well as the Palace Garage on Stevenson Street. Also previously determined individually eligible are buildings at 342, 527, and 531 Howard Street; 16 Jessie Street; 215, 245, 685, and 691 Market Street; 440 and 617 Mission Street; 83 Stevenson Street; 72 Tehama Street; and 76, 231, and 234 First Street.

147 The building at 77 – 79 Natoma Street has subsequently been demolished.

148 The Kelly & VerPlanck survey recommended a historic district boundary that would also extend east on Howard Street, beyond the former bus ramp that served the now-demolished Transbay Terminal. However, subsequent research by Carey & Co. and Planning Department staff determined that this easterly extension along Howard Street was not warranted under Article 11 because the ramp had essentially severed the buildings to the east from the remainder of the New Montgomery–Mission–Second Street Conservation District, and because some of the easterly resources had been altered.

office and condominium projects."[149] Six buildings are on the west side of First Street between Stevenson and Mission Streets, and the seventh building is at the northeast corner of First and Mission Streets.

Impact Analysis

Significance Criteria

The proposed project would have a significant effect on the environment in terms of Cultural Resources if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code;
- Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

A "substantial adverse change" is defined by State CEQA Guidelines Section 15064.5 as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." The significance of an historical resource is "materially impaired," according to Guidelines Section 15064(b)(2), when a project "demolishes or materially alters, in an adverse manner, those physical characteristics" of the resource that:

(A) "convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or"

(B) "account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or"

(C) "convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA."

In general, a project that would comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (including the Standards for Rehabilitation)[150] is considered mitigated to a less-than-significant level (CEQA Guidelines Section 15064.5(b)(3)).

State CEQA Guidelines Section 15126.4(b)(2) states that, "In some circumstances, documentation of a historical resource, by way of historic narrative, photographs, or architectural drawings as mitigation for

[149] Kelly & VerPlanck, "Transit Center District Survey," (footnote 127, p. 208); page 65.

[150] U.S. Department of the Interior, National Park Service, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Illustrated Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. 1995. Available on the internet at: http://www.nps.gov/history/hps/tps/standguide/index.htm.

the effects of demolition of the resources will not mitigate the effects to a point where clearly no significant effect on the environment would occur."[151] In such cases, the demolition or substantial alteration of a historical resource would remain a **significant and unavoidable** impact on the environment even after the historical documentation has been completed.

The determination of whether an effect on an archeological resource is significant depends on the effect of the project on those characteristics of the archeological resource that make the archeological resource important. For an archeological resource that is an historical resource because of its prehistoric or historical information value, that is, its scientific data, impairment of the potential information value of the resource would be a significant effect. The depositional context of an archeological resource, especially soils stratigraphy, can be important to the resource in terms of dating the resource and reconstructing characteristics of the resource at time of deposition, as well as interpreting the impacts of later deposition events on the resource. Thus, for an archeological resource eligible for the California Register under Criterion 4, a significant adverse effect to its significance may not be limited to impacts on specific artifacts, but may include effects on the soils matrix in which such objects or materials are situated.

Preservation in place is the preferred treatment of an archeological resource (CEQA Guidelines Sections 21083.2(b); 15126.4 (b)(3)(a)). When preservation in place of an archeological resource is not feasible, data recovery, in accord with a data recovery plan prepared and adopted by the lead agency prior to any soils disturbance, is the appropriate mitigation. In addition to data recovery, the mitigation of effects to an archeological resource that is significant for its scientific value, requires curation of the recovered scientifically significant data in an appropriate curation facility. Final studies reporting the interpretation, results, and analysis of data recovered from the archeological site are deposited in the California Historical Resources Regional Information Center (CEQA Guidelines Section 15126.4(b)(3)(C).

Under State law, human remains and associated burial items may be significant resources in two ways: they may be significant to descendent communities for patrimonial, cultural, lineage, and religious reasons and human remains may also be important to the scientific community, such as prehistorians, epidemiologists, and physical anthropologists. The specific stake of some descendent groups in ancestral burials is a matter of law for some groups, such as Native Americans (CEQA Guidelines Section 15064.5(d), Public Resources Code Section 5097.98). In other cases, the concerns of the associated descendent group regarding appropriate treatment and disposition of discovered human burials may become known only through outreach. Beliefs concerning appropriate treatment, study, and disposition of human remains and associated burial items may be inconsistent or in conflict between descendent and scientific communities. CEQA and State regulations concerning Native American human remains provide the following procedural requirements to assist in avoiding potential adverse effects to human remains within the contexts of their value to both descendents communities and the scientific community:

[151] Case law has held that, at least in the instance of a major historical resource, commemoration of the resource cannot mitigate, to a less-than-significant level, the impact of demolition of the resource. ("A large historical structure, once demolished, normally cannot be adequately replaced by reports and commemorative markers." *League for Protection of Oakland's Architectural and Historic Resources v. City of Oakland*, 52 Cal. App. 4th 896. 1997.)

- When an initial study identifies the existence or probable likelihood that a project would impact Native American human remains, the lead agency is to contact and work with the appropriate Native American representatives identified through the Native American Heritage Commission (NAHC) to develop an agreement for the treatment and disposal of the human remains and any associated burial items (CEQA Guidelines 15064.5 (d), Public Resources Code Section 5097.98).

- If human remains are accidentally discovered, the county coroner must be contacted. If the county coroner determines that the human remains are Native American, the coroner must contact the NAHC within 24 hours. The NAHC must identify the most likely descendant (MLD) to provide for the opportunity to make recommendations for the treatment and disposal of the human remains and associated burial items. If the MLD fails to make recommendations within 24 hours of notification or the project applicant rejects the recommendations of the MLD, the Native American human remains and associated burial items must be reburied in a location not subject to future disturbance within the project site (Public Resources Code Section 5097.98).

- If potentially affected human remains/burial may have scientific significance, whether or not having significance to Native Americans or other descendent communities, then under CEQA, the appropriate mitigation of effect may require the recovery of the scientific information of the remains/burial through identification, evaluation, data recovery, analysis, and interpretation (CEQA Guidelines Section 15064.5(c)(2)).

Paleontological Resources

There are no known paleontological resources in the Plan area. As described more fully in Section IV.O, Geology, Soils, and Seismicity, the Plan area is underlain primarily by artificial fill, Dune Sand, and Marsh deposits. The fill and Dune Sand do not typically contain paleontological resources (fossils), and the Marsh deposits are relatively young in age and thus are unlikely to contain rare or important fossilized remains. Because there are no known paleontological resources in the Plan area, and because the Plan area soils are unlikely to contain rare or important fossil resources, the project would not result in an adverse effect on paleontological resources.

Archeological Resources

Predicted Archeological Resources

Archeological resources are commonly grouped into categories referred to as property types. Property types are useful artificial constructs that can be associated with more than one time frame or research theme. Property types are groupings of individual properties that have shared physical or associative characteristics. This exercise links the ideas developed in theoretical historic contexts with actual historic properties that illustrate those ideas. Property types facilitate the development of plans for evaluation and treatment even when there is incomplete knowledge of the location and existence of individual properties. The usefulness of a property type with regard to relevant research themes determines the legal importance of that resource. The ARDTP prepared for the Plan area developed a series of research topics to which archeological resources of particular types could contribute significant information. Also useful to the importance of property types are assessments of integrity, land use history, and comparison

with other known similar property types. The following discussion presents archeological property types that can be expected to occur within the Plan area.

Prehistoric Period

While relatively few prehistoric archeological sites have been recorded so far within the Plan area, archeological results from elsewhere on the northern San Francisco peninsula and from other portions of the Bay Area provide a basis for discerning the range of prehistoric property types that may be encountered within the Plan area. Potential property types, based on the material remains associated with individual sites, include middens, artifact and/or ecofact scatters, burial complexes/cemeteries, isolated artifacts or features, and re-deposited prehistoric material.

Middens are accumulations of anthropogenically enriched sediment that generally have stratigraphy; in other words discrete episodes of occupation, trash dumping, and other daily activities that can be distinguished within the midden. Middens often include features, such as hearths, pits, house floors, and burials. The presence of distinct strata and features are highly informative for a variety of archeological research questions. Middens are the most common sites documented on the northern San Francisco Peninsula, and occur at three sites in the Plan area. These sites are referred to as shell middens owing to the high frequency of shellfish contained within them. Middens often vary greatly in size and thickness.

Artifact and ecofact scatters are generally the most common archeological site type documented during archeological surveys in undeveloped coastal areas. The absence of midden sediments is largely because occupation was of a very short duration (often including very specialized activities) but can also be affected by post-depositional processes. Artifact and ecofact scatters may have been created by a variety of cultural and natural formation processes that requires analysis to fully ascertain. In general, the older the site, the more likely it is to be an artifact or ecofact scatter rather than a midden. As such, this is the most likely site type to be encountered in association with middle-Holocene or earlier buried land surfaces.

Intentional burial grounds are well-documented from the middle Holocene onward in central California. Most are typically found within major residential sites. Occasionally, burial complexes are documented largely in isolation or adjacent to major residential sites. Data gleaned from burials can provide a wide range of invaluable scientific information, and they also have tremendous significance to modern Native Americans.

Isolates are typically one or a few artifacts found on ancient land surfaces without association with other aspects of human behavior. Isolated features, such as a hearth or a burial (e.g., the nearby BART skeleton, SFR-28), may also occur. Generally, their discovery and recovery exhausts their data potential. As such, isolate are not eligible resources.

Re-deposited prehistoric material is often encountered in urban settings where the original landscape has been greatly modified by construction activities. For example, late 19th-century removal of sand dunes in the Plan area vicinity and their dumping into Yerba Buena Cove are likely to have removed prehistoric

cultural material as well. Natural processes, such as erosion, can also re-deposit cultural material into a new geological context. Generally, prehistoric material that has been re-deposited has lost all integrity and association and hence is not able to contribute significantly to regional research issues. There are, however, exceptions to this general rule—most often if a short-term occupation site or an isolated burial was re-deposited. Such sites may still retain some valuable information, but analysis would be required to confirm that the material is from a limited temporal span.

Historical Period

The historical context roughly divided the occupation of the Plan area into four time segments: early San Francisco development prior to 1860; the late 19th century and early twentieth century (1860-1906); the 1906 earthquake and its immediate aftermath; and post-1906 development. The character of land use (e.g., residential, public-institutional, commercial, industrial) varies in the Plan area during each of these time segments. This is also reflected in the likelihood of encountering archeological property types indicative of these types of land-use activities. Four main property types are distinguished: architecture and landscape features, infrastructure features, industrial features, and refuse features. All four property types have been previously documented within the Plan area or in the immediately vicinity.

Architectural and landscape properties include structural remains such as foundations, wall footings, basement walls, and floor remnants. This property type essentially encompasses all buildings and other structures, although in this instance as they relate primarily to residential, institutional, and commercial land uses. Included here are some maritime resources; wharves and ships/vessels (also referred to as storeships) that may be encountered in the Plan area. Ditches, fencepost holes, and tree stump holes may be filled with refuse that may address important research themes (and would then be evaluated as refuse features).

Infrastructure features are related to development and maintenance of the city of San Francisco, such as roads, cisterns, sewer lines, drain pipes, power lines, roads, hydrants, and etc. Infrastructure features often correlate to utility maps and the locations of architectural features such as buildings. Where deviation occurs, it provides a means for addressing research issues such as actual application of technology. Identification of these features is critical for understanding impacts to the creation and/or destruction of the archeological record.

Industrial property types for the Plan area have been drawn largely from Sanborn Insurance maps and historic-era photographs. Expected types include foundries, machine shops, and metalworking shops. Industrial facilities have often been neglected in urban archeological projects due to a perceived lack of data potential. Since a great deal of the Plan area was used for industrial purposes, industrial features will be given added attention for this project.

Refuse features are the most common expected historic property type, and have proven to be one of the most useful sources of archeological investigation in urban settings, particularly those that relate to residential occupation, and to a lesser extent to commercial enterprises. Hollow-filled refuse features include pits, privies, and wells. Such property types were created specifically for a functional use. During

their use-life or upon abandonment, they became receptacles for refuse. Urban backyards were often used as convenient receptacles for trash before the advent of regular trash-removal services. This is particularly true for those residents who were moving out of the neighborhood. These discrete refuse features provide the archeologist with a "snapshot" of the occupants who used them.

Archeological Sensitivity Assessment

Plan Area as a Whole

As discussed in the Setting, seven formally recorded archeological resources are located within the Plan area, including four historic-era sites, two prehistoric sites, and one site with prehistoric and historic-era components. None of these sites are listed or have been formally evaluated for eligibility for listing on the National Register of Historic Places or the California Register of Historical Resources.

The potential for additional, as yet undocumented archeological resources within the Plan area was also assessed. This was done by geoarcheological archival research and field investigations and conducting historic-era archival investigations. The results provide a basis for assessing the potential sensitivity of the Plan area to contain archeological resources, and if so what age are they most likely to reflect and what types of activities are anticipated to have taken place at these sites.

Prehistoric Period Archeological Resources

Geoarcheological investigations were conducted to further assess the potential for archeological resources to lie buried below the urban landscape. Background research on the potential for buried prehistoric archeological sites relied heavily on existing knowledge of the various geological formations underlying the Plan area. These included two geologic mapping studies of the northern San Francisco Peninsula and geological coring in Yerba Buena Cove. It also utilized selected historic-era maps (US Coast Survey maps 1852/53 and 1857/59) to gain unique glimpses into the natural environment prior to major development that has obscured every natural surface in the Plan area. In particular, these maps identify how large portions of the Plan area are now situated within the area that was previously within Yerba Buena Cove, and the degree to which dunes were leveled in the Plan area.

The results of a previous geoarcheological investigation in the vicinity also provided insight into the nature and timing of geological formations underlying the Plan area. Recent geotechnical analysis and preliminary geological cross-sections of the Plan area by Treadwell and Rollo identified the general depth and nature of portions of the Plan area that are either too deep to be reached or outside of the area sampled by the current study. This analysis combined previously collected geotechnical data from approximately 145 investigations throughout the Plan area.

Geoarcheological coring was undertaken to explore subsurface deposits at the Transit Tower location and five sites in the Plan area for which project development plans are on file. A total of 33 cores were excavated using truck-mounted and limited-access dolly-mounted hydraulic coring devices, known commercially as "Geoprobes." The results of these efforts facilitated a reconstruction of localized Holocene landform evolution, assessment of where prehistoric settlements were likely to have been

located at various points in the past, and appraisal of the positive and negative implications of landform change on prehistoric site preservation. The resulting sensitivity assessment explains why certain deposits either are or are not archeologically sensitive, and provides general guidance for future archeological investigations in the Plan area.

The Plan area as a whole has undergone significant landscape changes during the terminal Pleistocene and the Holocene (the time span of human occupation). Landform stability prevailed during the last part of the Pleistocene and first part of the Holocene, and is reflected in the presence of the well-developed soils formed on and in the Colma Formation deposits. During the early Holocene, when sea levels were more than 30 feet lower than today, the Colma Formation likely formed an undulating surface throughout much of the peninsula and southwestern portion of the Plan area. Since this is the landscape that was first encountered and used by the earliest inhabitants, any archeological materials from this period will be located at or near the top of the Colma deposits and not buried by them. This is why these geologic deposits represent the "cultural basement," both temporally and stratigraphically, and only the upper 5 feet of the Colma formation have potential to contain archeological deposits.

Portions of the Colma Formation in the Plan area were high-angle landforms that were eroded by rising sea levels. In these contexts, the upper portion of this formation would have a low potential for archeological deposits. In the northeast portion of the Plan area (between Howard and Stevenson streets beginning east of Second Street), the top of the Colma Formation is more deeply buried near the Bay where it is overlain by increasingly thicker "marine sand" deposits, and eventually pinches out near Beale and Main Streets. Therefore in the eastern portion of the Plan area, only the Colma deposits have archeological sensitivity because the overlying marine sand was essentially unavailable for human use or occupation since they were deposited under water.

There is a moderate or greater potential for the Colma Formation to contain buried prehistoric archeological deposits in some portions of the Plan area. This area of moderate or greater potential includes the lower-angle surfaces of the Colma Formation expected to occur west of Second Street, south of Howard Street, and along the north-central margin of the Plan area on Market Street. Conversely, in the former steep valley locations of the Plan area (indicated by bedrock contours along Mission Street) where this surface would have been subjected to considerable erosion, the potential for buried archeological materials is low. This includes the central portion of the Plan area between Howard and Stevenson streets, beginning at the eastern edge of the Plan area and extending to Second Street.

Beginning between 8,500 and 4,000 years ago and continuing through the late Holocene, rising sea levels inundated the lower reaches of valleys around the peninsula, including the steep valley underlying the Plan area. During this time the rising Bay eroded adjacent high-angle landforms and deposited near-shore deposits in the vicinity of Fremont Street, potentially resulting in the deposition of the "marine sand" identified offshore of Yerba Buena Cove. The rapid rise in sea level into this valley resulted in the formation of an ancestral Yerba Buena Cove, which was much larger than what existed during the historic era. Then during the late Holocene, a large part of the cove and marsh were filled with sediments, forming the landscape as depicted historically.

Given that the Bay Mud was deposited in an aquatic environment, the potential for it to contain buried archeological material is generally low. The outer edges of these deposits, however, are marked by marshes and tidal flats where the low-energy conditions promoted the accumulation of sediments. Since these settings create productive habitats for a variety of plant and animals they also attracted and sustained prehistoric human settlements, which were generally located nearby. Consequently, some archeological materials may occur in the near-shore portions of these deposits, as with the "BART" skeleton (SFR-28) which lay encased within sediments deposited in a former arm of Mission Bay. In this context, the outer margins of the bay mud would have a low to moderate potential for buried archeological deposits.

The approximate extent of the of Yerba Buena Cove shoreline during the middle Holocene generally follows the contours of the canyon underlying the Plan area, specifically along the steep edge trending northeast-southwest between Howard and Tehama streets. Within the middle of Yerba Buena Cove, there is a low to moderate potential for archeological deposits to occur near the contact between the bay mud the Colma Formation where the later has not been eroded (i.e., north-central margin of Plan area along Market Street). Furthermore, given the low angle of the Colma Formation west of Second Street, the marsh deposits extending west to Fourth Street have a similar potential for buried archeological sites.

During the late Holocene, the landscape was forever changed by the eastward migration and deposition of sand dunes that extended across most of the northern peninsula and portions of the Plan area. A significant episode of dune formation occurred around 2000 cal BP that continued intermittently from 1000 cal BP up to the historic era. While the Ocean Beach area to the west is considered the primary source of this sand, some may be reworked sand from Colma-age dunes. As sand generally blew from west to east, Nob Hill acted as a barrier that slowed and trapped sand on its eastern face, resulting in the formation of a substantial dune in the northwest part of the Plan area. Massive dunes were historically situated along Market Street, while relatively thin dune deposits are present along Tehama Street. As such, much of the 1850s surface in the Plan area was represented by Late-Holocene-age sand dunes; most of the rest was under water. Because of this, some of the prehistoric marsh deposits within Yerba Buena Cove were buried by sand dunes that generally become progressively younger from west to east. This is further evidenced by the location of late-Holocene archeological sites SFR-112 and -135 within dune sand that overlies the western part of former Yerba Buena Cove, and the intact dune sand overlying historic-era bay deposits at the Transit Tower site farther to the west.

Given that several prehistoric sites in the Plan area have been identified buried by Late Holocene sand dunes (SFR-112, -114, and -151/H), these dune have the potential to contain more buried sites. The presence of thick dune deposits in the western portion of the Plan area, as compared to the east, increases the depth below the modern ground at which sites may be buried. Therefore, the potential for buried sites exists both at the historic surface and deeply buried in this area. Because the dunes adjacent to the historic-era shoreline in the Plan area were likely deposited on bay mud during the latest Holocene and up to the historic era, there is low potential for prehistoric sites below this surface. There is, however, potential for very late prehistoric sites at or near the historic-era surface.

Large amounts of artificial fill are present throughout the Plan area (especially in the east due to filling of the bay), and in places historic-era surfaces remain obscured. The unit includes dune sand deposits that have been significantly disturbed by historic-era development. Any prehistoric archeological materials documented within this unit should represent material in secondary context as a result of historic era cutting and filling. Therefore, this unit is considered to have very low potential for containing intact prehistoric archeological deposits.

Historical Period Archeological Resources

Archival investigations were undertaken to provide fine-grained insight into the land-use histories for the Transit Tower site and five opportunity sites within the Plan area, as well as to facilitate the historic-era context in the Plan area environs. The types of primary archival material utilized were varied and consisted of historic-era newspapers and periodicals, municipal reports of the City of San Francisco, Sanborn Fire Insurance maps, US Coast and Geodetic surveys, photographs, water company records, city directories, and oral histories.

Primary documentation was critical in establishing detailed land-use histories that focused on physical uses and changes to the individual parcels during the historic era (with an emphasis on cut and fill histories). The main focus of the research was to first establish the period of historical development in the Plan area, and then to focus on the main land-use activities that took place within individual parcels during that period. The historical context identified the beginning of permanent, non-native development in the Plan area at around 1848-1849, and consequently the Plan area site histories also begin at about that time.

The archival material was mainly collected from sources located in San Francisco, especially the San Francisco History Center at the San Francisco Public Library, the California Historical Society, San Francisco Planning Department, and the San Francisco Maritime Museum. Other important libraries and collections include the California Room of the California State Library (Sacramento) and the Bancroft Library at the University of California, Berkeley.

There is considerable potential for historic-era sites to be well-preserved in the Plan area. This assertion is supported by the nature of previously documented sites within and adjacent to the Plan area. The archival investigations have identified a series of prominent land-use trends that should be reflected in the archeological record within particular portions of the Plan area. These events are summarized here and key dates highlighted.

- The historic pre-Gold Rush settlement of the area occurred north of Market and outside of the project boundaries. Overall, the potential for encountering Yerba Buena (1776-1848) related sites is considered to be very low. However, should such sites or features be encountered, their research and interpretive potentials would be very high.

- One of the earliest residential settlements was known as Happy Valley, encompassing the southwestern portion of the Plan area (north of Howard Street, east of Annie Street, south of Market Street, and west of First Street).

- Another early residential settlement was Pleasant Valley, south of Happy Valley.
- In 1849 much of the Plan area was underwater, and represented by "water lots" (parcels mapped and sold while still submerged within Yerba Buena Cove).
- In 1853, filling in and reclaiming of land north of Market Street began.
- After 1857, reclaiming of area south of Market Street began. Most of the historic-era activities in the Plan area east of First Street occurred after fill was deposited on "water lots."
- From its outset, the Plan area was a mixed-use working-class neighborhood, with residential, commercial, and institutional uses.
- By the early 1850s, light and heavy industry concentrated near the harbor; retail establishments, churches, and schools aligned more or less with Market Street.
- By the end of the 1850s, the land use was more segregated: foundries dominated the southeast corner of Plan area; factories, mills, and warehouses were located to the northeast; retail and wholesale businesses clustered in the northwest corner; and residential neighborhoods dominated the southwest corner.
- The area was a working-class neighborhood by the 1860s.
- An Irish and German population dominated the area by the end of the 1870s (and remained in the area until the 1906 earthquake).
- By the 1880s, industrial use was concentrated east of First and south of Mission. West of First Street, south side of Mission to Folsom was residential.
- The industrial area south of Market Street was devastated during the earthquake and fire—almost no pre-1906 buildings survive in the area, and many were constructed immediately afterwards. There was an almost complete disappearance of family dwellings after 1906, although a few apartment complexes, boarding houses, and flats above commercial establishments survived.
- After the construction of the San Francisco-Oakland Bay Bridge in 1939, much more construction and reconstruction of infrastructure occurred.

The sanitation history of the city must also be taken into consideration when assessing the archeological sensitivity of specific locations within the Plan area. Brick and wooden cisterns were in place by the 1860s, and a 1872 General Order mandated that all garbage be taken to areas specifically designated as dumping grounds. Still, the disposal of sewage and refuse did not always go as city officials intended. Illegal refuse dumping often took place by burying garbage on private lands, and not all houses were tied into the sewer system. Backyard privy vaults often were used for the secondary purpose of refuse disposal. The city continued its efforts to enforce garbage collection, although private scavengers remained the "backbone of the waste disposal system," even after the 1906 earthquake and fires.

Other Individual Sites

As noted, the ARDTP also evaluated the archeological sensitivity of five sites in the Plan area where development applications are on file with the Planning Department. Four of those sites are discussed

here, while the fifth, at 350 Mission Street, was considered in the EIR for a project approved at that site in 2011 (Case No. 2006.1524E).

50 First Street Site. No archaeological sites are documented within this site, although two prehistoric sites (SFR-112 and SFR-135) and one historic-era site (SFR-119H) are located within 250 feet. There is a moderate potential for discovering intact prehistoric archaeological deposits on this project site. Any such resources would most likely be preserved in Late Holocene dune deposits situated about 12 to 30 feet below grade, or possibly at the interface of the bay mud and Colma Formation, between about 45 to 55 feet below the surface. The historical archaeological potential is relatively low due development that has occurred on the site.

181 Fremont Street Site. No prehistoric archaeological sites have been documented within this site, and the 1852-1853 Coast Survey shows it as completely within Yerba Buena cove. The only archaeological site documented nearby is historic site SFR-166H, situated across Fremont Street to the southeast. Because this site was within the Bay prior to being filled in the 19th century, it has a low potential for both prehistoric and historic-era archaeological sites. By the late 1860s the area was part of the Empire Foundry. Geoarchaeological coring adjacent to this site documented up to 20 feet of historic-era fill, including a thick black layer of coal tar likely associated with the foundry. Deposits relating to the coal houses may be preserved in the southeastern half of the parcel; however, there is a limited potential for information recovery from such deposits, whose archaeological potential is therefore considered to be low.

Palace Hotel Site. No documented archaeological resources are present within this site, nor have any been documented in the immediately vicinity. Based on geoarchaeological coring, this site has a moderate potential for buried prehistoric archaeological sites, which most likely to be within intact dune deposits at between 25 to 35 feet below grade, or at the interface of the thin marsh deposit and the Colma Formation, at a depth of from 35 to 40 feet. Geoarchaeological coring documented artificial fill underling the Palace Hotel that likely represents the rubble of the first Palace Hotel (built in 1875 and destroyed in the 1906 fire), as well as any fill brought in to construct the current building. The potential for historical archaeological deposits on this parcel is considered to be low, as much of the trash associated with the Palace Hotel was likely taken away on a routine basis, and the construction of the 1907 version of the hotel itself likely removed the pre-1907 ground surface. As a result, there is little likelihood of refuse features associated with the old hotel or its occupants, other than debris from the 1906 conflagration.

41 Tehama Street Site. This site falls within SFR-151/H, a city-block site bounded by Second, First, Howard, and Folsom streets. Prior historic-era archaeological fieldwork documented 1860s – 1880s buried surfaces, structural features, and privies in lots between Folsom and Clementina streets, although the tested lots between Tehama and Clementina Streets, where the project site is located, had been heavily disturbed. The latter were just west of the 41 Tehama site and presumably were disturbed by construction of the Bridge and the Transbay Terminal ramps and Embarcadero Freeway in the 1930s and 1950s. Geoarchaeological coring for the current study identified a prehistoric component to the site, consisting of a thin prehistoric shell midden buried in Late Holocene sand dune deposits 10 feet below grade. This site has a moderate to high potential for buried prehistoric archaeological deposits. The size of the 1,000-

year old prehistoric component of SFR-151/H is uncertain and it is possible that it is laterally extensive. Other sites or loci may be associated with this buried surface within this site, and it is also possible that earlier, as-yet undiscovered, deposits associated with another buried surface 18 feet deep may exist. Coring also documented an extensive historic-era burned layer associated with the 1906 fire. Pre-1906 deposits and surfaces associated with residential occupation (including privies) are likely preserved in the western portion of this site, while features related to the 1866 Tehama School may be present in the eastern portion. The archaeological potential for encountering domestic deposits associated with the residential occupation of the western portion of the site is moderate to high. After the earthquake, there were no disturbances (such as building basements) excavated into this portion of the lot. The area behind the residences is especially promising for encountering such deposits, including privies. Further, the sheet refuse associated with the earthquake may be associated with particular households. There may also be refuse deposits associated with the post-earthquake residence at 43 Tehama Street.

Transit Tower Project Site

No formally recorded archeological sites currently are documented on the Transit Tower project site (Block 3720, Lot 1). The following present sensitivity assessments for the potential for previously undocumented prehistoric and historic-era resources to be present within the parcel.

Sensitivity for Prehistoric Period Resources

The southern half of this site was formerly occupied by the Transbay Terminal building. This building was built with a basement and parking garage extending to about 20 feet below street level, while a driveway and sidewalks covered the site's northern half, where the proposed Transit Tower would be located. The 1852-1853 Coast Survey map depicts this area on the shoreline of Yerba Buena Cove, with only the western portion of the site situated on dry land at this time.

Four cores were excavated from the sidewalk in front of the Transbay Terminal, ranging in depth from 20 to 60 feet below street surface. No prehistoric archeological deposits were identified during coring. The cores did, however, document a complex series of depositional units one of which has the potential to contain prehistoric resources.

The results of the geoarcheological investigation for the Transit Tower indicate that this parcel has a low potential for buried prehistoric archeological sites (see **Table 15**). Stratigraphically, the parcel consists of artificial fill at the surface, underlain by sand dunes that were deposited immediately prior to or during the historic era. The lack of indications of a stable land surface (i.e., a buried soil) within these dunes and the probable historic age indicates they have a low potential for containing prehistoric sites. This assessment should be considered tentative, given that the radiocarbon date has a large standard deviation that encompasses the very end of the prehistoric sequence, and that nearby shoreline contexts were attractive settings in the Late Period (as indicated by nearby sites SFR-129 and SFR-154).

The bay deposits underlying the sand dunes were formed in an aquatic environment and have a low potential for prehistoric sites. The thin terrestrial landform identified within the dunes and within these bay deposits represents a very brief span of time and also has a low potential to contain buried

TABLE 15
SUBSURFACE PREHISTORIC ARCHEOLOGICAL POTENTIAL AT THE TRANSIT TOWER SITE

Geologic Unit	Depth Range (feet)	Potential for Deposits to be Present
Artificial Fill	Surface to ~11.5	Very low (for intact deposits)
Historic Sand Dunes	~11.5 up to 29	Low?
Bay Deposits	~20 to 55	Low
Beach Deposit	55 to 59	Low
Colma Formation Surface	59 to 60	Low (eroded surface)
Colma Formation	>60	Very low

SOURCE: Far Western Anthropological Research Group

archeological deposits. The pre-bay terrestrial deposits underlying the bay deposits (the Colma Formation) have been truncated and then overlain by a beach deposit. Given that the surface of the Colma Formation has been eroded in this area, and the beach deposit represents only a brief time period, both of these horizons also have a low potential for prehistoric sites.

Sensitivity for Historical Period Resources

Detailed archival investigation was undertaken to understand the land use history of the site. The following discussion summarizes its land use history. Since emerging from Yerba Buena Cove, land-use at the Transit Tower Parcel can be characterized by three distinct phases; pre-1906 earthquake, earthquake to 1938, and post-1938.

Of the six water lots that made up the site of the Transit Tower, one was actually a beach lot on the water's edge. As such, in 1849 the lot was almost entirely submerged. An 1853 survey noted that the northern part of this lot was under one foot of water at low tide and 6 feet of water at high tide. Historic-era site SFR-119H contained a well-preserved Gold Rush Period campsite, and is directly to the west of the Transit Tower location (bounded by First, Folsom, Second, and Mission Streets). As much of the Transit Tower site was largely underwater at the time of the campsite occupation, there is low potential for related resources in much of the parcel except where the historic period surface was identified. Study of the stratigraphy (assuming strata are dateable) may provide additional insights into the early development of the shoreline and the vegetation.

By 1853, buildings had been constructed on the western portion of the site, while the rest remained under water until sometime in 1854; in that year the intersection at Fremont and Mission had a city grade of 90 cm (three feet). By 1854 the entire Transit Tower site had been filled to a point to elevate it above the high-water mark. A brick sewer was in place on Mission Street, north of the site, by 1860. Water service was obtained two years later.

The site quickly developed the heavy industry already prevalent in the surrounding area. The SF Novelty and Plating Works was established on Mission Street in 1862. In 1864, Gallagher and Weed established a

brass foundry on First Street, midway between Natoma and Mission streets. From then on, the block became increasingly industrial. The 1886 Sanborn reflects the industrial nature of the block: a mechanic's mill, boiler shop, brass works, and forge shop are all shown.

Sanborn maps from 1886-1893 show machinists, a blacksmith and wagon maker, an instrument maker, J. Roylance Brass Works, and Mechanics Mill. The 1889-1890 directory listed a brass works, a blacksmith, an instrument maker/cutler, machine shop, an iron works, a mechanics mill, a coppersmith, a turning and planing mill, and a machine shop. The only residential location noted was a "Mechanics Home." In 1899, Miller, Sloss, and Scott began construction of a five-story commercial building that would house Pacific Hardware and Steel Co. between 1900 and 1904. The *San Francisco Chronicle* noted that the building "will fittingly indicate the importance of that new business section of San Francisco."

The 1899 Sanborn map depicts the construction of a five-story brick building (with a basement) in the northern portion of the lot, with storage buildings to the south. A copper works occupied the north center of the area, along with a variety storage buildings and sheds to the south. Along the south edge (adjacent to First Street) were an office, more storage, sheet metal works, machine shop, blacksmith, and a "lodgings" at the corner of First and Mission. As the twentieth century began, the parcel reflected a shift from gritty industry to consolidated wealth speculating in commercial real estate ventures.

The block remained primarily industrial until the 1906 earthquake, when the entire block was destroyed by fire. The block was rebuilt quickly after the earthquake as a mixed industrial complex, composed largely of warehouses. By 1909, the parcel was owned entirely by the Crockers or guardians of the Crocker Estate. Along Fremont Street, in the northern part (Fremont and Mission), the 1913 Sanborn map shows the Studebaker Brothers Sales room, offices, carriage repository, and auto repair shops (reflecting the transportation transition from the carriage to the automobile). This building was reconstructed on the site of the same five-story building noted above, and reused its foundations and basement. The Pacific Coast Envelope Company occupied the area of the Transit Tower site at the corner of First and Mission, and a box company occupied the area to the south. There was no longer any residential occupation of the site or, indeed, the vicinity after the earthquake.

All of these structures were demolished in the 1930s to make way for the Transbay Transit Terminal, constructed in 1938 (along with the Bay Bridge), which included a taxi stand, street car ramp, and pedestrian walkway. The Transbay Terminal building, with its basement and parking garage extending down to 20 feet below the surface. It is expected that construction of that building, including excavation for the basement, destroyed any archeological deposits directly beneath the surface.

Geoarcheological testing within the Plan area identified an historic period surface in the northern portion of the project site at a depth of 13 feet below modern ground level, generally at sea level. This surface is underlain by disturbed dune sand and overlain by artificial fill likely from the 1906 earthquake. This suggests that there is a low to moderate likelihood of encountering historic period deposits associated with residential and industrial uses of the block. Potential property types in this area could include sheet refuse associated with the earthquake, possible refuse deposits associated with the residential occupation

of the corner of First and Mission, and infrastructure, architectural, and industrial remains (**Table 16**). Overall the parcel has moderate potential to contain important historic period resources.

TABLE 16
EXPECTED HISTORIC-ERA PROPERTY TYPES AND
PRELIMINARY ASSESSMENT OF RESEARCH VALUE AT THE TRANSIT TOWER SITE

Time Period	Property Type/ and Examples	Potential for Deposits to be Present	Relative Research Values (assuming high levels of integrity)	Gold Rush Era Occupation	Defining Working-Class Neighborhoods	Commercial and Institutional Land Use	Development of Industry and Technology	Development of Infrastructure	Environmental Change	Public Interpretive Potential
Yerba Buena (1776-1848)	Natural/Dune	Low	-	-	-	-	-	-	Moderate to High	High
Gold Rush (1848-1850)	Refuse	Low	-	Moderate to High	-	-	-	-	-	High
Emergence of South Market (1850-1860)	Infrastructure	Low	-	-	-	-	-	Low	-	Low
South of Market Matures (1860s-1906)	Refuse, Architecture, Industrial, Infrastructure/ Mixed Industrial-Residential Neighborhood	Low to Moderate	-	-	Moderate to High	-	Low to Moderate	Low	Low	Moderate to High
Earthquake and Fires (1906)	Sheet Refuse, Architecture, Industrial, Infrastructure	Moderate	-	-	Low to Moderate	-	Low to Moderate	Low	Low	Moderate
Post-1907	Sheet Refuse, Architecture, Industrial, Infrastructure	-	-	-	-	-	Low	Low	Low	Low
1938	Transbay Terminal	Demo'd. 2010 - 11	-	-	-	-	-	-	-	-

Summary

In summary, the prehistoric sensitivity assessment considers the Transit Tower project site to have a low potential for containing buried archeological material. The data for this assessment are considered strong for all contexts except the upper-most portion of the dune deposits (owing largely to the poor chronological resolution provided by the radiocarbon dating results). In contrast, the historical archeological sensitivity assessment suggests there is a moderate potential for historic period resources; additional archeological investigations at the time of construction are needed to address this possibility, since archeological deposits could exist that were not identified by the coring already undertaken. During any such field investigation, additional identification efforts should be made to confirm the prehistoric sensitivity assessment regarding the age of dune deposits within the Site.

Plan Impacts

Impact CP-1. Development projects in the Plan area could cause a substantial adverse change in the significance of archeological resources. (Less than Significant with Mitigation)

As discussed previously, the Plan area as a whole can be considered generally sensitive for both prehistoric and historic-era archeological resources. Expected archeological resources could have important research value and would, therefore, be significant under CEQA. The Transit Center District Plan ARDTP presented sensitivity assessments for prehistoric and historic-era resources. It has also discussed spatial variation (both horizontal and vertical) within the Plan area regarding where certain types of sites are either known to be located or most likely to be discovered with additional subsurface investigative effort. This approach ensures that important archeological remains that may be present on development opportunity sites are identified, evaluated, and appropriately treated. The ARDTP has also identified a series of research topics to which identified archeological could contribute significant information.

Given that the majority of the buildings in the Plan area were constructed in the early twentieth century, prior deep sediment disturbances tend to be relatively shallow compared to many nearby areas where post-1950 construction predominate. For example, subgrade parking garages and deep foundation supports are relatively uncommon except in the northeast portion of the Plan area (generally, north and east of the Transit Center site), where the greatest concentration of 1960s and later development has occurred.

Proposed changes in *Planning Code* (zoning) controls for the Plan area would create a regulatory context for new private land improvements that would likely result in an increased potential for disturbance of soils below the existing surface. These *Planning Code* changes would increase maximum building height allowances, encouraging new development on parcels that have historically been underutilized. Moreover, greater development height often increases the minimum level of geotechnical support required for the development, with an associated increase in the depth and magnitude of sediment disturbance/modification. Much of the Plan area is within Liquefaction Hazards Zones in which tall buildings would frequently require geotechnical support in the form of pilings or soils improvement techniques. The potential to increase the amount and depth of soils disturbance resulting from the new building height regulations within the Plan area would increase the potential to affect California Register-eligible archeological resources.

Portions of the Plan area may also contain persistent hazardous wastes from late 19th and early industrial activities and other land uses using chemical processes. Therefore there is the potential that site remediation for hazardous wastes would occur in the future (see Section IV.X, Hazards and Hazardous Materials). Site remediation can result in the disturbance and removal of sediment in excess of sediments that would be disturbed by other components of a project such as foundations or parking. Thus, mitigation of hazardous materials within the sediments of a project site may adversely affect archeological deposits within the affected sediments independent of all other aspects of a project. Implementation of mitigation procedures outlined in the Plan area ARDTP would reduce this effect to a less-than-significant level.

In general there is a high likelihood that new construction would extensively disturb sediments to considerable depths below the modern surface. Since California Register-eligible archeological resources are expected to be present within existing sub-grade sediments of the Plan area, the proposed land use policies and controls within the Plan area could adversely affect archeological resources, which would be considered a significant impact. However, implementation of Mitigation Measure M-CP-1 would reduce this impact to a less-than-significant level.

Mitigation Measure

M-CP-1: **Subsequent Archeological Testing Program.** When a project is to be developed within the Transit Center District Plan Area, it will be subject to preliminary archeological review by the Planning Department archeologist. This in-house review will assess whether there are gaps in the necessary background information needed to make an informed archaeological sensitivity assessment. This assessment will be based upon the information presented in the Transit Center District Plan Archeological Research Design and Treatment Plan (Far Western Anthropological Research Group, Inc., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February 2010), as well as any more recent investigations that may be relevant. If data gaps are identified, then additional investigations, such as historic archival research or geoarchaeological coring, may be required to provide sufficiently detailed information to make an archaeological sensitivity assessment.

If the project site is considered to be archaeologically sensitive and based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Transit Center District Plan archeological research design and treatment plan at the direction of the ERO. In instances of inconsistency between the requirement of the project archaeological research design and treatment plan and of this archaeological mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of

construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) (c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP). The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented, the archeological consultant shall prepare an archeological monitoring plan (AMP):

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;

- Archeological monitoring shall conform to the requirements of the final AMP reviewed and approved by the ERO;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations.

- Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
- Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
- Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- Final Report. Description of proposed report format and distribution of results.
- Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high

interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Level of Significance after Mitigation

Implementation of the above mitigation measure would reduce impacts on archeological resources in the Plan area to a less-than-significant level.

Transit Tower Impacts

Impact CP-2. Development of the proposed Transit Tower could cause a substantial adverse change in the significance of archeological resources. (Less than Significant with Mitigation)

As described in Chapter II, Project Description, the Transit Tower is anticipated to be founded on deep piles that would be supported in bedrock more than 200 feet below grade; this would include a series of large diameter piles approximately 10 feet around that would support the tower's "megacolumns" (very large structural columns several feet in width). Excavation for the basement and parking levels of the Transit Tower would be to a depth of approximately 60 feet, consistent with the depth of the excavation for the adjacent Transit Center terminal that is currently under construction.

As noted above in the discussion of archeological sensitivity, while there is little potential for the discovery of prehistoric archeological resources at the Transit Tower site, there is a moderate potential for the existence of historic-era resources. Excavation for and construction of the Transit Tower and its foundation system could adversely affect these resources, which would be considered a significant impact. However, implementation of Mitigation Measure M-CP-2 would reduce this impact to a less-than-significant level.

Mitigation Measure

M-CP-2: **Archeological Testing Program Specific to Transit Tower.** Based on a reasonable presumption that archeological resources may be present within the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried historical resources. Transit Center District Plan Archeological Research Design and Treatment Plan (Far Western Anthropological Research Group, Inc., *Archaeological Research Design and Treatment Plan for the Transit Center District Plan Area, San Francisco, California*, February 2010) included a sensitivity assessment (based on historic archival investigations and geoarchaeological coring) of Transit Tower parcel and parcel-specific archaeological treatment plan. No formally recorded archaeological sites currently are documented on this parcel, and the parcel is considered moderately sensitive for historic-era resources and as having a low sensitivity for prehistoric resources. The Treatment Plan laid out an approach to mitigation efforts at the Transit Tower site that primarily focus on historic-era resources, with much more limited attention given to potential prehistoric resources. This would include

identification efforts, and if an archaeological site is located, evaluation and data recovery mitigation work.

The project sponsor shall retain the services of an archeological consultant from the Planning Department ("Department") pool of qualified archaeological consultants as provided by the Department archaeologist. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure and with the requirements of the Transit Center District Plan Archeological Research Design and Treatment Plan at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project archaeological research design and treatment plan and of this archaeological mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Sections 15064.5 (a) (c).

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP) that builds upon the Transit Center District Plan Archeological Research Design and Treatment Plan elements developed for this parcel. The ATP shall identify the testing method to be used and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. The archeological testing program shall be conducted in accordance with the approved ATP.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the ERO. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. If the ERO determines that a significant

archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

A) The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or

B) A data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented, the archeological consultant shall prepare an archeological monitoring plan (AMP).

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the AMP reasonably prior to any project-related soils disturbing activities commencing. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archaeological resources and to their depositional context;
- Archeological monitoring shall conform to the requirements of the final AMP reviewed and approved by the ERO;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the ERO has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving activity (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving activity may affect an archeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archeological consultant shall immediately notify the ERO of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan (ADRP). The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the ADRP shall include the following elements:

- Field Methods and Procedures. Descriptions of proposed field strategies, procedures, and operations.
- Cataloguing and Laboratory Analysis. Description of selected cataloguing system and artifact analysis procedures.
- Discard and Deaccession Policy. Description of and rationale for field and post-field discard and deaccession policies.
- Interpretive Program. Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program.
- Security Measures. Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- Final Report. Description of proposed report format and distribution of results.
- Curation. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable State and Federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code Sec. 5097.98). The archeological consultant, project sponsor, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate

dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines. Sec. 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects.

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Major Environmental Analysis division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Level of Significance after Mitigation

Implementation of the above mitigation measure would reduce impacts on archeological resources at the Transit Tower site to a less-than-significant level.

Historical Resources

Future development projects that would be facilitated by the proposed Plan may cause substantial adverse changes in terms of (a) direct impacts to the significance of one or more of the historical resources identified in this analysis by way of demolition or substantial alteration, or (b) indirect impacts to the significance of one or more of the historical resources identified in this analysis due to changes to the existing zoning controls (use districts and height limits), which in turn may add redevelopment pressures to such resources resulting in demolition or substantial alteration. The direct and indirect impacts can occur to both individual historical resources, as well as to proposed conservation or historic districts in the Plan area and/or their contributing buildings.

As noted above, substantial adverse changes that may occur include demolition, destruction, relocation or alteration of one or more resources, such that the historical significance or resource and/or the historic

district in which it is located is "materially impaired." Such an adverse change to a CEQA-defined historical resource would constitute a significant impact.

As described in the Setting, an expansion of the existing local New Montgomery–Second Street Conservation District is also being proposed as part of the Transit Center District Plan. *Planning Code* Article 11 ratings for individual building categories I – V would be revised and updated, and newly-rated buildings would become eligible to sell transferrable development rights to development sites in the downtown. Proposed new development in the expanded district would be analyzed for potential impacts to the district. Finally, the draft Plan proposes to seek City Landmark designation for four individual structures, three of which are outside existing or proposed historic districts, under Article 10 of the *Planning Code*. These include the Planters Hotel (606 Folsom Street), the Philips & Van Orden Building (234 First Street), the Marine Firemen's Union building (240 Second Street), and the Burdette Building (90 Second Street). Another aspect of the draft Plan that could affect historical resources is the Plan's proposed removal of restrictions on floor area ratio. This could affect the amount of transferrable development rights available at sites on which historic buildings are located.

Plan Impacts

Impact CP-3: Changes to the zoning controls in the Plan area could result in adverse impacts to historic architectural resources through demolition or substantial alteration. (Significant and Unavoidable)

Changes to Existing Use and Height and Bulk Districts

The Plan area is generally composed of portions of the C-3-O (Downtown Office), C-3-O (SD) (Downtown Office (Special Development)), C-3-S (Downtown Support), TB-DTR (Transbay Downtown Residential), and P (Public) use districts. The C-3-O and C-3-O (SD) districts, which make up the majority of the Plan area, both permit office uses as principal uses and include controls that generally encourage concentrated, high density office development. In addition, the C-3-O (SD) district allows a lesser intensity of development, measured in terms of floor area ratio, as of right than does the C-3-O district, but the C-3-O (SD) district also permits unused development potential on lots containing historic resources from elsewhere in the C-3 districts to be directed to other sites through the transferrable development rights (TDR) process.

The rezoning proposal that would be adopted as part of implementation of the draft Plan would entail converting the entire Plan area to C-3-O (SD) and eliminate the maximum 18:1 cap on Floor Area Ratio (FAR) limit on development in this zone. Although the C-3-O (SD) district would permit unused development potential on lots containing historic resources from elsewhere in the C-3 districts to be directed to other sites through the TDR process, the rezoning of the entire Plan area to C-3-O (SD) and elimination of the maximum 18:1 cap (FAR) could still indirectly increase incentives to demolish smaller-scale historic commercial buildings, in order to construct new large-scale commercial buildings.

The proposed Transit Tower project would not involve demolition of any structures. However, at other sites in the Plan area, future development projects that could be facilitated by the proposed changes to use districts in the Plan area could cause substantial adverse changes in either (a) the significance of one

or more of designated or potential historical resources, or (b) the significance of one or more of the existing or potential historic districts in which some of these resources are located. Such projects could result in demolition of historical resources or alteration of such resources such that their historic significance would be "materially impaired." Such an adverse change to a historical resource would constitute a significant impact as defined by CEQA Guidelines Section 15064.5, and such impacts could not necessarily be mitigated to a less-than-significant level. Because such projects would be permitted with implementation of the draft Plan, this would be a significant, unavoidable impact of the Plan.

For example, there is currently a project proposed within the Plan area that would result in the demolition of known historical resources on First Street, and two other projects that could adversely affect historical resources. These projects, with applications on file at the Planning Department, include a proposal for three towers ranging in height up to 850 feet at 50 First Street at Mission Street, a 680-foot residential tower at the rear of the Palace Hotel at 2 New Montgomery Street, and a residential project at Second and Howard Streets. These projects—each of which would be subject to project-specific environmental review under CEQA—would result in the demolition or substantial alteration of several individually significant and/or contributing buildings to an existing or potential historic district. Potential development opportunity sites identified along Howard Street could also result in the demolition or substantial alteration of historical resources. Finally, new construction may also adversely affect the setting of existing or potential historic districts.

The three projects noted specifically above are described below in more detail:

1. 50 First Street: This project would demolish four existing structures, three of which are historical resources, and develop three towers, ranging in height from 184 to 915 feet (to the top of the parapet and solar/wind energy collection features) on seven lots located at or near the northwest corner of First and Mission Streets. The project would accommodate a mix of office, residential, retail, hotel, and entertainment use, as well as publicly accessible open space. The three historic buildings that would be demolished are on the west side of First Street: the Marwedel Building at 76 First Street (rated "2S2," or determined individually eligible for the National Register), and the Neustadter Bros. Building at 62 First Street and the Brandenstein Building at 88 First Street (both rated "3CS" or individually eligible for listing in the California Register by the Transit Center *Context Statement*). These buildings represent the key elements of a small concentration of remaining early 20th century commercial buildings on First Street, and contribute to the potential First and Mission Historic District. The proposed project would constitute an adverse effect on the environment under CEQA because it would result in demolition of these historical resources.

2. Palace Hotel Tower, 2 Montgomery Street: The construction of a 680-foot residential tower at the rear of the Palace Hotel would result in the demolition of a non-historic addition to the City Landmark hotel and a property that is individually eligible for listing in the National Register. As such, no direct impacts to historic resources would necessarily result from construction of the tower itself. However, this project would also include alterations to the City Landmark hotel building, both as part of a structural upgrade to tie the historic building to the tower, and potentially as part of other program-related alterations to the hotel, some interior spaces of which

are considered historical resources.[152] Therefore, for purposes of a conservative assessment, this analysis assumes that the proposed Palace Hotel Tower could result in a significant adverse impact on the City Landmark hotel building that could not be mitigated to a less-than-significant level. Moreover, the Palace Hotel is located within the New Montgomery-Second Conservation District and the proposed expanded New Montgomery–Mission–Second Street Conservation District, and is a contributing resource to both. The proposed 680-foot tower could have a significant adverse impact not only on the historic setting of the Palace Hotel itself, but also on the on the historic setting of the existing and expanded conservation district. It is noted that the Palace Hotel Tower project will be the subject of a separate, project-specific EIR that will fully evaluate historical resources impacts, mitigation measures, and alternatives.

3. 201 Second Street: A 19-story, 180-foot residential building was approved in 2006 for a site at Second and Howard Streets that is currently a surface parking lot. As such, this project would not constitute an adverse effect on the environment because the parking lot does not contain any historical resources. However, the parking lot is proposed be acquired by the Transbay Joint Powers Authority (TJPA), along with two parcels to the south on Second Street occupied by existing buildings, as part of the project to extend underground Caltrain tracks to the new Transit Center, assuming the Caltrain Downtown Extension is ultimately funded. Under the approved Caltrain extension, the two existing buildings would be demolished. The draft Plan calls for the City to consider vacating Malden Alley, which runs between Howard and Tehama Streets to the east of these three parcels, to facilitate the assembly of a larger development parcel that could permit construction of a building that would have its foundation set back from the underground railway right-of-way. The draft Plan, in the discussion under Policy 2.12, notes that such a development scheme could permit a cantilevered portion of a new building to maintain a street presence at the corner of Second and Howard Streets. The draft Plan further indicates that such a program could "incorporate and build above a portion of the historic buildings immediately to the east," along Howard Street. Of the two buildings on Second Street to be demolished, the southerly structure, at 217 Second Street, was identified in the *Context Statement* and follow-on research as a historical resource (individually eligible for the California Register).[153] This building has been approved for demolition as part of the separate Caltrain extension project. However, the enlarged development site could involve alteration, or possibly even demolition, of one or more of the buildings to the east, at 583 and 589 Howard Street and 90 Tehama Street. The two buildings on Howard Street are listed on the National Register (rated "1D") as contributors to the Second and Howard Streets Historic District, while 90 Tehama Street was determined as part of the *Context Statement* and follow-on research to be a historical resource under CEQA. No design for development of the enlarged site is available as of this writing, although the site has an existing height limit of 350 feet, which would be retained with implementation of the draft Plan. Therefore, for purposes of a conservative assessment, it is assumed that this project would result in a significant unavoidable impact on historical resources.

The Plan would also allow for development on a number of opportunity sites that are either vacant, in use as surface parking, or where existing structures occupy 30 percent or less of the total permitted developable square footage allowable under the existing zoning. In particular, there are two opportunity

[152] Notably, the Garden Court dining room is part of the City Landmark designation. Planning Department preservation staff considers some other publicly accessible spaces of the hotel to be defining features of the building's historical status.

[153] Carey & Co., Supplemental DPR forms; see footnote 128, p. 209.

sites on Howard Street in the westernmost portion of the Plan area where development could result in the demolition of historical resources, at 648 - 660 Howard Street and at 667 – 669 Howard Street. Development on the former site could affect historic architectural resources at 147 Natoma Street (a Category I building under the Downtown Plan and rated "3S," or individually eligible for the California Register as part of the *Context Statement*) and 161 Natoma Street and 658 Howard Street (both eligible for listing to the California Register as district contributors). Development at 667 – 669 Howard Street could affect the 1907 Sharon Estate Building at 667 Howard Street (Downtown Plan Category III and eligible for the California Register as a district contributor). These two potential projects, like those described above, and like any other subsequent projects that could affect historical resources, would each be subject to project-specific CEQA review.

Additionally, although the potential expanded New Montgomery–Mission–Second Street Conservation District has not yet been incorporated into Article 11, the expanded district is considered a historical resource for purposes of CEQA analysis. The existing New Montgomery-Second Street Conservation District, by virtue of being listed in Article 11 of the *Planning Code*, is a historical resource under CEQA, as is the Second and Howard Streets National Register Districts, by virtue of being listed in the National Register.

For purposes of a conservative assessment, it is presumed that the demolition of one or more contributing resources to the existing and potential historic districts would occur during the lifetime of the Plan. While demolition of a contributing resource to a historical district does not necessarily result in a significant adverse effect on that district, this assessment assumes that such demolition would constitute a significant impact due to the loss of the contributing element itself, which would be considered demolition of a historical resource that could not be mitigated to a less-than-significant level. However, the precise nature of the impact cannot be determined in the absence of specific information about the proposal under consideration. Mitigation could, in some cases reduce the nature or the degree of the impact on the potential historic district, but it is assumed that the loss of one or more contributing resources would be **significant and unavoidable** for at least some subsequent projects.

Transfer of Development Rights

As noted, the draft Plan proposes to eliminate the restrictions on FAR in the Plan area. By increasing the potential development envelope on a given site, this change could increase the supply of transferrable development rights, a tool that allows owners of historic properties to sell the unused development rights above an existing smaller building to a prospective developer of another site, thereby potentially helping ensure the survival of the historic structure. According to Planning Department records, approximately 5 million square feet of transferrable development rights has been certified as eligible for sale since 1985; of this, 2.75 million square feet has been used by subsequent development projects, leaving about 2.25 million square feet of certified supply available, most of which is believed to have been acquired by developers but not yet applied to projects that remain unbuilt. The Department estimates that there is about 3 million additional square feet of "potential" supply remaining that is not yet certified.[154]

[154] San Francisco Planning Department, *25 Years: Downtown Plan Monitoring Report, 1985-2009*. June 2011. Available on the internet at: http://www.sf-planning.org/index.aspx?page=1663#downtown_report; p. 22.

The draft Plan proposes to maintain the Transfer of Development Rights program (*Planning Code* Section 128), but to modify the program in the Plan area. Among other things, the draft Plan would reduce the square footage requirement for the purchase of development rights by each individual development project from all floor area greater than a floor area ratio (FAR) of 6:1 to floor area between 6:1 and 9:1 FAR, and establish a Downtown Historic Preservation and Rehabilitation Fund and an in-lieu fee (whose proceeds would go to the fund) that developers could pay in lieu of purchasing transferrable development rights.

The draft Plan's proposed elimination of maximum FAR limits and increased height limits would be expected to result in increased development in the Plan area, which would increase the demand for TDR. Conversely, the draft Plan's modification of the TDR program would, as noted previously, reduce the demand for TDR on any given development project site. Along with this reduction, the draft Plan's proposal to increase flexibility in the use of TDR, including the creation of an in-lieu mechanism, would be expected to increase the overall number of both development projects and historical resources that could use TDR, thereby assisting in the preservation—and, potentially, ongoing maintenance—of historic buildings.

Mitigation Measures

M-CP-3a: **HABS/HAER Documentation.** Prior to demolition or substantial adverse alteration of historical resource(s), the project sponsor of a development project in the Plan area shall contract with a qualified preservation architect, historic preservation expert, or other qualified individual to fully document the structure(s) to be demolished or altered. Documentation shall be undertaken following consultation with Planning Department preservation staff and the Historic Preservation Commission, and shall at a minimum be performed to HABS Level II documentation standards. According to HABS Standards, Level II documentation consists of the following tasks:

- Written data: A brief report documenting the existing conditions and history of the building shall be prepared, focusing on the building's architectural and contextual relationship with the greater Western SoMa neighborhood.
- Photographs: Photographs with large-format (4x5-inch) negatives shall be shot of exterior and interior views of all three project site buildings. Historic photos of the buildings, where available, shall be photographically reproduced. All photos shall be printed on archival fiber paper.
- Drawings: Existing architectural drawings (elevations and plans) of all three the project site buildings, where available, shall be photographed with large format negatives or photographically reproduced on Mylar.

The completed documentation package shall be submitted to local and regional archives, including but not limited to, the San Francisco Public Library History Room, the California Historical Society and the Northwest Information Center at Sonoma State University in Rohnert Park.

M-CP-3b: **Public Interpretative Displays.** Prior to demolition or substantial adverse alteration of historical resource(s) that are significant due to event(s) that occurred in the building at the development site, the project sponsor of a development project in the Plan area shall develop, in consultation with Planning Department preservation staff, a permanent interpretative program/and or display that would commemorate such event(s). The program/display would be installed at a publicly accessible location, either at or near the project site or in another appropriate location (such as a library or other depository). The content and location of the display shall be presented to the Historic Preservation Commission for review and comment.

M-CP-3c: **Relocation of Historical Resources.** Prior to demolition or substantial alteration of historical resource(s), the project sponsor of a development project in the Plan area shall make any historical resources that would otherwise be demolished or substantially altered in an adverse manner available for relocation by qualified parties.

In addition to the foregoing measures, the procedures spelled out in Article 11 of the *Planning Code* and in the City's transferrable development rights (TDR) program (*Planning Code* Section 128) would serve to avoid or minimize potentially significant impacts on historical resources. Moreover, as noted in the Setting, the draft Plan proposes expansion of the existing local New Montgomery–Second Street Conservation District; revision of some Article 11 ratings for individual building categories I – V, along with revisions to the TDR program; and potential City Landmark designation for four individual structures in the Plan area. These policies and programs in the draft Plan would also function to avoid or minimize potentially significant impacts on historical resources.

Level of Significance after Mitigation

The foregoing mitigation measures would reduce the adverse impacts of the proposed Plan on historical resources, but not to a less-than-significant level. Therefore, the impacts are considered **significant and unavoidable**.

While relocation of historical resources could reduce the severity of impacts, it would likely not be practical except in limited circumstances (notably, for smaller buildings). This is because of the relatively high cost associated with such effort. Also, many of the historical resources that could be affected are either constructed of masonry (reinforced or unreinforced) or are faced in brick, meaning that such buildings are relatively more fragile than wood-frame structures such as residential buildings relocated in the Western Addition in the 1970s. Therefore, while relocation of one or more buildings could be undertaken, it is considered unlikely to be widely accomplished. Moreover, a relocated building could suffer, at a minimum, a loss of integrity of setting.

Impact CP-4: Changes to the height and bulk limits in the Plan area could result in indirect impacts to historic architectural resources. (Less than Significant)

Existing building height limits in the Plan area range from 30 feet at First and Mission Streets to 550 feet in other areas. The Plan would increase the height limit at First and Mission Streets to 1,000 feet to accommodate the proposed Transit Tower, and up to 850 feet in other areas (see Table 1, Proposed Height Limit Increases, on p. 19 of the Project Description).

By eliminating the maximum limit on floor area ratio and increasing height limits and changing use districts in portions of the Plan area, the draft Plan could increase the financial incentive to replace smaller buildings with newer, taller buildings, in order to take advantage of the greater allowable height and bulk. Thus, the increased height and bulk limits could foster the development of taller buildings adjacent to or near existing historical resources. Such new developments could bring significant changes to the historical resources' setting, thereby potentially compromising the integrity of those resources. While any height increase to surrounding buildings can potentially compromise the integrity of a historical resource's location and context, it is generally true that as permitted heights increase, so do potential adverse effects to nearby historical resources. For example, the draft Plan would permit development of a 750-foot-tall building on a TJPA-owned parcel (known as "Parcel F") on the north side of Howard Street near Second Street. Development of this tower would not result in direct effects on any historical resources. However, the addition of a building of a size and scale so much greater than that of nearby buildings in the Second and Howard Streets District and the local conservation district (and to individually listed or eligible resources) could result in an adverse effect on the setting of one or both districts, depending on the design of the new tower. Other high-rise development could result in somewhat similar effects, although generally to a lesser degree, as the Parcel F tower would be the tallest building in proximity to such a large concentration of historical resources. It is noted, however, that the Parcel F site is separated from both districts by the location of the new ramp to the Transit Center, which would attenuate potential impacts.

However, there are a number of draft Plan policies that address historical resources, such as recognizing and protecting historic resources, promoting the retention and rehabilitation of significant resources, and maintaining and balancing the TDR program. These policies and programs, in combination with implementation of design review and other processes through *Planning Code* Article 11, would serve to avoid any potentially significant indirect effects of the Plan's changes to use districts and height limits on historic resources. Therefore, the indirect impacts of the draft Plan on existing historical resources would be less than significant.

Impact CP-5: Construction activity in the Plan area could result in damage to historic architectural resources. (Less than Significant with Mitigation)

As described in Section IV.F, Noise and Vibration, construction activity can generate vibration that can cause structural damage in nearby buildings. In general, even pile driving, which causes the greatest

vibration levels during construction, is sufficiently attenuated by distance such that the peak particle velocity at 100 feet from pile driving is less than 0.2 inches per second (0.2 PPV), the threshold established by the Federal Transit Administration for potential damage to non-engineered timber and masonry buildings. At closer distances, pile driving, and possibly other construction activity, could potentially damage historical resources, particularly unreinforced masonry structures. Mitigation Measures M-CP-3b and M-CP-3c would require contractors to undertake best practices during construction and to conduct pre-construction surveys of historical resources within 125 feet of proposed construction (to allow for a 25 percent safety factor) and to conduct construction-period monitoring of these resources to ensure that potential construction impacts would be reduced to a less-than-significant level.

Mitigation Measures

M-CP-5a **Construction Best Practices for Historical Resources.** The project sponsor of a development project in the Plan area shall incorporate into construction specifications for the proposed project a requirement that the construction contractor(s) use all feasible means to avoid damage to adjacent and nearby historic buildings, including, but not necessarily limited to, staging of equipment and materials as far as possible from historic buildings to avoid direct impact damage; using techniques in demolition (of the parking lot), excavation, shoring, and construction that create the minimum feasible vibration; maintaining a buffer zone when possible between heavy equipment and historical resource(s) within 125 feet, as identified by the Planning Department; appropriately shoring excavation sidewalls to prevent movement of adjacent structures; design and installation of the new foundation to minimize uplift of adjacent soils; ensuring adequate drainage from adjacent sites; covering the roof of adjacent structures to avoid damage from falling objects; and ensuring appropriate security to minimize risks of vandalism and fire.

M-CP-5b **Construction Monitoring Program for Historical Resources.** The project sponsor shall undertake a monitoring program to minimize damage to adjacent historic buildings and to ensure that any such damage is documented and repaired. The monitoring program would include the following components. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a historic architect or qualified historic preservation professional to undertake a preconstruction survey of historical resource(s) identified by the Planning Department within 125 feet of planned construction to document and photograph the buildings' existing conditions. Based on the construction and condition of the resource(s), the consultant shall also establish a maximum vibration level that shall not be exceeded at each building, based on existing condition, character-defining features, soils conditions, and anticipated construction practices (a common standard is 0.2 inches per second, peak particle velocity). To ensure that vibration levels do not exceed the established standard, the project sponsor shall monitor vibration levels

at each structure and shall prohibit vibratory construction activities that generate vibration levels in excess of the standard.

Should vibration levels be observed in excess of the standard, construction shall be halted and alternative techniques put in practice, to the extent feasible. The consultant shall conduct regular periodic inspections of each building during ground-disturbing activity on the project site. Should damage to either building occur, the building(s) shall be remediated to its preconstruction condition at the conclusion of ground-disturbing activity on the site.

Level of Significance after Mitigation

Implementation of Mitigation Measures M-CP-5a and M-CP-5b would reduce construction-related impacts on historic architectural resources to a less-than-significant level.

Transit Tower Impacts

Impact CP-6. Development of the proposed Transit Tower would not directly or indirectly result in substantial adverse changes in the significance of historical resources. (Less than Significant)

The proposed Transit Tower project would include a mixed use office tower on the south side of Mission Street between First and Fremont Streets. The Plan foresees the Transit Tower as the City's tallest structure, with an "enclosed" height (i.e., the height at the top of the highest occupiable floor) of up to 920 feet. The Plan also calls for a sculptural element to potentially be located atop the tower. Although the Transit Tower would be developed on a portion of the site until recently occupied by the National Register-eligible Transbay Terminal, the terminal itself was demolished beginning in 2010 as part of the separate project to develop the new Transit Center. This demolition was fully analyzed and determined to be a significant and unavoidable impact to historic resources as part of the previously certified EIS/EIR for the Transit Center, Caltrain extension, and Transbay Redevelopment Plan (SCH No 95063004). As these direct effects of demolition have already been analyzed under a separate planning document, they are not addressed in this document. However, the proposed Transit Tower could have indirect effects to the setting of nearby historic resources and/or existing or potential historic districts in the project vicinity.

The proposed Transit Tower would be constructed directly and diagonally across First and Mission Streets from the three historic buildings which comprise the 50 First Street Project Site; 62 First Street and 88 First Street (both rated "3CS" or individually eligible for listing in the California Register), and 76 First Street (rated "2S2" determined individually eligible for the National Register). If the Transit Tower is constructed prior to the 50 First Street project, or if the 50 First Street project does not occur in the future and the existing buildings on that site remain in place, the setting of these buildings could be adversely affected by the construction of a tower up to 1,000 feet in height (and potentially up to 1,150 feet with sculptural element). The Transit Tower would contrast substantially with the architectural character of

the smaller, more fine-grained commercial buildings constructed between 1907 and 1917. A mixture of architectural styles and contrasting building heights is already prevalent in the immediate vicinity, and the setting of these three historic buildings has already been greatly altered by mid to late-20th century high rise construction. The proposed Transit Tower would further erode the historic setting of these three historic buildings, but not to the extent that they would no longer be eligible for the California Register, or the National Register in the case of 76 First Street. As stated in the *Context Statement*, "Since the late 1960s, intervening development has severed this small enclave from the rest of the [potential expanded New Montgomery–Mission–Second Street] district." The small concentration of existing buildings around the intersection of First and Mission Streets, were they to remain, would continue to present a "relatively intact cluster of early 20th-century masonry loft buildings," even with development of the Transit Tower. As such, no significant impacts to immediately adjacent historic resource are anticipated from construction of the Transit Tower.

The proposed Transit Tower would be located approximately 300 feet from the eastern edge of the existing New Montgomery-Second Conservation District and the potential New Montgomery, Mission and Second Historic District. While the upper stories of the tower would be clearly visible from these existing and potential historic districts, there would be no significant indirect effects to their setting, given the relatively large distance (300 feet) between the tower and the districts, and the number of intervening non-contributing high rise buildings in the Plan area which have already altered the setting of the districts. As such, no significant indirect impacts to either existing or proposed districts are anticipated from construction of the Transit Tower.

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Cumulative Impacts

Impact C-CP: Development pursuant to the draft Plan, along with cumulative development, including the Transit Tower, could adversely affect historical resources. (Significant and Unavoidable)

No cumulative significant impacts to archeological resources are anticipated beyond impacts identified for the Plan and Transit Tower, because effects are typically considered on a site-by-site basis.

However, development pursuant to the draft Plan, including development of the Transit Tower, could result in significant, unavoidable impacts to historical resources, as described above. In addition, other development, including projects in the Plan area that could proceed without the need for the zoning district changes or increased height limit proposed in the draft Plan, as well as projects near to the Plan area, would also have the potential to adversely affect historical resources, both through demolition and substantial adverse alteration. Such changes could also indirectly affect historical resources by changing the setting of individual historical resources or historic districts. Potential cumulative impacts, to which the draft Plan would make a considerable contribution, would be **significant and unavoidable**.

Mitigation Measures

M-C-CP: Implement Mitigation Measures M-CP-3a, **HABS/HAER Documentation**, and M-CP-3b, **Public Interpretive Displays**, and M-CP-3c, **Relocation of Historical Resources**.

Level of Significance after Mitigation

Implementation of Mitigation Measures M-CP-3a, M-CP-3b, and M-CP-3c would lessen the severity of effects on historical resources, but would not reduce them to a less-than-significant level. Thus, the impact would remain **significant and unavoidable**.

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E. Transportation

This analysis is based on a transportation study prepared for the Transit Center District Plan, and a separate project-specific analysis for the Transit Tower.[155]

Setting

Street System

Interstate Highway 80 (I-80) and U.S. Highway 101 (U.S. 101) provide the primary regional access to the Plan area, linking the area to the East Bay (I-80, via the Bay Bridge) and to the North Bay (U.S. 101, via the Golden Gate Bridge) and the Peninsula and South Bay (U.S. 101). The elevated I-80 "skyway" merges with U.S. 101 about one mile southwest of the Plan area. Access to and from I-80 is provided via on- and off-ramps at Fremont, First, and Essex Streets, south of the Plan area, and Fourth, Fifth, Seventh, and Eighth Streets, to the southwest. I-280 provides alternative access to the Peninsula/South Bay, with ramps at King and Sixth Streets.

Within the Plan area, all of the major east-west streets in the Plan area (Market, Mission, Howard, and Folsom Streets) are identified in the Downtown Plan (Map 6) as Transit Preferential Streets. Several Plan area streets are called out in the Downtown Streetscape Plan, which was adopted in 1995 to implement a Downtown Pedestrian Network as called for in Downtown Plan Objective 22. This plan identifies Mission Street as a "Special Street," Second and Beale Streets as "Second Level Streets," and Minna, Natoma, and Ecker Streets and Shaw Alley as "Walk Through Alleys." The *San Francisco Bicycle Plan* (2009) identifies Howard and Folsom Streets as part of the City's existing bicycle route network, and calls for new bicycle lanes on Second Street and a shared northbound auto-bicycle lane on Fremont Street south of Howard Street.

Existing intersection levels of service in the Plan area are presented in **Tables 17** and **18**, pp. 286 and 287. Under existing conditions, 47 of the 62 study intersections (see **Figure 54**, p. 285) operate at an acceptable level of service (LOS D or better) during the afternoon (p.m.) peak hour; the 15 intersections operating at unacceptable LOS E or F conditions are primarily those leading to freeway on-ramps (First Street intersections from Market to Harrison Street; Harrison Street intersections at Main, First, Second, Essex, and Fourth Streets; Bryant Street at Second, Fourth, and Fifth Streets; and New Montgomery at Howard Streets), along with the intersections of Kearny/Market/Third/ Geary Streets and Beale and Howard Streets. All 12 intersections analyzed in the morning (a.m.) peak hour operate at an acceptable LOS. [156]

Existing conditions at nearby freeway ramps are presented in **Table 20**, p. 298.

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155 AECOM, *Transit Center District Plan Transportation Impact Study*, September 2011. This report is available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2007.0558E and Case No. 2008.0789E.

156 The intersections selected for analysis in the a.m. peak hour 12 of the intersections were selected based on their being most likely to be affected by vehicles arriving into downtown San Francisco during the morning commute.

Transit

The Plan area has the greatest concentration of both local and regional transit in San Francisco (and, in fact, in the Bay Area). Local service is provided by the San Francisco Municipal Railway (Muni). Service to and from the East Bay is provided by BART, AC Transit and ferries; service to and from the North Bay is provided by Golden Gate Transit buses and ferries; and service to and from the Peninsula and South Bay is provided by SamTrans and BART, as well as by Caltrain, which can be reached by a connecting Muni line (and is within walking distance for many riders). There are several transit-only lanes (taxis may also use these lanes) in the Plan area, including on Mission Street west of Main/Beale Streets (depending on direction), from 7:00 a.m. to 6:00 p.m.; on First Street between Market and Howard Streets (all times); and on Fremont Street between Market and Mission Streets (all times).

Transit service that formerly served the Transbay Transit Terminal was relocated to the Temporary Transbay Terminal, on Howard Street between Beale and Main Streets, in late 2010. In general, the routes that formerly served the Transbay Transit Terminal will be relocated to the new Transbay Transit Center, currently under construction, when it opens in 2014.

Muni Service

Muni lines serving the Plan area include the six Muni Metro lines (J-Church, K-Ingleside/ T-Third Street,[157] L-Taraval, M-Oceanview, and N-Judah), all of which are accessible at the Montgomery and Embarcadero Stations on Market Street, the F-Market and Wharves historic streetcar line on the surface of Market Street, and bus lines 1-California (and 1AX and BX Expresses), 2-Clement, 3-Jackson, 5-Fulton, 6-Parnassus, 9-San Bruno, 10-Townsend, 12-Folsom/Pacific, 14-Mission (and 14 Limited and 14X Express), 21-Hayes, 30X-Marina Express, 31-Balboa (and 31-AX and BX Expresses), 38-Geary (and 38 Limited and 38AX and BX Expresses), 41-Union, 71-Haight/Noriega (and 71 Limited), and 108-Treasure Island, along with three routes offering express service to the Caltrain station at Fourth and King Streets and the 76-Marin Headlands (Sunday and holiday service only). Additional lines operate within a block of the Plan area, including the 8X, 8AX, and 8BX Expresses, 30-Stockton, 45-Union/Stockton, and 91-Owl (late night service only).

For analysis purposes, most Muni service into and out of downtown is grouped into one of four "screenlines" (Northeast, Northwest, Southeast, and Southwest) that transit vehicles cross when passing between downtown and a quadrant of the City. Each screenline is further divided into key corridors such as the Geary Corridor within the Northwest screenline and the Mission Corridor within the Southwest screenline, for which ridership and capacity are presented separately from other lines. Together, the lines included in the screenline analysis represent the primary commute lines into and out of the greater

[157] The K and T lines function as a single line; inbound K trains transition to outbound (to Visitacion Valley) T trains in the Market Street tunnel, while inbound (to downtown) T trains become outbound K trains in the tunnel.

Downtown area.[158] More than 20,000 riders travel on the screenline routes during both the morning and afternoon peak hours each day.

Under existing conditions, Muni service operates within Muni's acceptable standard of 85 percent capacity utilization (riders as a percentage of capacity) in the peak direction on all corridors within each screenline, with the exception of Muni Metro service at the Southwest screenline (just outbound of the Market Street station); Muni Metro service in the subway currently operates at 86 percent of capacity utilization in the morning peak hour, and 87 percent in the afternoon peak hour.[159] Ridership in the non-commute direction is considerably lower than that in peak direction, and Muni has substantial surplus capacity in non-commute service. Many trips on Market Street service do not affect screenline capacity as these trips do not pass through the maximum load point, but they can cause some degree of concentrated loading on transit vehicles before or after the maximum load point. Observations indicate that a sizable number of Market Street riders use surface transit along Market Street, as the aggregate frequency and convenience of surface lines is sufficient to preclude many riders from using Muni Metro for these short trips.

Regional Transit Service

Five principal regional transit providers serve San Francisco: BART from the East Bay and northern Peninsula; Caltrain and SamTrans from the Peninsula; AC Transit from the East Bay, and Golden Gate Transit (buses and ferries) from the North Bay. There are also three additional East Bay ferry providers—Vallejo Baylink, Alameda Harbor Bay Ferry, and Blue & Gold Fleet's Oakland/Alameda Ferry. Blue & Gold also serves Tiburon and Sausalito, although much of this service is to and from Fisherman's Wharf. All of these regional transit providers serve the Plan area or the immediate vicinity (the Ferry Building is six blocks from the Transit Center site), with the exception of Caltrain, whose station is at Fourth and King Streets, about one mile southwest of the Transit Center.

Regional transit operations are evaluated at three regional screenlines (East Bay, North Bay, and South Bay). Approximately 38,000 transit riders currently cross the three regional screenlines during the morning and afternoon peak hours, with about 59 percent crossing the East Bay screenline (88 percent of

158 The Northeast screenline (generally separating the greater downtown from North Beach, Russian Hill, and Polk Street) and includes the Kearny/Stockton corridor (Lines 30 and 45) and Other service (Lines F, 10, and 41). The Northwest screenline (essentially, Van Ness Avenue) includes the Geary corridor (38, 38L, 38AX and BX), the California corridor (1, 1AX and BX), the Sutter/Clement corridor (2, 3), the Fulton/Hayes corridor (5, 21), the Balboa corridor (31, 31AX and BX), and the Chestnut/Union corridor (30, 30X, 41, 45). The Southeast screenline (approximately Duboce Avenue and 18th Street)includes the Third Street corridor (T), the San Bruno/Bayshore corridor (8X, 8AX and BX, 9), and Other service (J, 12, 19). The Southwest screenline (Gough, Market, and Duboce) includes the Subway corridor (K, L, M, N), the Haight/Noriega corridor (6, 71, 71L, 16AX and BX [the latter two are outside the Plan area]), and Other service (F).

159 Capacity utilization based on aggregation of each line's "maximum load point," regardless of whether that maximum load occurs within the Plan area. Each vehicle's capacity includes seated passengers and a number of standing passengers that is between 30 and 80 percent of the seated capacity depending upon the specific transit vehicle. Maximum capacities, including both seated and standing passengers, are 45 passengers for the 30-foot bus, 63 passengers for a standard 40-foot diesel or electric (trolley) bus, 94 passengers for a 60-foot (articulated) bus, and 119 passengers for a Muni Metro rail car.

which are on BART), while about 35 percent cross the South Bay screenline (80 percent on BART). All regional transit providers currently operate at less than their capacity standard under existing conditions.[160]

As with Muni service, ridership on regional transit in non-commute directions during the peak hours is relatively low. Many of the regional operators, such as express buses operated AC Transit, SamTrans, and Golden Gate Transit, operate only in the peak direction, with no (or limited) service in the reverse direction due to limited demand. BART service in the non-commute direction operates at the same frequencies as in the commute direction, generally resulting in substantial excess capacity on counter-commute trains.

Pedestrian Conditions

All major streets in the Plan area have sidewalks and all major intersections have signalized crossings with marked crosswalks. Intersection corners in the Plan Area also have curb ramps, although some are not Americans with Disabilities Act (ADA) compliant and lack tactile warning systems such as the bumpy plastic tiles known as "truncated domes." Sidewalks in the Plan area generally range from 8 to 15 feet in width along most streets to 30 feet or more along Market Street. However, the effective width of each sidewalk is often less due to obstructions such as street trees, lamp posts, newspaper racks, and other objects. The effective width is increased in some locations by publicly accessible building setbacks.

Because of the high concentration of jobs and of transit service in the Plan area, there is generally a high level of pedestrian activity throughout the day, with peaks occurring in the morning and afternoon commute periods and the noon hour. At some locations, there is potential for pedestrian-vehicle conflicts, primarily on left- and right-turning movements at intersections. However, the effects of these pedestrian-vehicle conflicts are more apparent in the operations of the affected vehicular movements (which may see reduced capacity) as opposed to safety hazards to pedestrians. For example, the number of collisions involving pedestrian injury is generally lower at Plan area intersections than at many intersections farther west in the South of Market neighborhood and the Tenderloin.[161] The greatest number of pedestrian injury collisions in the Plan area occur along Fremont Street and on Market Street; the intersections of Market Street at Sixth Street and at Fifth Street, west of the Plan area, were two of the four intersections with the highest numbers of reported pedestrian injury collisions during the period 2007 – 2009.[162]

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160 Capacity on BART is considered 1. 5 riders per seat (i.e., 50 percent standees), while for other operators, capacity is reached when all seats are occupied.

161 San Francisco Municipal Transportation Agency, *Eastern Neighborhoods Transportation Implementation Planning Study (EN TRIPS): Existing Conditions Report*, June 2010. Available at: http://www.sf-planning.org/ftp/files/Citywide/Eastern_Neighborhoods/SFMTA_EN_TRIPS_Existing_Conditions_REPORT_7_2_10.pdf.

162 San Francisco Municipal Transportation Agency, *San Francisco 2009 Collisions Report,* April 21, 2011; Figures 17; available at: https://sfmta.securesites.net/cms/vsafe/documents/Collision_report_2009.pdf. (Injury collision total for 1996 taken from MTA's *2005 Collision Report*.) A third nearby intersection, Sixth/Howard Streets, is also among the four with the highest number of pedestrian injury collisions.

Citywide, the number of pedestrian injury collisions citywide (including fatalities) has generally declined over the last 14 years, from 1,018 in 1996 to 695 in 2009.[163]

In terms of pedestrian activity, crosswalks in the Plan area generally operate at acceptable level-of-service conditions (i.e., are not overcrowded), although one or more crosswalks at New Montgomery/Mission Streets, Fremont/Mission Streets, and First/Mission Streets have sufficient activity that pedestrians may need to change speed and position to avoid conflicts with one another. Sidewalks in the Plan area generally operate without overcrowding, although the northeast corner of New Montgomery and Mission Streets and the northwest corner of Beale and Howard Streets were both observed to experience moderate pedestrian congestion in the midday period and, in the latter case, in the afternoon peak.

Bicycle Conditions

Bicycle routes with separate bike lanes (Class II route) are on The Embarcadero and King, Seventh, Eighth, Folsom, and Howard (west of Fremont) Streets. Class III routes, where bicycles share the roadway with vehicle traffic, exist on Second, Third, Fifth, Harrison, Division, Townsend, and Howard (east of Fremont) Streets. Also, Market Street, just north of East SoMa, is a major Class III bicycle route. Bicycle volumes in the East SoMa subarea in general were observed to be low to moderate. During field surveys, a substantial number of bicyclists were observed on Folsom Street (Route #30) and on Division Street (Route #36).

Bicycle commuting has been increasing in San Francisco. Between 2003 and 2009, the percentage of commuters traveling by bicycle increased from 1.9 percent to 3.2 percent, according to Census data; actual counts showed a 58 percent increase in the number of bicyclists observed at selected locations on San Francisco streets between 2006 and 2010.[164] As of 2007, the City currently ranked third among large U.S. cities, behind Portland and Minneapolis, in the percentage of commuters traveling to and from work by bicycle.[165]

Passenger and Freight Loading

On-street passenger (white) and freight (yellow) loading zones are distributed fairly evenly throughout the Plan area, albeit with a higher concentration, especially of yellow zones, closer to Market Street, where the concentration of larger office towers is much greater. More than half the blocks on major streets in the Plan area have one or more passenger loading zones, and virtually every block has at least one freight loading zone. In general, the passenger zones were observed to have relatively high turnover, due to limited time required to drop-off and pick-up passengers.

163 *Ibid.*

164 San Francisco Municipal Transportation Agency, *City of San Francisco 2010 Bicycle Count Report*, November 2010. Available on the internet at: http://128.121.89.101/cms/bhome/documents/City_of_San_Francisco_2010_Bicycle_Count_Report_edit12082010.pdf.

165 Alliance for Biking and Walking, *Bicycling and Walking in the United States: 2010 Benchmarking Report*, November 2010; pp. 32, 34. Available on the internet at: http://peoplepoweredmovement.org/site/images/uploads/2010%20Benchmarking%2011.20.10%20Web.pdf.

Freight loading zones were observed to be occupied between 50 percent and 75 percent of the time throughout the day, with periods of higher usage concentrated in the early mornings (primarily deliveries to restaurants and stores) and the midday period (primarily package and mail deliveries). Violations of the freight loading zones were routinely observed, including usage by non-delivery vehicles, such as passenger pick-ups/drop-offs and short-term parking. Such violations result in a shortage of available loading spaces in areas and during periods of high demand, which was observed to result in delivery vehicles double-parking in travel lanes, resulting in minor congestion. Delivery / service vehicles were also observed to stop at red zones (such as near intersections or fire hydrants) or at bus stops, affecting bus operations and resulting in additional delays at intersections. It should be noted that most large buildings in the Plan area provide off-street loading docks that can accommodate most of the daily delivery / service vehicle demands of each building. The demand for on-street loading zones tends to be from smaller buildings or uses that do not have off-street facilities, or by deliveries that only require a short stop (such as a package delivery).

Casual Carpools

"Casual carpools" are informal carpools formed when drivers and passengers meet at designated locations, primarily for trips between the East Bay and San Francisco. Passengers are typically dropped off in the Plan area, such as within the designated on-street "carpool" parking spaces along Howard Street, or via double-parking along Fremont Street, Howard Street, or Mission Street (many casual carpool drivers exit the Bay Bridge onto Fremont Street). An aggregate total of 550 feet of curb space is designated along both sides of Howard Street between Fremont and First Streets for carpool activities between 6:00 a.m. and 10:00 a.m. on weekdays. Observations of carpool drop-off activity on this section of Howard Street indicated that five to seven vehicles per signal cycle arrive at the designated drop-off zone, after making the northbound left turn from Fremont Street, typically occupying no more than half of the allotted curb space. Little double-parking was observed along this section of Howard Street and drop-off activity does not typically obstruct traffic on Howard Street.

In the evening, casual carpool pick-up spaces are designated on Beale Street between Howard and Folsom Streets between 3:30 p.m. and 7:00 p.m., occupying approximately 250 feet of curb space. Observations during the p.m. peak hour indicated that the designated curb space is generally sufficient to handle arrivals, although there is some queuing along streets as drivers wait for curb space to load passengers, as well as passenger queuing on sidewalks. Given that traffic volumes along this section of southbound Beale Street are low relative to the available lane capacity, traffic flow along southbound Beale Street is not substantially affected.

Parking

The parking study area encompasses an approximately one-block radius surrounding the Plan area and is generally bounded by Harrison, Third, Market, Montgomery and Pine Streets and the Embarcadero. Off-street parking was quantified, while on-street conditions were assessed qualitatively.

On-street parking is either metered (typically 15-minute or one-hour limit) or time-limited unmetered parking. On-street parking is prohibited on some streets during the morning and afternoon commute periods, including Mission, First, and Fremont Streets. No on-street parking is permitted on Market Street at any time. South of Mission Street, on-street parking is generally 80 percent or more occupied during the midday period, while occupancy reaches 85 percent closer to Market Street, and generally is close to 100 percent north of Market Street. There is a small area of residential permit parking ("Y" permit) in the Plan area on the block bounded by First, Second, Howard, and Folsom Streets.

There are approximately 60 off-street parking lots and garages in the parking survey area that provide publicly accessible parking. All Plan area facilities are privately operated; there are no City garages in the Plan area. Off-street parking was found to be used at approximately 85 percent of capacity in the midday period, and about 40 percent occupied in the evening, for those facilities operating after 7:00 p.m. Since the survey was conducted, approximately 10 parking lots and garages have closed due to construction of the Temporary Transbay Terminal and the start of work on the new Transit Center. This has resulted in elimination of some 1,800 spaces, or almost 15 percent of the previously available total of 13,500 spaces in the Plan area, and is presumed to have pushed midday occupancy to approximately 90 percent.

Impacts

Significance Criteria

The City has not formally adopted significance standards for impacts related to transportation and circulation, but generally considers that implementation of the project could have a potentially significant impact related to transportation and circulation if it were to:

- Conflict with an applicable plan, ordinance, or policy establishing a measure 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;
- 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;
- Result in a change in air traffic patterns, including either an increase in traffic levels, obstructions to flight, or a change in location, that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses;
- Result in inadequate emergency access; or
- Conflict with adopted policies, plans, or programs regarding public transit, bikeways, or pedestrian facilities, or otherwise substantially decrease the performance or safety of such facilities.

Due to the nature of the proposed project, there would be no impact related to the following topics for the reasons described below:

- ***Change in air traffic patterns.*** The Plan area is not near an airfield; San Francisco International Airport is about 12 miles to the south, and Metropolitan Oakland International Airport is about 11 miles to the southeast. These distances are outside of the limit for objects near airports in the guidance published by the Federal Aviation Administration (FAA).[166] Therefore, this criterion is not discussed further.

- ***Substantially increase hazards due to a design feature or incompatible uses.*** Neither development projects that would be permitted by the draft Plan nor the draft Plan's proposed public realm improvements would include design features that would be expected to result in particular safety hazards or introduce incompatible uses to the Plan area. On the contrary, many of the proposed public realm improvements would be anticipated to improve safety for pedestrians and bicyclists. Therefore, this criterion is not discussed further.

Below is a list of significance criteria used by the San Francisco Planning Department to assess whether a proposed project would result in significant impacts. These criteria are organized by mode to facilitate the transportation impact analysis; however, the transportation impact criteria are essentially the same as the ones presented above.

- The operational impact on signalized intersections is considered significant when project-generated traffic would cause the level of service (LOS) at a signalized intersection to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F as a result of the addition of project traffic; or, for an unsignalized intersection, cause the LOS at the worst-operating approach[167]to deteriorate from LOS D or better to LOS E or F (where Caltrans signal warrants would be met) or cause Caltrans signal warrants to be met when the worst approach is already operating at LOS E or LOS F.[168] The project may result in significant adverse impacts at intersections that operate at LOS E or F under baseline conditions depending upon the magnitude of the project's contribution to the worsening of the average delay per vehicle. In addition, the project would have a significant adverse impact if it would cause major traffic hazards or contribute considerably to cumulative traffic increases that would cause deterioration in levels of service to unacceptable levels;

- The operation impact on freeway ramps is considered significant when project-generated traffic would cause the level of service to deteriorate from LOS D or better to LOS E or F, or from LOS E to LOS F. In addition, a project would have a significant effect if it would contribute substantially to ramp volumes already operating at LOS E or F;

- The project would have a significant effect if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service (measured by capacity utilization in excess of an operator's standard); or cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result (measured by the need to add an additional transit vehicle, or, for routes with a headway [separation between buses] of 6 minutes or less, increase the round-trip travel time by half the headway or more, and for routes with a headway of greater than 6 minutes, increase the round-trip travel time by six minutes or more);

166 Tall buildings proposed in the Plan area, including the Transit Tower, would be required to be fitted with warning lights approved by the Federal Transportation Administration.

167 An "approach" to an intersection represents vehicles entering the intersection on one street from one direction.

168 The LOS analysis provides a standardized means of rating an intersection's operating characteristics on the basis of traffic volumes, intersection capacity, and delays. LOS A represents free-flow conditions, with little or no delay, while LOS F represents congested conditions, with extremely long delays; LOS D (moderately high delays) is considered the lowest acceptable level in San Francisco.

- The project would have a significant effect if it would cause a pedestrian facility to deteriorate from LOS D or better to LOS E or LOS F, or from LOS E to LOS F, or add substantially to pedestrian congestion where the facility operates at LOS E or LOS F under existing conditions; or result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas; or
- The project would have a significant effect if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas; or
- The project would have a significant effect if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, or pedestrians; or
- The project would have a significant effect if it would result in inadequate emergency access.

Parking supply is not considered to be a part of the permanent physical environment in San Francisco.[169] Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

As described above, neither the draft Plan nor the Transit Tower would result in a change in air traffic patterns, including obstructions to flight that results in substantial safety risks[170] or substantially increase hazards due to a design feature or incompatible uses. Therefore, these issues are not analyzed.

Plan Impacts

Travel Demand

The San Francisco County Transportation Authority (SFCTA) countywide travel demand forecasting model was used to develop the travel forecasts for development and growth through the year 2030 in the Plan area. Inputs to the SFCTA model are generated by the Planning Department from departmental growth forecasts; regional traffic growth is derived from forecasts by the Association of Bay Area Governments (ABAG). Additionally, trip generation for assumed development on potential individual project sites within the Plan area was calculated based on the Planning Department's *Transportation Impact Analysis Guidelines for Environmental* Review (2002), with trip generation rates modified by a Resident Travel Behavior Survey undertaken in 2008 in an and around the Plan area, as well as the SFCTA model and the Institute of Transportation Engineers *Trip Generation* manual to account for linked trips between different uses and for area-specific conditions. This approach results in an impacts

169 Under California Public Resources Code (CEQA) Section 21060.5, "environment" can be defined as "the physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise and objects of historic or aesthetic significance." In 2010, the state CEQA Guidelines were amended to remove parking impacts from consideration in Appendix G, the environmental checklist.

170 Tall buildings proposed in the Plan area, including the Transit Tower, would be required to be fitted with warning lights approved by the Federal Transportation Administration.

assessment for year 2030 conditions that takes into account both the future development expected in the Plan and the expected growth in housing and employment for the remainder of San Francisco and the nine-county Bay Area. This is the common and generally accepted approach to transportation analysis in San Francisco, and is similar to that used in other communities, although San Francisco is unique in being a City and County, and therefore having a transportation model that serves only a single city.

The transportation analysis calculated service levels and capacity utilization for existing conditions to serve as a basis for assessing impacts. Travel demand was estimated for the following three land use scenarios:

- **2030 Without Project**—Assumes future development and growth consistent with the forecasts by ABAG for San Francisco and the Bay Area, but without any changes to uses on the development sites in the Plan area that are assumed to be improved under the Plan scenario, as described in the Analysis Assumptions set forth at the start of Chapter IV (p. 72). This scenario assumes approval and completion of several projects east and south of the Plan area, including the Museum of Modern Art expansion, a residential tower and the Mexican Museum project at Third and Mission Streets, expansion of Moscone Convention Center and associated mixed-use development at Third and Folsom Streets, and three mixed use projects, at Second and Harrison Streets, Fourth and Harrison Streets, and Fifth and Mission Streets. In addition, the 2030 Without-Project Scenario includes a number of modifications to the Plan area roadway network that are considered reasonably foreseeable. These include implementation of Bicycle Plan projects on Second and Howard Streets; two-way traffic on Folsom Street east of Fremont Street and on Spear Street south of Folsom Street (consistent with the Rincon Hill Plan); Muni service changes consistent with the Transit Effectiveness Project; operation of the Central Subway Muni Metro extension that is now under construction; and implementation of certain streetscape improvements in Zone 1 of the Transbay Redevelopment Area, including reconfiguration of the I-80 off-ramp at Fremont and Folsom Streets,. Also assumed is extension of Caltrain to the new Transit Center now under construction and expanded ferry service on San Francisco Bay.

- **2030 With Plan Area Growth**—This scenario includes the foregoing plus the incremental additional development associated with the 17 individual "soft" sites in the Plan area that could occur under the rezoning, including increased heights, proposed under the draft Plan. This scenario also includes development of the Transit Tower.

- **2030 With Plan Area Growth and Public Realm Improvements**—This scenario adds to the above the effects of changes to the street network that are proposed as part of the draft Plan. These changes are described in Chapter II, Project Description (p. 27) and depicted graphically in **Appendix C**. This scenario includes all reasonably foreseeable growth and street network changes that could affect the Plan area and vicinity.

No separate cumulative model run was undertaken, because, as noted, the 2030 forecasts developed by the Planning Department include growth in the remainder of San Francisco, as well as in the rest of the Bay Area. Thus, the Plan analysis takes into account the cumulative growth scenario for the year 2030, including non-project-generated growth accounted for in the 2030 Without-Project scenario, as well as growth from development that would occur with implementation of the draft Plan. Growth resulting from the draft Plan itself is the increment between the 2030 Without-Project condition and the 2030 with Plan Area Growth scenario, while the overall impact of the draft Plan, including the proposed public

realm improvements, is the Plan's increment of the change Existing conditions and the 2030 With Plan Area Growth and Public Realm Improvements scenario. The draft Plan's contribution to cumulative impacts is, therefore, the same increment, taken as a fraction of the overall change between Existing Conditions and the 2030 With Plan Area Growth and Public Realm Improvements scenario.

No direct comparison is made between the draft Plan and Existing Conditions, because it is not considered reasonably foreseeable that the full series of changes that would occur under Plan implementation—including both all the potential Plan area growth and all of the public realm improvements—would occur immediately, without other non-Plan-area projects and background growth in San Francisco also having taken place. That is, the draft Plan is a plan for long-term incremental change involving more than a dozen potential development sites across the Plan area, many of which have no proposed projects on file at this time, over the course of 20 years or more, during which time it must be assumed that other growth is also occurring throughout the City and the region. Therefore, the analysis evaluates the change from the 2030 Without-Project scenario to the 2030 plus Plan condition, as well as the change from Existing conditions to 2030 plus Plan conditions, which includes other growth not attributable to the draft Plan. In this way, the analysis captures both the total change from existing to future transportation operations, as well as the specific increment of Plan-attributable growth. As stated, a portion of the change between existing conditions and 2030 with-Plan conditions constitutes the Plan's contribution to cumulative impacts, and is reported as such. In this way, the analysis captures, analyzes, and identifies impacts resulting from both the Plan's distinct increment of growth and the Plan's contribution to cumulative growth.

The project-level analysis of the proposed Transit Tower compares that proposed project to existing conditions and also analyzes cumulative conditions, because it is reasonably foreseeable that the Transit Tower may be constructed in the near future, and because such analysis is standard practice in San Francisco for analysis of transportation impacts of a specific building project.

Impacts on Intersection Levels of Service

Impact TR-1: Traffic growth related to the draft Plan, including the street changes, would adversely affect local intersection operation, and therefore would conflict with established measures of effectiveness for the performance of the circulation system. (Significant and Unavoidable with Mitigation)

The traffic analysis evaluated weekday p.m. peak-hour levels of service at 62 intersections in and near the Plan area. Twelve intersections were also evaluated in the a.m. peak hour. Study intersections are shown in **Figure 54**.

Under existing conditions, 47 of the 62 study intersections (see **Tables 17 and 18**, pp. 286 and 287) operate at an acceptable level of service (LOS D or better) during the afternoon (p.m.) peak hour; the 15 intersections operating at unacceptable LOS E or F conditions are primarily those leading to freeway on-ramps (First Street intersections from Market to Harrison Street; Harrison Street intersections at Main,



SOURCE: AECOM

Case Nos. 2007.0558E and 2008.0789E: Transit Center District Plan and Transit Tower . 207439

Figure 54
Study Intersections

TABLE 17
INTERSECTION LEVEL OF SERVICE – A.M. PEAK HOUR

Intersection	Existing		2030 w/o Project		2030 + Plan Growth		Growth+Public Realm	
	LOS [1]	Delay [2]	LOS [1]	Delay [2]	LOS [1]	Delay [2]	LOS [1]	Delay [2]
Kearny / Sutter	C	27.1	D	35.3	D	36.9	D	36.5
Battery / California	B	19.6	C	33.2	**E**	**61.9**	**E**	**61.9**
Front / Sacramento	B	17.5	B	16.8	B	16.8	B	18.1
Third / Kearny / Market / Geary	D	35.4	**F**	**>80.0 (0.93)**	**F**	**>80.0 (0.97)**	**F**	**>80.0 (0.96)**
Fremont / Market / Front	C	24.3	C	23.7	C	29.9	**F**	**>80.0 (1.05)**
Main / Market / Drumm	C	21.2	C	22.5	C	22.6	C	26.4
Fremont / Mission	D	36.1	**F**	**>80.0 (1.14)**	**F**	**>80.0 (1.23)**	**F**	**>80.0 (1.26)**
Fremont / Howard	D	37.9	**E**	**>75.0 (1.08)**	**F**	**>80.0 (1.31)**	**F**	**>80.0 (1.76)**
Embarcadero / Folsom	D	36.4	**F**	**>80.0 (0.77)**	**F**	**>80.0 (0.77)**	**F**	**>80.0 (0.83)**
Fifth / Harrison / I-80 WB Off	C	23.6	C	29.1	C	29.1	C	29.8
Second / Tehama	C	17.5	B	13.4	**F**	**>50.0)**	**F**	**>50.0)**
First / Tehama	B	12.4	B	14.4	C	17.6	B	13.4

[1] Intersections at LOS E or LOS F are **bolded;** solid box indicates significant project or project & cumulative impact; dashed box indicates significant cumulative impact.
[2] Delay in seconds per vehicle. Where delay exceeds 80 seconds (50 seconds for unsignalized intersection), volume-to-capacity ratio indicated in parentheses.

Source: AECOM, 2011.

First, Second, Essex, and Fourth Streets; Bryant Street at Second, Fourth, and Fifth Streets; and New Montgomery at Howard Streets), along with the intersections of Kearny/Market/Third/ Geary Streets and Beale and Howard Streets. All 12 intersections analyzed in the morning (a.m.) peak hour operate at an acceptable LOS.

2030 Without-Project Scenario

Under 2030 Without-Project conditions, 44 of the 62 intersections would operate at LOS E or LOS F in the p.m. peak hour, compared with 15 at unacceptable LOS under existing conditions (see Tables 17 and 18). In general, the poor operating conditions would occur along the primary access routes to the I-80/U.S. 101 freeway on-ramps. In the a.m. peak hour, four intersections would operate at LOS E or F, whereas all 12 intersections are at acceptable LOS under existing conditions.

Proposed Plan

With the addition of Plan-related growth only (no street changes), 49 of 62 intersections would operate at LOS E or F in the p.m. peak hour, and six of 12 would be at LOS E or F in the a.m. peak hour. Traffic from assumed Plan-related growth would result in a significant impact, either individually (by degrading LOS) or cumulatively (by making a considerable contribution to already degraded operations) at 33 of 62 intersections in the p.m. peak hour, and at five of 12 intersections in the a.m. peak hour. They are identified in Tables 17 and 18 by boxes around the level of service, delay, and volume-to-capacity ratios.

No mitigation for this significant impact is feasible at the vast majority of intersections, because it is generally not possible to expand vehicular travel capacity at intersections in and near the Plan area (i.e., all available right-of-way is already used for vehicle traffic) and other potential mitigation approaches, such as signal retiming, restriping, provision of right-turn pockets, or prohibition of left/right turns, cannot generally offer sufficient improvement in vehicle LOS to avoid significant impacts, where traffic volumes would exceed intersection capacity by as great a margin as would be the case for most of the study intersections. Additionally, measures that would affect the signal timing or require changes to intersection geometry could require comprehensive review by the Municipal Transportation Agency of

TABLE 18
INTERSECTION LEVEL OF SERVICE – P.M. PEAK HOUR

Intersection	Existing		2030 w/o Project		2030 + Plan Growth		Growth+Public Realm	
	LOS [1]	Delay [2]	LOS [1]	Delay [2]	LOS [1]	Delay [2]	LOS [1]	Delay [2]
Stockton / Geary	D	37.7	**F**	**>80.0 (1.09)**	**F**	**>80.0 (1.11)**	**F**	**>80.0 (1.10)**
Kearny / Sutter	C	26.5	**F**	**>80.0 (1.05)**	**F**	**>80.0 (1.08)**	**F**	**>80.0 (1.05)**
Montgomery / Bush	D	36.9	D	48.2	D	52.4	D	52.4
Battery / California	C	32.1	D	54.4	**E**	**65.1**	**E**	**65.0**
Front / Sacramento	B	13.7	B	14.7	B	14.9	B	15.0
Embarcadero / Washington	D	38.2	**F**	**>80.0 (0.65)**	**F**	**>80.0 (0.67)**	**F**	**>80.0 (0.65)**
Third / Kearny / Market / Geary	**E**	**57.6**	**F**	**>80.0 (0.95)**	**F**	**>80.0 (1.00)**	**F**	**>80.0 (0.99)**
Montg'y. / Market / N. Montg'y.	D	41.3	**E**	**61.3**	**E**	**68.9**	**E**	**66.2**
Second / Market	C	21.7	B	18.5	C	20.6	B	19.1
First / Market	**E**	**72.7**	**F**	**>80.0 (1.36)**	**F**	**>80.0 (1.44)**	**F**	**>80.0 (1.42)**
Fremont / Market / Front	B	19.1	C	30.5	**E**	**67.3**	**F**	**>80.0 (1.20)**
Beale / Market / Davis / Pine	C	31.6	**E**	**60.4**	**E**	**60.3**	**F**	**>80.0 (1.13)**
Main / Market / Drumm	C	21.7	C	23.0	C	23.2	C	26.9
Spear / Market	B	12.5	B	10.6	B	12.4	B	13.1
Third / Mission	C	22.8	**F**	**>80.0 (1.76)**	**F**	**>80.0 (2.14)**	**F**	**>80.0 (1.42)**
New Montgomery / Mission	B	17.0	C	31.4	**E**	**56.7**	**F**	**>80.0 (1.16)**
Second / Mission	C	22.5	B	15.9	C	21.6	**E**	**60.2**
First / Mission	**E**	**57.2**	**F**	**>80.0 (1.32)**	**F**	**>80.0 (1.69)**	**F**	**>80.0 (3.09)**
Fremont / Mission	C	24.8	**E**	**65.5**	**F**	**>80.0 (1.20)**	**F**	**>80.0 (1.42)**
Beale / Mission	D	35.2	**F**	**>80.0 (0.79)**	**F**	**>80.0 (0.88)**	**F**	**>80.0 (1.02)**
Main / Mission	B	15.0	B	16.5	B	17.1	C	23.3
Spear / Mission	D	39.9	D	41.5	**F**	**>80.0 (1.40)**	D	40.8
Steuart / Mission	B	17.4	B	18.0	C	25.1	C	24.5
Embarcadero / Mission	D	42.1	**F**	**>80.0 (1.25)**	**F**	**>80.0 (1.30)**	**F**	**>80.0 (1.26)**
Third / Howard	D	36.1	**F**	**>80.0 (1.29)**	**F**	**>80.0 (1.50)**	**F**	**>80.0 (1.63)**
New Montgomery / Howard	**E**	**59.4**	**F**	**>80.0 (1.29)**	**F**	**>80.0 (1.57)**	**F**	**>80.0 (2.37)**
Second / Howard	B	12.3	B	13.2	C	23.6	**F**	**>80.0 (1.62)**
First / Howard	**E**	**74.3**	**F**	**>80.0 (1.27)**	**F**	**>80.0 (2.36)**	**F**	**>80.0 (2.31)**
Fremont / Howard	D	48.6	**E**	**60.9**	**F**	**>80.0 (1.16)**	**F**	**>80.0 (1.49)**
Beale / Howard	**E**	**76.2**	**F**	**>80.0 (1.20)**	**F**	**>80.0 (1.29)**	**F**	**>80.0 (1.62)**
Main / Howard	C	32.2	**E**	**65.9**	**E**	**74.0**	**F**	**>80.0 (2.31)**
Spear / Howard	C	23.1	D	49.0	D	48.9	**F**	**>80.0 (1.29)**
Steuart / Howard	C	23.1	D	38.5	D	39.0	**E**	**67.7**
Embarcadero / Howard	D	44.2	**F**	**>80.0 (0.90)**	**F**	**>80.0 (0.91)**	**F**	**>80.0 (0.90)**
Third / Folsom	D	35.2	**F**	**>80.0 (1.42)**	**F**	**>80.0 (1.47)**	**F**	**>80.0 (1.34)**
Hawthorne / Folsom	D	35.6	**F**	**>80.0 (1.12)**	**F**	**>80.0 (1.19)**	**F**	**>80.0 (1.32)**
Second / Folsom	D	49.8	**F**	**>80.0 (1.28)**	**F**	**>80.0 (1.93)**	**F**	**>80.0 (2.14)**
First / Folsom	**E**	**70.1**	**F**	**>80.0 (1.09)**	**F**	**>80.0 (1.31)**	**F**	**>80.0 (1.62)**
Fremont / Folsom / I-80 WB Off	C	25.9	C	21.4	D	47.5	C	31.7
Beale / Folsom	C	32.8	**F**	**>80.0 (1.23)**	**F**	**>80.0 (1.29)**	**F**	**>80.0 (1.30)**
Main / Folsom	C	20.1	**F**	**>80.0 (1.24)**	**F**	**>80.0 (1.25)**	**F**	**>80.0 (1.13)**
Spear / Folsom	C	31.7	**F**	**>80.0 (1.39)**	**F**	**>80.0 (1.46)**	**F**	**>80.0 (2.52)**
Embarcadero / Folsom	D	45.5	**F**	**>80.0 (1.01)**	**F**	**>80.0 (1.02)**	**F**	**>80.0 (0.92)**
Fifth / Harrison / I-80 WB Off	D	52.0	**F**	**>80.0 (0.89)**	**F**	**>80.0 (0.91)**	**F**	**>80.0 (0.91)**
Fourth / Harrison / I-80 WB On	**E**	**66.3**	**F**	**>80.0 (1.152)**	**F**	**>80.0 (1.27)**	**F**	**>80.0 (1.27)**
Third / Harrison	D	37.1	**F**	**>80.0 (1.36)**	**F**	**>80.0 (1.48)**	**F**	**>80.0 (1.48)**
Hawthorne / Harrison	D	39.4	**F**	**>80.0 (1.21)**	**F**	**>80.0 (1.39)**	**F**	**>80.0 (1.39)**
Second / Harrison	**E**	**55.9**	**F**	**>80.0 (1.44)**	**F**	**>80.0 (1.50)**	**F**	**>80.0 (1.49)**
First / Harrison / I-80 EB On	**F**	**>80.0 (1.36)**	**F**	**>80.0 (1.36)**	**F**	**>80.0 (1.50)**	**F**	**>80.0 (1.48)**
Fremont / Harrison	C	29.9	**E**	**69.6**	**E**	**69.4**	C	27.6
Main / Harrison	**E**	**57.0**	**E**	**77.8**	**E**	**78.0**	D	48.2
Spear / Harrison	D	47.0	**E**	**55.8**	**E**	**55.7**	C	21.3
Embarcadero / Harrison	D	45.4	**F**	**>80.0 (1.19)**	**F**	**>80.0 (1.19)**	**F**	**>80.0 (1.09)**
Fifth / Bryant / I-80 EB On	**E**	**72.3**	**F**	**>80.0 (1.45)**	**F**	**>80.0 (1.46)**	**F**	**>80.0 (1.46)**
Fourth / Bryant / I-80 EB Off	**F**	**>80.0 (0.74)**	**F**	**>80.0 (0.92)**	**F**	**>80.0 (0.94)**	**F**	**>80.0 (1.25)**
Third / Bryant	D	41.2	**F**	**>80.0 (1.29)**	**F**	**>80.0 (1.36)**	**F**	**>80.0 (1.36)**
Second / Bryant	**E**	**56.6**	**E**	**72.8**	**F**	**>80.0 (1.14)**	**F**	**>80.0 (1.16)**
Embarcadero / Bryant	D	42.8	**F**	**>80.0 (0.94)**	**F**	**>80.0 (0.94)**	**F**	**>80.0 (0.94)**
Second / Tehama	C	15.3	B	**13.1**	**F**	**>50.0**	**F**	**>50.0**
First / Tehama	B	11.7	B	12.4	C	16.0	B	12.7
Essex / Folsom	--	--	**F**	**>80.0 (1.17)**	**F**	**>80.0 (1.19)**	**F**	**>80.0 (1.38)**
Essex / Harrison / I-80 EB On	**F**	**>80.0 (1.24)**	**F**	**>80.0 (1.50)**	**F**	**>80.0 (1.52)**	**F**	**>80.0 (1.58)**

[1] Intersections at LOS E or LOS F are **bolded;** solid box indicates significant project or project & cumulative impact; dashed box indicates significant cumulative impact.
[2] Delay in seconds per vehicle. Where delay exceeds 80 seconds (signalized intersections only), volume-to-capacity ratio indicated in parentheses.
Source: AECOM, 2011.

the entire Plan area network and beyond. As such, implementation of such measures is uncertain. Moreover, in light of the City's Transit First Policy and planning efforts to improve conditions for pedestrian, bicycle, and other non-vehicle modes of travel—including such efforts that are integral to the draft Plan itself—mitigating traffic impacts would often result in degrading conditions for other modes of travel. Therefore, this traffic impact is considered **significant and unavoidable**.

With the street configuration changes in the draft Plan's public realm plan added to the effects of assumed growth, 49 intersections would operate at LOS E or F in the p.m. peak hour, and seven would do so in the a.m. peak hour; most would be the same intersections that would operate at unacceptable levels of service as a result of Plan area growth. Redistribution of traffic from the public realm changes in addition to assumed Plan-related growth would result in a significant impact, either individually (by degrading LOS) or cumulatively (by making a considerable contribution to already degraded operations) at 38 of 62 intersections in the p.m. peak hour (compared to 33 intersections without the public realm plan), and at seven of 12 intersections in the a.m. peak hour (compared to five intersections without the public realm).

As with the Plan growth only scenario, no mitigation for this significant impact is feasible at the vast majority of intersections, because of a lack of available space to expand capacity and/or the insufficiency of other potential mitigation strategies such as signal timing changes or turn prohibitions. Moreover, because the public realm improvements under the draft Plan are explicitly intended to improve pedestrian and bicycle mobility, mitigating traffic impacts that would result in degrading conditions for other non-vehicular modes of travel would be contrary to this stated policy approach under the draft Plan. Therefore, this traffic impact is considered **significant and unavoidable**.

Although the number of intersections operating at unacceptable levels of service would be similar with Plan-related growth only and with assumed growth plus the street network changes, the public realm improvements would alter some of the locations of poor operations by improving vehicular LOS at some intersections and degrading LOS elsewhere. Where improvements in intersection LOS would occur, they would primarily be the result of anticipated redistribution in traffic due to the introduction of two-way traffic on blocks of Howard and Folsom Street that are currently one-way. **Table 19** compares intersection operating conditions for those intersections at which LOS would be acceptable under one Plan-related scenario and unacceptable under the other, as well as those intersections at which operations would change from LOS E to LOS F between scenarios.

In addition to the above, five of the mid-block signalized pedestrian crossings proposed as part of the public realm improvements would result in adverse traffic impacts: Second and Natoma Streets, First and Minna Streets, First and Natoma Streets, Fremont and Natoma Streets, and Fremont Street at the Transit Center Bus Plaza, between Minna and Natoma Streets (these latter signals are discussed in more detail below). No mitigation would be available for these impacts, short of not installing the new signals, and therefore the impacts are considered **significant and unavoidable**.

TABLE 19
INTERSECTIONS AT WHICH PUBLIC REALM IMPROVEMENTS RESULT IN CHANGED LOS

Intersection	2030 with Plan Growth		2030 Plan Growth plus Public Realm	
	LOS [1]	Delay [2]	LOS [1]	Delay [2]
A.M. Peak Hour				
Fremont / Market / Front	C	29.9	**F**	**80.0 (1.05)**
P.M. Peak Hour				
Second / Market	C	20.6	B	19.1
Fremont / Market / Front	**E**	**67.3**	**F**	**>80.0 (1.20)**
Beale / Market / Davis / Pine	**E**	**60.3**	**F**	**>80.0 (1.13)**
New Montgomery / Mission	**E**	56.7	**F**	**>80.0 (1.16)**
Second / Mission	C	21.6	**E**	**60.2**
Main/Mission	B	17.1	C	23.3
Spear / Mission	**F**	**>80.0 (1.40)**	D	40.8
Second / Howard	C	23.6	**F**	**>80.0 (1.62)**
Main / Howard	**E**	**74.0**	**F**	**>80.0 (2.31)**
Spear / Howard	D	48.9	**F**	**>80.0 (1.29)**
Steuart / Howard	D	39.0	**E**	**67.7**
Fremont / Folsom / I-80 WB Off	D	47.5	C	31.7
Fremont / Harrison	**E**	**69.4**	C	27.6
Main / Harrison	**E**	**78.0**	D	48.2
Spear / Harrison	**E**	**55.7**	C	21.3
First / Tehama	C	16.0	B	12.7

[1] Intersections operating at LOS E or LOS F conditions highlighted in **bold**.
[2] Delay in seconds per vehicle. Where delay exceeds 80 seconds, volume-to-capacity ratio indicated in parentheses.

Source: AECOM, 2011.

As described in Chapter II, Project Description, the draft Plan's public realm plan includes establishment of two new signalized locations for pedestrian crossings and for facilitating buses exiting the future Transit Center ground-level bus plaza, located on the east side of Fremont Street to the north of Natoma Street. (The bus plaza, part of the Transit Center now under construction, would have four bays for Muni buses and one bay for Golden Gate Transit buses.)

These two mid-block signals would be coordinated, operating as a single signal, with three separate signal phases: the first for northbound traffic on Fremont Street (and pedestrian traffic along Fremont Street crossing Natoma Street and the bus plaza), the second for the southern three bus bays (and pedestrian traffic crossing Fremont Street at Natoma Street), and the third for the northern two bus bays (and pedestrian traffic crossing Fremont Street at the Bus Plaza). This signal, in combination with the removal of one travel lane and conversion of another travel lane into a transit-only lane as also proposed, would reduce the capacity of Fremont Street between Howard Street and Mission Street. A microsimulation analysis revealed that delays would occur at the new signal, resulting in LOS F conditions on northbound Fremont Street and generating a queue of vehicles stretching back up onto the Bay Bridge off-ramp during the weekday a.m. peak period, when traffic along Fremont Street reaches its peak. During the weekday p.m. peak period, traffic volumes along Fremont Street are lower and could be accommodated with acceptable LOS and no significant queuing. This would be a **significant and**

unavoidable impact to which Plan-generated traffic and the draft Plan's public realm improvements would contribute.[171]

Street Changes due to Proposed Public Realm Improvements

Extension of two-way Howard Street from Fremont Street to New Montgomery Street would cause a substantial increase in delays on westbound approaches at intersections along Howard Street, especially at the intersection of First and Howard Streets (see Table 18), at which the new eastbound approach would conflict with the traffic headed to the Bay Bridge via First Street. In addition, the westbound approaches could experience additional congestion as vehicles attempting to make left turns—such as from Howard Street to First Street to access the Bay Bridge—restrict through capacity along an already constrained westbound Howard Street resulting from the loss of some westbound capacity to the addition of an eastbound traffic lane.

Extension of two-way Folsom Street from Fremont Street to Second Street would result in degraded intersection levels of service along Folsom Street (see Table 18) with the reduction in through capacity in the eastbound direction.

Elimination of one southbound travel lane on Spear Street would not substantially worsen traffic conditions, although the required changes to the signals and additional conflicts would cause delays to increase, such as on the southbound approach at Spear and Howard Streets (see Table 18).

Lane reductions along Fremont Street and Beale Street, both key arterials for Bay Bridge traffic, would exacerbate conditions at intersections that already operate at unacceptable level of service at intersections on these streets (see Table 18). Main Street, however, would continue to operate at acceptable LOS even with the removal of one travel lane.

The removal of one northbound travel lane along Fremont Street between the I-80 Westbound Off-Ramp and Market Street would substantially increase delays along northbound Fremont Street, a major artery for traffic arriving into downtown San Francisco from the Bay Bridge (see Table 18). There would be heavy congestion on the northbound approaches at Howard Street, Mission Street, and Market Street, exacerbated by high volumes of pedestrians crossing north-south across side streets. As a result, some vehicles may shift to Main Street, which would generally operate with much less congestion.

The removal of one southbound travel lane along Beale Street between Market and Mission Street would increase delays along southbound Beale Street, which serves as an access route for Bay Bridge traffic during the weekday p.m. peak period. In particular, there would be substantial degradation in LOS on the southbound approaches at Market / Pine Streets and Mission Street, and some vehicles may shift to

[171] A two-phase signal would avoid the significant impact but would not provide for adequate safety, as discussed under Mitigation Measures.

parallel streets such as Spear Street or already-congested streets such as First Street and the Embarcadero (see Table 18).

The removal of one northbound travel lane along Main Street between Howard Street and Market Street would not result in substantial degradation to LOS along northbound Main Street at Mission Street or Market Street, although the intersections of Main and Howard Streets and Main and Folsom Streets, when considering side-street approaches, would continue to operate at unacceptable conditions. In particular, the intersection of Main and Howard Streets would degrade from LOS E to LOS F (see Table 18). However, the northbound approaches at Main Street intersections would continue to operate under acceptable conditions with the removal of one travel lane.

No significant impacts were identified for other aspects of the draft Plan's public realm plan not otherwise identified, including closure of Shaw Alley, conversion of operations on Minna and Natoma Streets, extension of Tehama and Clementina Streets, new bulb-outs, median transit islands, and alterations to casual carpool zones.

As described further under Impact TR-7, below, implementation of the draft Plan would result in a shortfall of on-street freight loading spaces, which could further increase congestion on Plan area streets. This impact would be considered **significant and unavoidable**.

Mitigation Measures

Where mitigation would be different for the overall draft Plan (Plan growth plus the public realm improvements) than for Plan growth only, the discussion below focuses on mitigation for effects of the overall draft Plan, to ensure that the proposed project's full impact is mitigated, where feasible.

M-TR-1a **Signal Timing Optimization:** The Municipal Transportation Agency (MTA) could optimize signal timing at the following intersections to reduce impacts on intersection LOS to a less-than-significant level, by either improving conditions to LOS D or better or by avoiding the draft Plan's contribution to increased vehicle delay (mitigated LOS in parentheses):

- Stockton / Geary Streets (LOS F, p.m.)
- Kearny / Sutter Streets (LOS F, p.m.)
- Battery and California Streets (LOS D, a.m. and p.m.)
- Embarcadero / Washington Streets (LOS F, p.m.)
- Third / Folsom Streets (LOS F, p.m. peak)
- Beale / Folsom Streets (LOS F, p.m. peak)
- Embarcadero / Folsom Streets (LOS F, a.m. and p.m. peak)

Significance after Mitigation: Altering signal timing to change the amount of green-light time at the aforementioned intersections would either improve level of service to LOS D or better or, where the intersection would still operate at an unacceptable LOS E or F, avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate

signal progression (timing of related traffic signals) and pedestrian crossing time requirement prior to changing signal timing, impacts at these intersections would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1b **Taxi Left-Turn Prohibition:** At the intersection of Third /Mission Streets, the Municipal Transportation Agency (MTA) could expand existing prohibitions on peak-hour left turn to include taxis, thereby permitting only buses to make left turns.

Significance after Mitigation: Prohibiting eastbound left turns by taxis would either improve LOS or avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1c **Beale / Mission Streets Bulbs and Optimization:** At the intersection of Beale and Mission Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the north and south crosswalks to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the less-congested westbound / westbound Mission Street approaches to the southbound Beale Street approach.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA and DPW would have to further evaluate signal progression, pedestrian crossing time, and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1d **Steuart / Howard Streets Restriping:** At the intersection of Steuart and Howard Streets, the Municipal Transportation Agency (MTA) could remove two on-street parking spaces on the south side of Howard Street immediately west of the intersection and stripe the eastbound approach as one through lane and one shared through-right lane. The proposed design for eastbound Howard Street after extension of the westbound Howard Street bicycle lane to The Embarcadero calls for one wide curb lane and one parking lane, but a second eastbound travel lane at the intersection could be provided by removing up to two on-street parking spaces.

Significance after Mitigation: Implementation of this measure would improve conditions at Steuart / Howard Streets to LOS D, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1e **Beale / Folsom Streets Left-Turn Prohibition and Signal Optimization:** At the intersection of Beale and Folsom Streets, the Municipal Transportation Agency (MTA) could prohibit eastbound right turns from Folsom Street in the p.m. peak hour and optimize the signal timing by reallocating green time from the eastbound / westbound Folsom Street approaches to the northbound / southbound Beale Street approaches.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate signal progression, pedestrian crossing time requirements, and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1f **Third / Harrison Streets Restriping:** At the intersection of Third and Harrison Streets, the Municipal Transportation Agency (MTA) could convert one of the two eastbound lanes leaving the intersection into an additional westbound through lane by restriping the east (Harrison Street) leg of the intersection. In order to allow sufficient turning radius and clearance for heavy vehicles such as buses and trucks, two on-street parking spaces on the south side of Harrison Street east of the intersection would be removed.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate intersection lane geometry and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1g **Hawthorne / Harrison Streets Restriping:** At the intersection of Hawthorne and Harrison Streets, the Municipal Transportation Agency (MTA) could stripe an additional westbound through lane approaching the intersection by converting one of the two eastbound lanes.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate intersection lane geometry and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1h **Second / Harrison Streets Turn Prohibition and Optimization:** At the intersection of Second and Harrison Streets, the Municipal Transportation Agency (MTA) could prohibit eastbound left turns during the p.m. peak hour.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate

signal progression, pedestrian crossing time requirements, area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1i **Third / Bryant Streets Bulbs and Optimization:** At the intersection of Third and Bryant Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the south crosswalk to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the eastbound Bryant Street approach to the northbound Third Street approach.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate signal progression, pedestrian crossing time requirements, and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1j **Second / Bryant Streets Bulbs and Optimization:** At the intersection of Second and Bryant Streets, the Municipal Transportation Agency (MTA) and Department of Public Works (DPW) could install bulb-outs on the east and west crosswalks to reduce pedestrian crossing distances and times and optimize the signal timing plan at this intersection during the weekday p.m. peak hour by reallocating green time from the northbound / southbound Second Street approaches to the eastbound Bryant Street approach.

Significance after Mitigation: Implementation of this measure would avoid the draft Plan's contribution to increased vehicle delay, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate signal progression, pedestrian crossing time requirements, and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1k **Second / Tehama Streets Restriping and Optimization:** At the intersection of Second and Tehama Streets, the Municipal Transportation Agency (MTA) could prohibit eastbound and westbound left turns (from Tehama Street) during the a.m. and p.m. peak hours.

Significance after Mitigation: Implementation of this measure would improve operations to LOS D, thereby reducing impacts to a less than significant level. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate signal progression, pedestrian crossing time requirements, and area-wide traffic circulation and volumes, the impacts at this intersection would remain **significant and unavoidable**, due to the uncertainty of implementing this measure.

M-TR-1l **Mid-Block Signalized Intersection Improvements:** At the signalized intersections proposed in the public realm plan at Second / Natoma Streets; First / Minna Streets; First / Natoma Streets; Fremont / Tehama Streets; and Fremont Street / Transit Center Bus Plaza, the following improvements could improve traffic operations:

- At Second / Natoma Streets, the Municipal Transportation Agency (MTA) could install bulb-outs on the north and south crosswalks to reduce pedestrian crossing distances and times, allowing more green time for through traffic along Second Street. The traffic signal could also be designed to give priority to transit vehicles. However, due to two-way traffic along Second Street and the close proximity of the proposed crossing to the Second / Howard Streets intersection, this measure may not be sufficient to reduce the proposed mid-block crossing's impacts to traffic and transit operations. In addition, while bulb-outs would reduce crossing distance, a sufficiently high volume of pedestrians heading to and from the Transit Center may warrant retaining longer pedestrian phases to ensure adequate crossing times and throughput, so as not to introduce substantial queuing or congestion at the crosswalk or surrounding sidewalk. Accordingly, the feasibility of this measure is uncertain, and this impact is considered **significant and unavoidable**.
- At First / Minna Streets and First / Natoma Streets, reducing impacts would require additional lane capacity on First Street, although that would result in increased pedestrian crossing distances that would require longer pedestrian signal phases. This would also preclude the public realm plan's proposed sidewalk widening on First Street adjacent to the Transit Center. Moreover, additional lanes would not alleviate downstream congestion on First Street leading to the Bay Bridge. Eliminating one or both of the mid-block crossings might result in congested sidewalks on First Street. In addition, traffic signals at these two locations may be necessary for freight and passenger loading-related traffic circulation to and from Minna and Natoma Streets, regardless of whether pedestrian crossings are provided. Accordingly, no feasible mitigation was identified and this impact is considered **significant and unavoidable.**
- At Fremont / Natoma Streets and Fremont Street at the Transit Center Bus Plaza, the signal could be designed with two signal phases instead of three. One phase would be for northbound Fremont Street, and the second, for all five bus bays to exit the Bus Plaza, as well as pedestrians crossing Fremont Street at both Natoma Street and at the Bus Plaza. This would increase traffic capacity on Fremont Street and reduce the potential for queues on Fremont Street and the Bay Bridge. However, the Municipal Transportation Agency has determined that a two-phase signal would create operational and safety concerns for transit and pedestrians. Accordingly, no feasible mitigation was identified and this impact is considered **significant and unavoidable.**

Significance after Mitigation: For the reasons noted above, the impacts at these mid-block intersections would remain **significant and unavoidable**.

In addition to the foregoing intersection-specific mitigation measures, the following measure is identified to improve Plan-area traffic flow.

M-TR-1m **Downtown Traffic Signal Study:** As part of a Regional Traffic Signalization and Operations Program project, the Municipal Transportation Agency (MTA) could conduct a study of Downtown-area traffic signal systems, with the aim of recalibrating cycle lengths, offsets, and splits at Downtown-area intersections to optimize traffic flow and minimize unnecessary delays (without impacting other modes of travel).

Significance after Mitigation: Implementation of such a study could improve operations throughout the Plan area and elsewhere in Downtown. However, because the outcome of such an analysis is not known, intersection impacts would remain **significant and unavoidable**.

Mitigation (indicated in parentheses) could reduce average vehicle delay at the following intersections, but not to a less-than-significant level because further mitigation would require increased lane capacity that would preclude one or more proposed sidewalk improvements under the draft Plan's public realm plan, and because further signal timing optimization would require coordination with other signals that could increase overall vehicle delay. Therefore, impacts at the following intersections would be **significant and unavoidable**:

- New Montgomery / Mission Streets (Optimize signal timing)
- Third / Howard Streets (Optimize signal timing)
- New Montgomery / Howard Streets (Optimize signal timing)
- Fremont / Howard Streets (Prohibit eastbound p.m. peak left turns and optimize signal)
- Main / Howard Streets (Prohibit eastbound p.m. peak left turns and optimize signal)
- Spear / Howard Streets (Add northbound and southbound left-turn pockets, prohibit eastbound p.m. peak left turns and optimize signal)

No mitigation is feasible to reduce impacts at the following intersections to a less-than-significant level because, while increased lane capacity and/or signal timing optimization and, in some cases, installation of corner pedestrian bulbs to allow for less green time for pedestrian crossing could improve level of service for one or more approaches, the applicable mitigation strategy would increase delays for transit vehicles on Market and Mission Streets and also cause increased pedestrian delays or, in some instances, precluding proposed sidewalk or transit improvements under the draft Plan's public realm plan. Therefore, impacts at the following intersections would be **significant and unavoidable**:

- Third / Kearny / Market / Geary Streets
- Montgomery / Market / New Montgomery Streets
- First / Market Streets
- Fremont / Market / Front Streets
- Beale / Market / Davis / Pine Streets
- Second / Mission Streets
- First / Mission Streets
- Fremont / Mission Streets
- Second / Howard Streets
- First / Howard Streets

- Beale / Howard Streets
- Hawthorne / Folsom Streets
- Second / Folsom Streets
- First / Folsom Streets
- Spear / Folsom Streets
- Fourth / Harrison Streets / I-80 WB On-Ramp
- First / Harrison Streets / I-80 EB On-Ramp

No mitigation is feasible to reduce impacts at the following intersection to a less-than-significant level because additional lane capacity is unavailable and/or signal timing optimization would not improve level of service to an acceptable level. Therefore, impacts at the following intersection would be **significant and unavoidable**:

- Essex / Harrison Streets / I-80EB On-Ramp

No mitigation is required for the following intersections, which would experience significant impacts only in the absence of the public realm improvements that are part of the draft Plan:

- Spear / Mission Streets (without the public realm improvements, could be mitigated by changing signal phasing and optimizing signal timing)

Impacts on Freeway Ramp Operations

Impact TR-2: Traffic growth related to the draft Plan, including the street changes, would result in a considerable contribution to congested operations at the Fourth/Harrison Streets and First/Harrison Streets freeway on-ramps, and therefore would conflict with established measures of effectiveness for the performance of the circulation system. (Significant and Unavoidable)

Five freeway on-ramps were analyzed for p.m. peak-hour conditions, when traffic from the Plan area, including traffic that passes through the Plan area from elsewhere in San Francisco, would cause or contribute to the greatest amount of congestion. Under existing conditions, four of the five on-ramps operate at LOS D or better; the one ramp operating at a poor LOS is the Fourth/Harrison Streets on-ramp to westbound I-80, which operates at LOS F (see **Table 20**). Under the 2030 Without-Project scenarios, operations at the on-ramps at Sterling/Bryant Streets and First/Harrison Streets would degrade to LOS F, while operations at Fifth/Bryant Streets and Essex/Harrison Streets would remain at acceptable levels.

With the addition of traffic from assumed growth in the Plan area, as well as with the street changes proposed in the public realm plan, Plan area traffic would not change the level of service at any ramps, but would contribute more than 5 percent to the traffic volumes on the Fourth/Harrison Street westbound on-ramp and the First/Harrison Streets eastbound on-ramp. This would be **a significant and unavoidable impact on freeway ramp operations**.

TABLE 20
FREEWAY RAMP LEVELS OF SERVICE, P.M. PEAK HOUR

On-Ramp	Existing		2030 w/o Project		2030 + Plan Growth		Growth+Public Realm	
	LOS [1]	Density[2]	LOS [1]	Density[2]	LOS [1]	Density[2]	LOS [1]	Density[2]
I-80 Westbound Ramps								
Fourth / Harrison Streets[3]	**F**	**47.0**	**F**	**60.2**	**F**	**64.8**	**F**	**64.0**
Increase in Volume[4]					1.0%	**10.9%**	0.7%	**10.9%**
I-80 Eastbound Ramps								
Fifth / Bryant Streets	C	25.0	C	26.8	C	26.8	C	26.8
Sterling / Bryant Streets	D	29.8	**F**	–[5]	**F**	–[5]	**F**	–[5]
Increase in Volume[4]					0.0%	0.7%	0.0%	-1.3%
Essex / Harrison Streets	C	23.5	C	24.8	C	24.8	C	24.8
First / Harrison Streets	D	28.4	**F**	–[5]	**F**	–[5]	**F**	–[5]
Increase in Volume[4]					0.4%	**9.4%**	0.2%	**5.4%**

[1] Ramps operating at LOS E or LOS F conditions highlighted in **bold;** solid box indicates significant impact.
[2] Density in passenger cars per lane mile per hour.
[3] Analyzed as a weaving segment (Type B) due to interactions with the downstream off-ramp to Eighth Street / Harrison Street.
[4] First percentage for reach scenario is freeway mainline increase in volume attributable to project growth; second percentage is ramp increase.
[5] Density not reported for LOS F merge or diverge areas, as the equations used to compute density do not hold for LOS F conditions.

SOURCE: AECOM, 2011.

The contribution from Plan area growth to the other on-ramp that would operate at unacceptable levels of service, at Bryant/Sterling Streets, would be less than 5 percent of the volume, and there would be no substantial change in freeway on-ramp operations. Therefore, the impact from Plan growth and the public realm improvements at this ramp would be less than significant.

Mitigation Measures

No feasible mitigation is available for the impacts at the Fourth and Harrison Streets and First and Harrison Streets ramps, because there is insufficient physical space for additional capacity without redesign of the I-80 aerial structures. Other potential measures to improve operations would involve reducing the traffic volumes entering the weaving section, either through ramp metering, tolling, or other means. Ramp metering, however, would likely exacerbate congestion on roads leading to the on-ramp (i.e., Fourth Street and Harrison Street), while tolling would need to be implemented as a systemwide improvement in order to prevent concentration of vehicular traffic and increased congestion on non-tolled facilities. Moreover, any changes to the ramps would require approval of Caltrans, which operates the freeways and ramps.

Significance after Mitigation: Significant and Unavoidable, due to physical constraints and the uncertainty of implementing this measure.

Transit Impacts

2030 Without-Project Scenario

Background growth exclusive of ridership generated by the draft Plan would cause peak-hour ridership demand at the four Muni screenlines to increase by about 37 percent in the morning and by about 40 percent in the afternoon, while capacity is projected to increase by about 19 percent and 16 percent, respectively, during these two peaks. While ridership at all four screenlines would be below capacity levels during both the a.m. and p.m. peak hours, Muni lines on certain corridors would operate with ridership greater than Muni's capacity standard of 85 percent. These would include the California (95%), Sutter/Clement (91%), Third Street (89%), and Other Southeast (86%) corridors in the a.m. peak and, in the p.m. peak, the Geary (87%), California (105%), Sutter/Clement (85%+), Third Street (97%), Other Southeast (90%), and Subway (90%) corridors. Overall Muni capacity utilization across the four screenlines would increase from 67 percent and 68 percent in the a.m. and p.m. peak hours, respectively, under existing conditions, to 76 percent and 82 percent in the a.m. and p.m. peak hours, respectively under 2030 conditions without the project. **Table 21** presents projected Muni operations.

TABLE 21
MUNI PEAK-HOUR CAPACITY UTILIZATION

Screenline / Corridor	Existing		2030 w/o Project		2030 + Plan Growth		Growth+Public Realm	
	AM	PM	AM	PM	AM	PM	AM	PM
Northeast Screenline								
Kearny / Stockton	58%	56%	75%	75%	77%	78%	77%	78%
Other	41%	48%	66%	71%	67%	73%	68%	74%
Subtotal	50%	52%	70%	73%	72%	75%	72%	76%
Northwest Screenline								
Geary	63%	76%	77%	81%	85%[1]	**91%**	**86%**	**92%**
California	68%	69%	**89%**	**98%**	**99%**	**110%**	**99%**	**111%**
Sutter / Clement	54%	56%	85%[1]	79%	**94%**	**89%**	**95%**	**90%**
Fulton / Hayes	72%	68%	73%	64%	79%	69%	79%	70%
Balboa	58%	49%	57%	44%	62%	49%	62%	49%
Chestnut / Union	70%	64%	62%	77%	68%	**85%**	69%	**86%**
Subtotal	65%	65%	74%	76%	81%	85%[1]	82%	**86%**
Southeast Screenline								
Third	61%	78%	**86%**	**94%**	**91%**	**99%**	**91%**	**99%**
Mission	65%	53%	46%	64%	50%	68%	50%	69%
San Bruno / Bayshore	78%	74%	81%	80%	84%	83%	84%	83%
Other	62%	70%	84%	**88%**	**88%**	**91%**	**88%**	**91%**
Subtotal	67%	66%	73%	82%	76%	**85%**	77%	**86%**
Southwest Screenline								
Subway	**86%**	**87%**	76%	**87%**	81%	**92%**	81%	**92%**
Haight / Noriega	53%	58%	75%	71%	85%[1]	80%	**85%**	81%
Other	44%	43%	49%	38%	54%	41%	54%	41%
Subtotal	76%	77%	74%	81%	80%	**86%**	80%	**86%**
TOTAL	67%	68%	73%	79%	78%	84%	79%	85%[1]

Notes:

AM Peak Hour represents inbound (to downtown) ridership; **PM Peak Hour** represents outbound (from downtown) ridership.

Bold indicates exceedance of capacity utilization policy standard (85% utilization)**;** solid box indicates significant impact.

[1] Unbolded capacity utilization of 85% indicates actual number is slightly below threshold.

SOURCE: AECOM.

Most new non-residential development within the Plan area (and elsewhere in the City) are subject to the Transit Impact Development Fee ("TIDF"), set forth in *Planning Code* Section 411 *et.seq*. The TIDF attempts to recover the cost of carrying additional riders generated by new development by obtaining fees on a per square foot basis. TIDF funds may be used to increase revenue service hours reasonably necessary to mitigate the impacts of new non-residential development on public transit. As of March 2011, the TIDF is $10 per square foot of office, medical, retail, entertainment, cultural, institutional, and educational floor area, and $8 per square foot of production, distribution and repair and visitor services uses. Funds collected through the TIDF have averaged about $5 million per year over approximately the last 25 years.

Regional transit operators would also see increased ridership due to background growth (see **Table 22**). In particular, ridership to and from the East Bay is projected to more than double during the a.m. peak hour, and to increase by 84 percent in the p.m. peak hour, resulting in both BART and AC Transit operating at ridership levels in excess of capacity, despite anticipated future increases in capacity due to increased frequency of Transbay service on both systems. Capacity utilization for BART in the Transbay Tube would be approximately 115 percent in the a.m. peak hour and 111 percent in the p.m. peak hour. Ridership on Golden Gate Transit buses and ferries is also projected to increase substantially (by 75 percent in the morning peak hour and 82 percent in the afternoon peak hour), and would also operate with ridership in excess of capacity. Caltrain ridership is also forecast to increase substantially, but because the analysis assumes that by 2030 Caltrain will have been extended Downtown to the new Transit Center and the Caltrain system will have been electrified, capacity is forecast to increase substantially, as well, and Caltrain would operate at less than forecast capacity. Other regional carriers would also operate at less than 100 percent capacity under 2030 conditions without the project.

Proposed Plan

As set forth in Chapter II, Project Description, among the draft Plan's "fundamental core goals" are to "capitalize on major transit investment with appropriate land use in the downtown core, with an eye toward long-term growth considerations" and to "create a framework for a network of public streets and open spaces that support the transit system…."

Objective 4.1 of the November 2009 draft Plan states:

> The District's transportation system will prioritize and incentivize the use of transit. Public transportation will be the main, non-pedestrian mode for moving into and between destinations in the Transit Center District.

The draft Plan also states that the "district's transportation system will meet changing transit needs, particularly to support the new Transbay Transit Center and accommodate increased densities. Make changes in the circulation network that ensure delivery of reliable and convenient transit service to the Transbay Transit Center and for district residents, employees, and visitors" (November 2009 Draft Plan, Objective 4.3). Among the other objectives and policies intended to increase transit use and improve transit service, the draft Plan calls for:

TABLE 22
REGIONAL TRANSIT PEAK-HOUR CAPACITY UTILIZATION

Screenline / Operator	Existing		2030 w/o Project		2030 + Plan Growth		Growth+Public Realm	
	AM	PM	AM	PM	AM	PM	AM	PM
East Bay								
BART	80%	83%	**113%**	**110%**	**116%**	**113%**	**117%**	**113%**
AC Transit	55%	60%	**153%**	**113%**	**157%**	**116%**	**157%**	**117%**
Ferries	56%	46%	81%	78%	84%	80%	84%	80%
Subtotal	77%	78%	**117%**	**108%**	**120%**	**111%**	**120%**	**111%**
North Bay								
Golden Gate Transit Bus	57%	63%	98%	**114%**	**100%**	**116%**	**101%**	**118%**
Ferries	56%	53%	96%	96%	98%	98%	99%	99%
Subtotal	56%	59%	98%	**106%**	100%[1]	**108%**	**101%**	**109%**
South Bay								
BART[2]	65%	61%	56%	53%	60%	57%	60%	57%
Caltrain	65%	61%	69%	62%	70%	63%	71%	64%
SamTrans	65%	61%	75%	43%	76%	44%	77%	44%
Ferries	n/a	n/a	50%	25%	51%	25%	51%	25%
Subtotal	65%	61%	60%	55%	62%	57%	63%	58%
TOTAL	70%	70%	92%	86%	95%	89%	96%	90%

Notes:
AM Peak Hour represents inbound (to downtown) ridership; **PM Peak Hour** represents outbound (from downtown) ridership.
Bold indicates exceedance of 100% of seating capacity)**;** solid box indicates significant impact.
[1] Unbolded capacity utilization of 100% indicates actual number is slightly below threshold.
[2] Includes trips to/from stations within San Francisco but outside of downtown (16th / Mission, 24th / Mission, Glen Park, and Balboa Park).
SOURCE: AECOM, 2011.

- Management of Bay Bridge queues to reduce and mitigate impacts of regional traffic on transit circulation (Objective 4.6);
- Prioritizing transit movements through and within the district "over all other transportation modes" (Objective 4.9) and ensuring that regional transit is also given priority when operating on City streets (Policy 4.6);
- Design of transit facilities "to improve the reliability and function of transit movements and to enhance the rider experience" (Objective 4.10); and
- Ensuring that roadway changes, including pedestrian and streetscape improvements, "are designed to support and enhance the operation of transit" (Objective 4.11).

The draft Plan also calls for adding dedicated, self-enforcing transit lanes (Policies 4.1 and 4.2) and enhanced transit stops (Policy 4.4); supports additional funding for local and regional transit and the Transit Center, along with increased BART capacity, especially at the Montgomery and Embarcadero stations (Objectives 4.13 and 4.14 and Policies 4.5 and 4.7); and proposes evaluation of a transit-only zone on the block of Mission Street in front of the new Transit Center (Policy 4.3).[172]

A complete list of all draft transportation policies for the Plan area is provided in Appendix B.

[172] The concept for a transit-only zone on Mission between First and Fremont Street is not evaluated in this EIR, but is identified in the draft Plan for potential future implementation.

Plan Impacts

Impact TR-3: Transit ridership related to the draft Plan, including the street changes, would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service; and would cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result. (Significant and Unavoidable with Mitigation)

Growth projected with implementation of the draft Plan would result in an increase, compared to conditions without the Plan, of 7.1 percent in Muni ridership in the a.m. and p.m. peak hours (1,870 and 1,965 new a.m. and p.m. peak-hour riders, respectively) such that capacity utilization at two of the four screenlines—Southeast (85%+) and Southwest (86%)—would exceed Muni's 85 percent standard in the p.m. peak hour. This would be a **significant impact on Muni operations**. Ridership at the Northwest screenline would be just under 85 percent of capacity, while the Northeast screenline would be at 75 percent. The increase in a.m. and p.m. peak-hour ridership by 2030 compared to existing conditions, including growth elsewhere in San Francisco, would be 40 percent and 44 percent, respectively. During that same period, a.m. and p.m. peak-hour capacity is expected to increase by 19 percent and 16 percent, respectively.

The increase in ridership under with-Plan conditions, compared to conditions without the project, would increase capacity utilization by between 3 and 13 percent on each corridor. Overall capacity utilization in the p.m. peak hour would increase to 84 percent, from 79 percent without the project. The Geary, California, Sutter/Clement, Chestnut/Union, Third Street, Other Southeast, and Subway corridors would all exceed 85 percent of capacity, and all but the Third Street, other Southeast, and Subway corridors would result in significant impacts due to Plan increases in ridership. In the a.m. peak hour, all four screenlines would remain at acceptable operations, with the California, Sutter/Clement, Third Street, and Other Southeast corridors exceeding 85 percent capacity. Each of these corridors would result in a significant impact due to the contribution from Plan ridership. Increases in capacity utilization among corridors would range from 0 to 4 percent. Overall a.m. peak-hour capacity utilization would increase to 78 percent, from 73 percent.

With the addition of the street network changes under the public realm plan, overall Muni screenline capacity utilization would increase by an additional approximately 1 percentage point, to 79 percent in the a.m. peak hour and just under 85 percent in the p.m. peak hour. The increase in peak-hour ridership would be about 8 percent, compared to conditions without the project. The a.m. and p.m. peak-hour ridership in 2030 would be 41 percent and 44 percent, respectively, higher than existing ridership. In the a.m. peak hour, the Geary corridor (86%) and the Haight/Noriega corridor (85%+) would newly exceed Muni's standard, although operations at all four screenlines would remain below 85 percent of capacity, and many corridors would not experience an increase in capacity utilization. In the p.m. peak hour, capacity utilization would increase by 1 percentage point on most corridors, compare to with-Plan conditions. The same six corridors affected under the with-Plan scenario would exceed Muni's capacity standard due to the Plan, and ridership at the Northwest Screenline, at 86 percent of capacity, would newly exceed the standard.

In summary, as indicated in Table 21, Plan area ridership would result in significant effects, either because it would increase capacity utilization to beyond 85 percent and/or because it would contribute more than 5 percent of the total ridership, on the following corridors/screenlines and peak hours:

- Geary Corridor (Plan Growth, p.m.; Growth + Public Realm, a.m. and p.m.)
- California Corridor (Plan Growth, a.m. and p.m.; Growth + Public Realm, a.m. and p.m.)
- Sutter/Clement Corridor (Plan Growth, a.m. and p.m.; Growth + Public Realm, a.m. and p.m.)
- Chestnut/Union Corridor (Plan Growth, p.m.; Growth + Public Realm, p.m.)
- Northwest Screenline (Growth + Public Realm, p.m.)
- Third Street Corridor (Plan Growth, a.m.; Growth + Public Realm, a.m. and p.m.)
- Other Southeast Corridor (Plan Growth, a.m.; Growth + Public Realm, a.m.)
- Southeast Screenline (Plan Growth, p.m.; Growth + Public Realm, p.m.)
- Haight/Noriega Corridor (Growth + Public Realm, a.m.)
- Southwest Screenline (Plan Growth, p.m.; Growth + Public Realm, p.m.)

To evaluate the potential for Plan-induced traffic congestion to cause a substantial increase in delays or operating costs to transit, an analysis of the Project's impacts to transit travel times was conducted. The analysis calculated the incremental increase in transit vehicle travel times for Muni lines passing through the Plan area, considering the study intersections and transit ridership increases within the Plan area only. The analysis found that Plan area traffic would generally result in increases in travel times for transit vehicles for each line, compared to 2030 conditions without the project, and that the draft Plan would result in significant travel time impacts to the 41 Union line, in that Muni would have to add an additional bus to this line to maintain current headways. Additionally, delays of several minutes per bus (i.e., per "run"), compared to conditions without Plan development, would be experienced on the 12 Folsom-Pacific route and on the 11 Downtown Connector, a planned new line that would be operate with implementation of Muni's Transit Effectiveness Project and would connect Civic Center BART, South of Market, Downtown, Chinatown, North Beach, and the Marina. Other Muni lines would also experience delays due to increased congestion, ranging from less than 30 seconds to more than one minute per run. This would be a **significant impact on Muni operations**.

Because the public realm plan would make different kinds of changes to street capacity and operations depending on location, it would result in different changes in travel times. With the public realm improvements, an additional vehicle would be required on the planned 11 Downtown Connector line. The 12 Folsom-Pacific line would also experience a substantial increase in travel time. Delays on most other Muni lines serving the Plan area would be greater than those with Plan growth only, although delays would diminish on three lines. This would be a **significant impact on Muni operations**.

The proposed mid-block signalized pedestrian crossing on Second Street at Natoma Street would be located on Second Street, a key local transit corridor. Because of potential disruption of coordination between this signal and nearby signals, and because this signal light would potentially result in additional congestion and vehicle queuing, this signal would result in **a significant impact on Muni operations** on Second Street.

As described in Chapter II, Project Description, the draft Plan's public realm component would include relocation of transit-only lanes on Mission Street between First and Third Streets to the street's center lanes and provide in-street boarding islands at Second Street. This could result in conflicts between Muni vehicles and regional transit (Golden Gate Transit and SamTrans) vehicles using the same boarding islands. This would be a **significant impact on Muni and regional transit operations.**

Regional carriers would see ridership increase by an aggregate of about 3.5 percent during the a.m. and p.m. peak hours with Plan area growth. Capacity utilization (see Table 22) would increase by about 2 to 7 percent for each carrier, and would result in Golden Gate Transit bus service incrementally exceeding the 100 percent capacity utilization standard in the a.m. peak hour. This would be a significant impact. Plan ridership would cause add less than 5 percent to Golden Gate Transit capacity utilization, and therefore would have a less-than-significant impact on Golden Gate Transit bus service.

Plan-induced growth would contribute almost 3 percent additional ridership to conditions on BART and AC Transit, both of which would operate with ridership in excess of capacity under 2030 Without-Project conditions, and 6 to 7 percent additional ridership to BART Peninsula service, on the South Bay Screenline. Although BART and AC Transit would operate at conditions well in excess of capacity, Plan ridership would amount to less than 5 percent of future ridership on these operators' service. Therefore, the impact would be less than significant. No other additional carriers would exceed capacity, compared to Without-Project Conditions.

With the addition of the street network changes under the public realm plan, aggregate regional carrier ridership would generally increase by 1 percentage point or less, compared to conditions with Plan growth, although capacity utilization would increase by an additional 2 percentage points on Golden Gate Transit bus service in the p.m. peak hour and by 1.4 percentage points on the North Bay Screenline in the a.m. peak hour. This latter increase would result in this screenline newly exceeding 100 percent of capacity, which would be a significant impact.

Concerning travel-time delays, both SamTrans and Golden Gate Transit buses run on city streets within the Plan area, and would continue to do so in the future. (AC Transit buses will have a direct connection from the Bay Bridge to the new Transit Center, once complete, in a manner comparable to their former operations at the Transbay Terminal.) In particular, SamTrans operates all of its downtown San Francisco routes along Mission Street, while Golden Gate Transit operates its "basic" bus routes along Mission Street and its commuter express bus routes along First Street (a.m. peak period) and Fremont Street (p.m. peak period). Golden Gate Transit buses also use portions of Howard Street and Folsom Street when heading to and from Golden Gate Transit's mid-day yard, at Eighth and Harrison Streets. Increased congestion at intersections within the Plan area would be expected to increase travel times for SamTrans and Golden Gate Transit buses; these vehicles could also have increased difficulty reentering traffic lanes due to increased volumes on Plan area streets. The resulting delays could require the deployment of additional buses on some Golden Gate Transit and SamTrans routes in order to maintain headways and appropriate vehicle load, which would be a **significant impact to regional transit (Golden Gate Transit and SamTrans) operations**.

Additionally, the proposed public realm improvements would remove one lane on Fremont Street between the I-80 off-ramp (between Folsom and Howard Streets) and Market Street. This would substantially increase delays and congestion along Fremont Street, which is a key corridor for Golden Gate Transit commuter buses leaving for the North Bay during the weekday p.m. peak hour. While the draft Plan would extend the Golden Gate Transit boarding zone on the east side of Fremont Street between Mission Street and Market Street to occupy the full length of the block, congestion in the northbound direction would make it difficult for buses to re-enter the traffic flow, resulting in delays in bus service. In addition, Golden Gate Transit buses turning left from eastbound Folsom Street onto northbound Fremont Street would experience increased delay due to the proposed two-way operation of Folsom Street (as left-turning vehicles would have to yield to the new westbound approach). Lastly, buses heading northbound at the Fremont/Mission Streets intersection could also experience delays from the new Transbay Transit Center Bus Plaza and associated mid-block signals, as well as from vehicles making the right turn onto Mission Street. As a result, the proposed public realm improvements would result in a **significant impact to regional transit (Golden Gate Transit) operations**.

As noted in the discussion of Muni impacts above, the proposed change to Mission Street transit lanes could result in conflicts between Muni vehicles and regional transit (Golden Gate Transit and SamTrans) vehicles using the same boarding islands. This would be a **significant impact on Muni and regional transit operations.**

In addition to capacity utilization, BART is likely to face peak-hour capacity constraints at its Montgomery Street and Embarcadero stations, each located on the northern boundary of the Plan area. These two stations have the highest passenger load of any stations in the BART system. The Embarcadero station, in particular, which has a narrower platform than other stations, has been identified by BART as having capacity constraints.[173] The Montgomery station experiences of peak-hour congestion, especially in the morning, resulting in passenger queues at the escalators. Because increased ridership from Plan area development would almost all go through these two stations, this would be a **significant and unavoidable impact on regional transit (BART) operations**.

As discussed further under Impact TR-7, below, implementation of the draft Plan would result in a shortfall of on-street freight loading spaces, which could further increase congestion on Plan area streets and hinder transit vehicle operation. This impact would be considered **significant and unavoidable**.

In addition to increases in ridership and congestion, implementation the draft Plan could result in a further, indirect, effect on transit operations, in that the shortfall of parking that would ensue could result in a shift in travel mode as drivers opt to travel using other means, including transit. This indirect effect, which could further increase capacity utilization on both Muni and regional transit, is discussed below on p. 324.

[173] BART, *Comprehensive Station Plan: Embarcadero,* June 2004. Available at: http://www.bart.gov/docs/planning/EmbarcaderoCSP.pdf. Reviewed September 14, 2011.

Mitigation Measures: Transit

Where mitigation would be different for the overall draft Plan (Plan growth plus the public realm improvements) than for Plan growth only, the discussion below focuses on mitigation for effects of the overall draft Plan, to ensure that the proposed project's full impact is mitigated, where feasible.

M-TR-3a: **Installation and Operation of Transit-Only and Transit Queue-Jump Lanes.** To reduce or avoid the effects of traffic congestion on Muni service, at such time as the transit-vehicle delay results in the need to add additional vehicle(s) to one or more Muni lines, the Municipal Transportation Agency (MTA) could stripe a portion of the approach lane at applicable intersections to restrict traffic to buses only during the p.m. peak period, thereby allowing Muni vehicles to avoid traffic queues at certain critical intersections and minimizing transit delay. Each queue-jump lane would require the prohibition of parking during the p.m. peak period for the distance of the special lane.

For the 41 Union, MTA could install a p.m. peak-hour transit-only lane along Beale Street approaching and leaving the intersection of Beale/Mission Street, for a distance of 150 to 200 feet. Five parking spaces on the west side of Beale Street north of Mission Street could be eliminated when the transit lane is in effect to allow for a right-turn pocket. MTA could also install a p.m. peak-hour queue-jump lane on the eastbound Howard Street approach to the intersection of Beale/Howard Streets, for a distance of 100 feet. If the foregoing were ineffective, MTA could consider re-routing the 41 Union to less-congested streets, if available, or implementing actions such as providing traffic signal priority to Muni buses.

For the 11-Downtown Connector and 12 Folsom Pacific, MTA could install a p.m. peak-hour queue-jump lane on the southbound Second Street approach to the intersection to the intersection of Second/Folsom Streets, for a distance of approximately 150 feet. When the lane is in effect, five on-street parking spaces on the west side of Second Street north of Folsom Street could be eliminated, as well as a portion of the southbound bicycle lane approaching the intersection. If the foregoing were ineffective, MTA could consider re-routing the 11-Downtown Connector and 12 Folsom to less-congested streets, if available, or implementing actions such as providing traffic signal priority to Muni buses.

The MTA could also evaluate the effectiveness and feasibility of installing an eastbound transit-only lane along Folsom Street between Second and Third Streets, which would minimize delays incurred at these intersections by transit vehicles. The study would create a monitoring program to determine the implementation extent and schedule, which may include conversion of one eastbound travel lane into a transit-only lane.

Level of Significance after Mitigation

Implementation of the above mitigation measures could reduce the effects of traffic congestion on Muni headways. However, it cannot be determined whether the impact would be reduced to a less-than-

significant level, because the efficacy of the improvements is not certain, pending trial implementation and additional review by MTA. Because the effectiveness of the above mitigation measures is unknown, this impact is considered **significant and unavoidable**.

Moreover, it is noted that, because there is finite right-of-way at Plan area intersections, installation of transit-only lanes and/or transit queue-jump lanes could increase traffic congestion and, possibly, transit delays at other locations.

M-TR-3b: **Exclusive Muni Use of Mission Street Boarding Islands.** To reduce or avoid conflicts between Muni buses and regional transit service (Golden Gate Transit and SamTrans) using the relocated transit-only center lanes of Mission Street between First and Third Streets, MTA could reserve use of the boarding islands for Muni buses only and provide dedicated curbside bus stops for regional transit operators. Regional transit vehicles would still be allowed to use the transit-only center lanes between stops, but would change lanes to access the curbside bus stops. This configuration would be similar to the existing Muni stop configuration along Market Street, where two different stop patterns are provided, with each route assigned to only one stop pattern.

Level of Significance after Mitigation

The feasibility and effectiveness of this mitigation measure in reducing impacts to both Muni and regional transit is uncertain. In particular, relocation of the Mission Street transit-only lanes while still requiring regional transit vehicles to use curbside stops may result in unsafe maneuvers for regional transit vehicles and increase the potential for collisions and conflict between buses and vehicles or bicycles. Alternatively, regional transit operators could use only the curb lane, eliminating increased potential for collisions due to merging in and out of the transit-only lanes, but this would subject regional transit vehicles to substantial travel time delays as a result of traveling in mixed-flow traffic. Accordingly, this impact is considered **significant and unavoidable**.

M-TR-3c: **Transit Improvements on Plan Area Streets.** To reduce or avoid the effects of traffic congestion on regional transit service operating on surface streets (primarily Golden Gate Transit and SamTrans), MTA, in coordination with applicable regional operators, could conduct study the effectiveness and feasibility of transit improvements along Mission Street, Howard Street, Folsom Street, First Street, and Fremont Street to reduce delays incurred by transit vehicles when passing through the Plan area. The study would examine a solutions including, but not limited to the following:

- Installation of transit-only lanes along Howard Street and Folsom Street, which could serve both Muni buses (e.g., 12 Folsom-Pacific) and Golden Gate Transit buses heading to / from Golden Gate's yard at Eighth and Harrison Streets;[174]

[174] It is anticipated that Golden Gate Transit will move midday bus storage to the area beneath the elevated I-80 freeway at Fourth Street in connection with the operation of the Transit Center, by 2017.

- Extension of a transit-only lane on Fremont Street south to Howard Street and installation of transit-actuated queue-jump phasing at the Fremont Street / Mission Street intersection to allow Golden Gate Transit buses to make use of the Fremont Street transit lane (currently only used by Muni vehicles); and
- Transit signal priority treatments along Mission, Howard, and Folsom Streets to extend major-street traffic phases or preempt side-street traffic phases to reduce signal delay incurred by SamTrans and Golden Gate Transit vehicles.
- Golden Gate Transit and SamTrans could consider rerouting their lines onto less-congested streets, if available, in order to improve travel times and reliability. A comprehensive evaluation would need to be conducted before determining candidate alternative streets, considering various operational and service issues such as the cost of any required capital investments, the availability of layover space, and proximity to ridership origins and destinations.

Level of Significance after Mitigation

Implementation of the above mitigation measure could reduce the effects of traffic congestion on regional transit operations. However, it cannot be determined whether the impact would be reduced to a less-than-significant level. Therefore, this impact is considered **significant and unavoidable**.

Moreover, it is noted that, because there is finite right-of-way at Plan area intersections, adding transit-only lanes could increase congestion for other traffic and, possibly, increase transit delays.

M-TR-3d: **Increased Funding to Offset Transit Delays.** Sponsors of development projects within the Plan area could be subject to a fair share fee that would allow for the purchase of additional transit vehicle(s) to mitigate the impacts on transit travel time. In the case of Muni operations, one additional vehicle would be required. For regional operators, the analysis also determined that on-street delays could require the deployment of additional buses on some Golden Gate Transit and SamTrans routes.

Funds for the implementation of this measure are expected to be generated from a delineated portion of the impact fees that would be generated with implementation of the draft Plan, and are projected to be adequate and sufficient to provide for the capital cost to purchase the additional vehicle and facility costs to store and maintain the vehicle.

Level of Significance after Mitigation

Implementation of the above mitigation measure could incrementally reduce the effects of traffic congestion on Muni and regional transit operations. However, inasmuch as operational costs (primarily drivers' salaries) would not be included in this fee, the effect would not be fully mitigated and this impact is considered **significant and unavoidable**.

M-TR-3e: **Increased Funding of Regional Transit.** Sponsors of development projects within the Plan area could be subject to one or more fair share fees to assist in service improvements, such as through the purchase of additional transit vehicles and vessels or contributions to operating costs, as necessary to mitigate Plan impacts. These fee(s) could

be dedicated to Golden Gate Transit, North Bay ferry operators, AC Transit, BART, and/or additional North Bay and East Bay transit operators. Depending on how the fee(s) were allocated, Caltrain and SamTrans might also benefit, although lesser impacts were identified for these South Bay operators.

Funds for the implementation of this measure are expected to be generated from a delineated portion of the impact fees that would be generated with implementation of the draft Plan.

Level of Significance after Mitigation

Funds for the implementation of this measure are expected to be generated from a delineated portion of the impact fees that would be generated with implementation of the draft Plan. However, it would be speculative at this time to presume that sufficient funding could be available to offset project effects. Additional funding would likely have to be identified, whether from public or private sources, or a combination thereof, potentially including project sponsors of individual development projects in the Plan area, in order to purchase and operate additional transit vehicles and, potentially in some cases, to increase rail system capacity. Adoption of the draft Plan is anticipated to be accompanied by additional development impact fees, such as were adopted in the Eastern Neighborhoods and Market Octavia Plan areas. However, because it is not known whether or how much additional funding would be generated for transit, and because no other definite funding sources have been identified, this impact is considered **significant and unavoidable**.

Pedestrian and Bicycle Conditions

Proposed Plan

As set forth in Chapter II, Project Description, one of the draft Plan's "fundamental core goals" is to "create a framework for a network of public streets and open spaces that … provides a wide variety of public amenities and a world-class pedestrian experience."

Objective 4.4 of the November 2009 draft Plan states:

> The District's transportation system will prioritize pedestrian amenity and safety. Invest in circulation modifications and urban design measures that support the creation of an attractive and memorable public realm.

Objective 4.29 of the November 2009 draft Plan states:

> Make cycling a safe, pleasant, and convenient means of transportation throughout the district.

Policy 4.44 of the November 2009 draft Plan states:

> Do not compromise pedestrian, bicycle, or transit amenity or service within the District to accommodate or maintain levels of service for regional auto trips.

The draft Plan also strives to "Make walking a safe, pleasant, and convenient means of moving about throughout the district" (November 2009 Draft Plan, Objective 3.1). Among the other objectives and policies intended to increase transit use and improve transit service, the draft Plan calls for:

- Objectives 3.2 and 4.21: Create a high-quality pedestrian environment in the district consistent with the vision for the central district of a world-class city.
- Objective 4.22: Graciously accommodate increases in pedestrian volumes in the district.
- Objective 4.23: Emphasize the importance of streets and sidewalks as the largest component of public open space in the Transit Center District.
- Policy 4.22: Create and implement a district streetscape plan to ensure consistent corridor-length streetscape treatments.
- Policy 4.23: Widen sidewalks to improve the pedestrian environment by providing space for necessary infrastructure, amenities and streetscape improvements.
- Policy 4.24: Facilitate pedestrian circulation by providing sidewalk widths that meet the needs of projected pedestrian volumes and provide a comfortable and safe walking environment.
- Policy 4.25: Continue the Living Streets treatment to create linear plazas along Beale, Main, and Spear streets.
- Policy 4.26: Create additional pedestrian capacity and shorten pedestrian crossing distances by narrowing roadways and creating corner curb bulb-outs.
- Policy 4.27: Enhance crosswalks with special treatments (e.g. paving, lighting, raised crossings) to enhance pedestrian safety and comfort especially at potential conflict locations, such as at new mid-block crosswalks or where bulb-outs cannot be installed.
- Policy 3.7: Develop "quality of place" and "quality of service" indicators and benchmarks for the pedestrian realm in the district, and measure progress in achieving benchmarks on a regular basis.
- Objective 4.24: Restrict curb cuts on key streets to increase pedestrian comfort and safety, to provide a continuous building edge of ground floor uses, to provide a continuous sidewalk for streetscape improvements and amenities, and to eliminate conflicts with transit.
- Objective 4.25: Enhance the pedestrian network with new linkages to provide direct and varied pathways, to shorten walking distances, and to relieve congestion at major street corners.
- Objective 4.27: Ensure that new development enhances the pedestrian network and reduces the scale of long blocks by maintaining and improving public access along existing alleys and creating new through-block pedestrian connections where none exist.
- Policy 4.32: Design new and improved through-block pedestrian passages to make them attractive and functional parts of the public pedestrian network.
- Objective 4.30: Ensure high-quality on-street bicycle connections to the Transbay Transit Center.
- Objective 4.31: Enhance facilities for intra-district bicycle travel.
- Objective 4.32: Ensure local connections to regional bicycle facilities.
- Objective 4.33: Ensure the provision of adequate secure, on- and off-street bicycle parking facilities to accommodate and encourage employees to cycle for commuting and daily needs.

- Policy 4.39: Increase the requirement for secure bicycle parking in new and renovated non-residential buildings to a minimum of five percent of peak on-site employees and visitors.
- Objective 4.34: Facilitate traffic flow to and through the district at levels that are consistent with envisioned improvements for transit, pedestrians and bicycles.

Additionally, as noted in Chapter II, Project Description, the draft Plan proposes an increase in the amount of bicycle parking required in new commercial buildings from a maximum of 12 spaces to the equivalent of at least one bike parking space for every 6,000 square feet of office space.

Pedestrian Impacts

Impact TR-4: Pedestrian activity resulting from implementation of the draft Plan would cause the level of service at sidewalks, street corners, and crosswalks to deteriorate. (Significant and Unavoidable with Mitigation)

Under 2030 conditions without implementation of the draft Plan, pedestrian activity in the Plan area would increase, resulting in increased congestion in crosswalks, on sidewalks, and at street corners, particularly in the vicinity of the new Transit Center and on Second and New Montgomery Streets. Pedestrian level of service (LOS), a measure of crowding, would deteriorate to unacceptable levels at some of the crosswalks at Fremont and Mission Streets in both the midday and afternoon peak hours and First and Mission Streets (p.m. peak only), as well as Beale and Howard Streets (midday only), and New Montgomery and Mission Streets (midday only, although p.m. peak conditions—already at LOS E, would worsen). All sidewalk segments evaluated would continue to operate at acceptable levels of service, as would all but one of the street corners analyzed: the northwest corner of Beale and Howard Streets would reach an unacceptable level of crowding in the midday peak hour.

Development resulting from implementation of the draft Plan would further increase pedestrian activity. Significant impacts would occur at a number of crosswalks due to degraded pedestrian LOS and/or increased congestion: Fremont/Mission Streets (midday peak hour, north crosswalk; and p.m. peak hour, all four crosswalks); First/Mission Streets (midday, north and south; and p.m. peak, east, south, and west); Beale/Howard Streets (midday, west); Second/Howard Streets (midday, east, and p.m. peak, north); Second/Mission Streets (midday and p.m. peak, east); and New Montgomery/Mission Streets (midday and p.m. peak, west). Sidewalks would continue to operate at acceptable LOS. Significant impacts due to street corner congestion would occur at First/Mission Streets (p.m. peak, southwest corner); Beale/Howard Streets (midday, northwest corner); and New Montgomery/Howard Streets (midday, northeast).

With the addition of the proposed public realm improvements (i.e., widened sidewalks and sidewalk bulbs at certain locations, as well as the addition of some mid-block crosswalks), sidewalk conditions, including street corners, would improve incrementally, and all sidewalks and corners would operate at acceptable pedestrian LOS, without excessive crowding, including those that would be adversely affected by Plan area growth without the public realm improvements. Crosswalk impacts would be very similar to those with Plan growth. (Crosswalk widths are not assumed to change, and crosswalk conditions

would therefore be essentially the same as without the public realm plan; if crosswalk widths were to be increased, those locations would have somewhat improved conditions, compared to those reported above.)

Mitigation Measure

M-TR-4 **Widen Crosswalks.** To ensure satisfactory pedestrian level of service at affected crosswalks, the Municipal Transportation Agency, Sustainable Streets Division, could conduct periodic counts of pedestrian conditions (annually, for example) and could widen existing crosswalk widths, generally by 1 to 3 feet, at such times as pedestrian LOS is degraded to unacceptable levels.

Significance after Mitigation: Implementation of Mitigation Measure M-TR-4 would reduce potential LOS impacts to a less-than-significant level at each of the affected crosswalks. However, because the feasibility of these changes is not known at this time, given that MTA would have to further evaluate and consider crosswalk widening in light of other circulation considerations, these impacts are conservatively judged to remain **significant and unavoidable**.

It is noted that the street corner congestion that would occur at First/Mission Streets, New Montgomery/Howard Streets, and Beale/Howard Streets, although not a significant impact, would be resolved by the sidewalk improvements (bulbs and widening) proposed as part of the draft Plan's public realm improvements. Therefore, no further improvement is required.

Impact TR-5: Development of large projects pursuant to the draft Plan would create potentially hazardous conditions for pedestrians and otherwise interfere with pedestrian accessibility. (Significant and Unavoidable with Mitigation)

In terms of pedestrian safety and access, implementation of the draft Plan would allow for development of a number large projects in the Plan area. In particular, in the vicinity of the new Transit Center, the Transit Tower and several other projects are anticipated, which would increase both vehicular traffic and pedestrian activity in an area with existing high levels of both. It can be anticipated that elements of the public realm plan, such as widened sidewalks and the installation of corner bulb-outs and mid-block crosswalks, would increase pedestrian safety and enhance walkability in the Plan area, even with increased activity.

However, specific pedestrian-vehicle conflicts could arise where individual projects propose driveways and entrance-exit locations for parking and/or loading access. Impacts would depend on project-specific designs and site-specific sidewalk conditions and pedestrian flow. These impacts would include the potential that vehicles entering and exiting project garages and/or loading docks could conflict with pedestrians on the sidewalk crossing project driveways, and could conflict with traffic in the street, including buses, for those locations where driveways would be created near bus stops. Vehicles exiting a

garage or loading dock and waiting for a gap in the traffic flow could potentially block the sidewalk, creating an unsafe condition for pedestrians.

Potential conflicts between pedestrians on the sidewalk and vehicles exiting project parking garages and loading docks could normally be avoided, or at least minimized, by the project having a garage/loading dock attendant on duty, especially during hours of peak traffic and pedestrian activity. Vehicles entering parking garages could block the sidewalk if a queue were present on the garage driveway, or could block traffic lane(s) if the sidewalk were congested (or if there were a lengthy queue ahead on the driveway). Use of a garage/ loading dock attendant could also help minimize pedestrian-vehicle conflicts with incoming cars and trucks (see Mitigation Measure TR-5a).

Depending on the size and design of a particular project's loading dock, if provided, certain longer trucks might not be accommodated because the available maneuvering room would be insufficient. In addition, longer trucks generally require a wider turning movement, and therefore could be required to enter a project's loading area from (and exit to) a traffic lane beyond the curb lane to satisfy turning-radius requirements. Such movements would disrupt vehicle traffic, including transit on transit routes. Accordingly, certain projects might have to impose restrictions on the size of trucks using their dock(s). A parking/loading attendant would have to be on duty to enforce such a restriction (see also Mitigation Measure TR-7a under Impact TR-7, Loading, below).

Mitigation Measure

M-TR-5 **Garage/Loading Dock Attendant.** If warranted by project-specific conditions, the project sponsor of a development project in the Plan area shall ensure that building management employs attendant(s) for the project's parking garage and/or loading dock, as applicable. The attendant would be stationed as determined by the project-specific analysis, typically at the project's driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with pedestrians on the sidewalk during the a.m. and p.m. peak periods of traffic and pedestrian activity, with extended hours as dictated by traffic and pedestrian conditions and by activity in the project garage and loading dock. (See also Mitigation Measure M-TR-4b, above.) Each project shall also install audible and/or visible warning devices, or comparably effective warning devices as approved by the Planning Department and/or the Sustainable Streets Division of the Municipal Transportation Agency, to alert pedestrians of the outbound vehicles from the parking garage and/or loading dock, as applicable.

Significance after Mitigation: Because it cannot be stated with certainty that pedestrian conflicts and safety hazards with respect to driveway operation would be fully mitigated, this impact is conservatively judged to be **significant and unavoidable**.

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Bicycle Impacts

Impact TR-6: Implementation of the draft Plan would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (Significant and Unavoidable with Mitigation)

Under 2030 Without-Project conditions, a number of bicycle improvements are assumed to have been made in the Plan area, consistent with the adopted *Bicycle Plan*. These include the following:

- Second Street bicycle lanes, King Street to Market Street;
- Beale Street bicycle lanes, Bryant Street to Folsom Street;
- Fremont Street bicycle lanes, Folsom Street to Harrison Street; and
- Howard Street Bicycle Lane, The Embarcadero to Fremont Street.

These bicycle improvements would enhance north-south and east-west connections in the bikeway network through the Plan area. In particular, the Second Street and Howard Street bicycle lanes would provide major Class II links in the bikeway network, connecting to major thoroughfares such as Market Street, Mission Street, and The Embarcadero. Travel lanes would be removed along Second Street to accommodate the bike lanes, diverting traffic flow off of Second Street and reducing the potential for vehicle-bicycle conflicts.

Development pursuant to the draft Plan would increase vehicular, pedestrian, and bicycle traffic within the Plan area, but would likely not result in substantial adverse changes to overall bicycle conditions. It is possible that increased congestion could result in a slightly increased potential for vehicle-bicycle and pedestrian-bicycle conflicts and reduced speed for cyclists. However, the draft Plan's public realm plan would institute various traffic calming measures including conversion of one-way streets to two-way traffic and reductions in travel lanes. In general, these measures would enhance bicycling safety within the Plan area by encouraging slower speeds and reducing conflicting right-turn vehicles by eliminating unnecessary circulation movements in a one-way street grid. Although increased on-street parking activity (either occupancy or turnover) could also result in increased potential for injuries to bicyclists as a result of "dooring," the bike lanes planned for several streets within the Plan Area would provide dedicated space for bicyclists and a cushion from both parked vehicles and moving traffic in the adjacent travel lane. Moreover, the draft Plan calls for removal of on-street parking at several locations in the Plan area.

As described further under Impact TR-7, below, implementation of the draft Plan would result in a shortfall of on-street freight loading spaces, which could further increase congestion on Plan area streets and pose safety hazards for bicyclists. This impact would be considered **significant and unavoidable**.

Mitigation Measure

Implement Mitigation Measures M-TR-7 and M-TR-7b (see below).

Significance after Mitigation: Because it cannot be stated with certainty that bicycle conflicts and safety hazards with respect to driveway operation would be fully mitigated, this impact is conservatively judged to be **significant and unavoidable**.

Loading

Impact TR-7: Implementation of the draft Plan would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles, and pedestrians. (Significant and Unavoidable with Mitigation)

Freight Loading

Implementation of the draft Plan's public realm plan would result in the removal of approximately 165 on-street freight loading spaces, and create one full-block loading zone, approximately 27 loading pockets, and approximately 11 individual loading spaces (an aggregate total of about 111 new on-street commercial loading spaces), resulting in a net loss of approximately 54 spaces. This would represent a loss of 14 percent of the current supply of 400 on-street loading spaces within the Plan Area, and would force existing delivery and service vehicles using these spaces to seek alternative locations. It would also result in fewer on-street loading spaces being available for future development.

Assumed development in the Plan area would generate a demand for 81 off-street freight loading spaces during an average hour and 106 loading spaces during the peak hour of loading demand. The number of off-street freight loading spaces that would be required under the *Planning Code* to be provided by new buildings in the Plan area would be approximately 86 spaces. This supply would accommodate average hourly demand, but would not meet the estimated peak-hour demand of 106 spaces.[175] Any loading demand that could not be met on-site at a particularly building would need to seek alternative arrangements for loading activities, typically through on-street facilities (yellow zones). Since there is already a substantial amount of existing commercial loading activity within the Plan area, it is expected that the existing supply of on-street loading spaces would not necessarily be able to accommodate the excess loading demand generated. Moreover, not all development sites have sufficient on-street loading spaces nearby.

If the on-street commercial spaces are occupied, drivers of delivery / service vehicles might double-park in order to shorten the distance to their final destination, or may attempt to use any available on-street parking spaces. Any double parking that would occur along streets, especially major commute-related facilities and transit routes, could adversely affect local vehicular and transit circulation and lead to congestion and delays. It could also hinder bicycle traffic and create safety hazards for bicyclists, resulting in adverse secondary impacts to bicycle conditions.

[175] It is noted that this analysis is in the aggregate, and may not reflect specific future projects' design or operation.

A project-specific analysis of the proposed loading facilities for each subsequent development project in the Plan area would be conducted as each project is proposed and evaluated for Planning Code compliance and loading impacts. In particular, Sections 153(a)(6), 154(b)(2), and 161(i) of the *Planning Code* include provisions for providing fewer loading spaces than typically required or undersized loading spaces.

As also noted above under Impact TR-5, depending on the size and design of a project's loading dock, if provided, certain longer trucks longer than might not be able to be accommodated because the available maneuvering room would be insufficient. In addition, longer trucks generally require a wider turning movement, and therefore could be required to enter a project's loading from (and exit to) a traffic lane beyond the curb lane to satisfy turning-radius requirements. Such movements would disrupt vehicle traffic, including transit on transit routes. Accordingly, certain projects might have to impose restrictions on the size of trucks using their locations dock(s). A parking/loading strategy would have to be implemented, which would include enforcement of such a restriction (see Mitigation Measure TR-7a, below).

However, as stated above, an insufficient supply of loading spaces at any individual project site could affect vehicular and transit circulation, as well as bicycles, in the vicinity. Failure to provide an adequate supply of off-street commercial loading spaces at one or more of the specific developments would be expected to further exacerbate such effects. If other nearby developments were also to have a loading space shortfall, these effects could be magnified as delivery and service vehicles compete for a limited supply of on-street spaces.

Given the above, it is conservatively determined that implementation of the draft Plan would result in a **significant and unavoidable impact with respect to loading conditions within the Plan area, with corresponding secondary impacts to traffic, transit, and bicycle circulation**. Mitigation to reduce the magnitude of this impact would involve increasing the number of on-street loading spaces (see Mitigation Measure TR-7b, below).

Mitigation Measure

M-TR-7a **Loading Dock Management:** To ensure that off-street loading facilities are efficiently used and that trucks longer than can be safely accommodated are not permitted to use a building's loading dock, the project sponsor of a development project in the Plan area shall develop a plan for management of the building's loading dock and shall ensure that tenants in the building are informed of limitations and conditions on loading schedules and truck size. Such a management plan could include strategies such as the use of an attendant to direct and guide trucks (see Mitigation Measure M-TR-5), installing a "Full" sign at the garage/loading dock driveway, limiting activity during peak hours, installation of audible and/or visual warning devices, and other features. Additionally, as part of the project application process, the project sponsor shall consult with the Municipal Transportation Agency concerning the design of loading and parking facilities.

Typically, a building property manager dictates the maximum size of trucks that can be accommodated by a building's loading dock, and when trucks may access the project site.

Significance after Mitigation: Significant and Unavoidable because, while loading dock management would improve operations, it cannot be stated with certainty that the impact would be mitigated to a less-than-significant level.

M-TR-7b **Augmentation of On-Street Loading Space Supply:** To ensure the adequacy of the Plan area's supply of on-street spaces, the Municipal Transportation Agency (MTA) could convert existing on-street parking spaces within the Plan Area to commercial loading use. Candidate streets might include the north side of Mission Street between Second Street and First Street, both sides of Howard Street between Third Street and Fremont Street, and both sides of Second Street between Howard Street and Folsom Street. The MTA and Planning Department could also increase the supply of on-street loading "pockets" that would be created as part of the draft Plan's public realm improvements.

Increasing the supply of on-street loading spaces would reduce the potential for disruption of traffic and transit circulation in the Plan Area as a result of loading activities. However, the feasibility of increasing the number of on-street loading spaces is unknown. Locations for additional loading pockets have not been identified, and the feasibility of adding spaces is uncertain, as any such spaces would reduce pedestrian circulation area on adjacent sidewalks. Locations adjacent to transit-only lanes would also not be ideal for loading spaces because they may introduce new conflicts between trucks and transit vehicles. Given these considerations, potential locations for additional on-street loading spaces within the Plan area are limited, and it is unlikely that a sufficient amount of spaces could be provided to completely offset the net loss in supply.

Significance after Mitigation: Significant and Unavoidable with respect to the supply of on-street loading. In particular, because implementation of the draft Plan would reduce the number of available on-street spaces, compared to existing conditions, the loading shortfall would have a **significant and unavoidable effect** on Muni and regional transit operators (primarily Golden Gate Transit and SamTrans) that use City streets. The loading shortfall would also result in a **significant and unavoidable impact** on bicycle movement and safety.

Passenger Loading

Implementation of the public realm improvements proposed under the draft Plan would consolidate the morning casual carpool drop-off area along Howard Street between Fremont Street and First Street (currently both sides of Howard Street) to only the north side of the street because this segment of Howard Street would be converted to two-way traffic. An additional drop-off area would be designated in the proposed loading pocket on the west side of Fremont Street between Howard Street and the Bay Bridge off-ramp (mid-block between Howard Street and Fremont Street), during the a.m. peak hour.

Field observations indicate that the existing casual carpool drop-off zone on both sides of Howard Street is typically less than half occupied during periods of peak use. Most drop-off activities are completed within ten seconds, clearing the zone before one full signal cycle at Fremont Street / Howard Street. The addition of a drop-off area on Fremont Street would offset the loss of part of the Howard Street curb space for drop-off activities, and no substantial impacts to carpool activities or traffic flow along westbound Howard Street are expected with implementation of the draft Plan. This impact would be less than significant.

Should conditions warrant in the future, the Municipal Transportation Agency could designate an additional casual carpool drop-off zone during the weekday a.m. peak period along the north and/or south side of Natoma Street between First Street and Fremont Street, adjacent to the new Transit Center. As private vehicle pick-up / drop-off activities for the Transbay Transit Center are scheduled to be handled along Natoma Street, this curb space could be shared with casual carpool drop-off activities.

Emergency Access

Impact TR-8: Implementation of the draft Plan would not result in inadequate emergency access. (Less than Significant)

Implementation of the draft Plan would not introduce unusual design features, nor would the Plan change the Plan area street network so as to hinder or preclude emergency vehicle access. The physical changes made to the street network, such as closing Shaw Alley and part of Natoma Street to vehicular traffic, would be undertaken in consultation with the Fire Department, and would still allow for emergency vehicle access.

As described in the traffic analysis under Impact TR-1 and the analysis of potential delays to Muni service in the Plan area (p. 303), increased traffic congestion in the Plan area would result in substantial peak-hour delays for passenger vehicles and for transit. Although emergency vehicles are equipped with flashing lights and sirens to facilitate movement through congested streets, and although emergency personnel are typically familiar with the best response routes, it is likely that the projected levels of traffic congestion would occasionally impede emergency vehicle access in the Plan area during periods of peak traffic volumes. However, inasmuch as the traffic analysis focuses on peak-hour conditions (and primarily on the afternoon peak hour, when traffic conditions are generally at their worst), it is not representative of overall traffic conditions that would exist in the Plan area. Moreover, many streets that are highly congested in the a.m. peak hour carry substantially less traffic in the p.m. peak hour, and vice versa. This is particularly true in the Plan area, where many streets are one-way. Thus, while nearly three-fourths of Plan area study intersections would operate at LOS F during at least one peak hour, the same intersections would be expected to operate acceptably during the vast majority of each day. Therefore, while peak traffic periods could result in some delays for emergency responders, the overall effect is not considered substantial, and implementation of the draft Plan would not result in inadequate emergency access in the Plan area.

Mitigation: None required.

Construction Impacts

Impact TR-9: Plan area construction, including construction of individual projects along with ongoing construction of the Transit Center, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation. (Significant and Unavoidable with Mitigation)

In general, the analysis of construction impacts is specific to individual development projects, and includes a discussion of temporary roadway and sidewalk closures, relocation of bus stops, effects on roadway circulation due to construction trucks, and the increase in vehicle trips, transit trips and parking demand associated with construction workers, all in the context of the proposed development.

Construction work may require the temporary closure of travel lanes or sidewalks or the temporary removal of on-street parking, and construction staging and delivery activities may temporarily impede traffic flow on area roadways. Additional parking for construction workers may also need to be provided, or special transportation arrangements made to allow workers to access the site by means other than private automobile. There is also the potential that construction on several different sites could occur simultaneously, requiring that construction traffic plans be coordinated effectively to minimize impacts to the transportation network.

Temporary parking demand from construction workers' vehicles and impacts on local intersections from construction worker traffic would occur in proportion to the number of construction workers who would use automobiles. Parking of construction workers' vehicles would temporarily increase occupancy levels in off-street parking lots, either by those vehicles or by vehicles currently parking in on-street spaces that would be displaced by construction workers' vehicles.

Construction-related activities typically occur Monday through Friday, between 6:00 a.m. and 6:00 p.m., with limited construction activities on weekends (on an as-needed basis). Construction staging typically occurs within project sites and from the adjacent sidewalks. These sidewalks along the site frontages are usually closed throughout the construction duration, with temporary pedestrian walkways constructed in the adjacent parking lanes as needed. Temporary traffic lane closures are required to be coordinated with the City in order to minimize the impacts on local traffic.

During a project's construction period, temporary and intermittent traffic and transit impacts may result from truck movements to and from project sites. Truck movements during periods of peak traffic flow would have greater potential to create conflicts than truck movements during non-peak hours because of the greater number of vehicles on the streets during the peak hour that would have to maneuver around queued trucks. The sponsors of individual projects would have to meet with the Municipal Transportation Agency, Department of Public Works, Interdepartmental Staff Committee on Traffic and Transportation (ISCOTT), and other responsible City agencies to coordinate construction activities so as

to minimize construction impacts on vehicular, transit and pedestrian traffic. Any bus stop relocation would need to be coordinated with the Muni Street Operations / Special Events office, or other respective transit agencies as needed.

Construction-generated traffic generally operates along designated routes (optimized to streamline truck access and minimize temporary secondary noise, air quality, and transportation effects) and occurs outside of the peak hours for commute travel, further reducing the impacts of construction on transportation facilities.

Cumulative Construction Impacts

Demolition of the Transbay Terminal and associated elevated loop structures began in August 2010, with construction of the new Transit Center to begin in early 2012. Completion is scheduled in 2017, and may require relocation of bus stops, closure of sidewalks, removal of on-street parking, or other temporary changes to transportation facilities in the immediate vicinity of the Transit Center.

Several of the assumed development sites—including the Transit Tower, 350 Mission Street, 50 First Street, 181 Fremont Street, TJPA "Parcel F," a nearby site on Howard Street, and 41 Tehama Street—are located adjacent to or within one block of the new Transit Center and associated facilities, and may require special coordination should development proposals move forward and construction commence while the Transit Center is being constructed.

In general, any simultaneous construction activities for the Transit Center and development projects on nearby sites would result in a greater temporary increase in traffic levels, due to construction worker traffic and construction truck traffic (e.g., excavation, demolition, materials delivery). These additional vehicles could result in exacerbated congestion and circulation issues in the immediate vicinity of the Transit Center. Additionally, further disruption of travel lanes and/or sidewalks could occur As a result, sponsors of individual development projects would be required to coordinate with TJPA, MTA, and transit operators (Muni, SamTrans, and Golden Gate Transit) to minimize secondary effects to traffic, transit, pedestrians, bicyclists, and parking and loading activities.

Given the number of relatively large projects proposed in the vicinity and the uncertainty concerning construction schedules, it is conservatively assumed that cumulative construction activities could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles that could be significant. As noted above, project sponsors and/or their construction contractors would coordinate with construction contractors for any concurrent nearby projects, including the new Transit Center. Nevertheless, despite the best efforts, it is possible that simultaneous construction of multiple projects proximate to one another and to the Transit Center could result in substantial disruption of transit operations, traffic, and pedestrians and bicyclists, which would be **significant and unavoidable**. Mitigation Measure TR-8 would ensure the maximum degree of coordination between project sponsors/construction managers and agencies to minimize potential transit disruption.

Mitigation Measure

M-TR-9 **Construction Coordination.** To minimize potential disruptions to transit, traffic, and pedestrian and bicyclists, the project sponsor and/or construction contractor for any individual development project in the Plan area shall develop a Construction Management Plan that could include, but not necessarily be limited to, the following:

- Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m. (or other times, if approved by the Municipal Transportation Agency) to minimize disruption of traffic, transit, and pedestrian flow on adjacent streets and sidewalks during the weekday a.m. and p.m. peak periods.
- Identify optimal truck routes to and from the site to minimize impacts to traffic, transit, pedestrians, and bicyclists; and,
- Encourage construction workers to use transit when commuting to and from the site, reducing the need for parking.

The sponsor shall also coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Muni, AC Transit, Golden Gate Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that will result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.

Significance after Mitigation: Given the proximity of the sites to each other and the Transbay Transit Center, as well as the uncertainty regarding construction schedules, construction activities would likely result in disruptions and secondary impacts to traffic,transit, pedestrians, and bicycles, even with implementation of this mitigation measure. Therefore, this impact is considered **significant and unavoidable**.

Parking

Proposed Plan

Objective 4.5 of the draft Plan states:

> The district's transportation system will build on successful traffic and parking management programs and policies that are in place. expand and strengthen existing adopted policies (e.g. Downtown Plan, C-3 parking controls) and current planning initiatives (e.g. Transit Effectiveness Project, SFPark).

The draft Plan also contains the following objectives and policies concerning parking:

- Policy 2.24: Prohibit access to off-street parking and loading on key street frontages. Whenever possible, all loading areas should be accessed from alleys.
- Objective 4.16: Create a parking plan that encourages the use of public transit and other modes of transportation that are alternatives to single -occupant vehicles.

- Objective 4.38: Create a parking supply and demand management plan that encourages the use of public transit and other non-single occupant vehicle modes of transportation.
- Objective 4.39: Limit growth in auto trips to the district and congestion through strict limits on the supply of parking.
- Objective 4.40: Establish a parking pricing structure as a primary strategy to manage parking demand and achieve goals for parking turnover and availability.
- Objective 4.41: Implement parking management strategies and technologies that facilitate the dynamic management of parking supply and demand.
- Objective 4.42: Minimize the impacts of parking facilities on transit, pedestrians, and building design by regulating the location and design of parking facilities, including entrance and egress locations.
- Objective 4.43: Limit the continuance of surface parking lots and ensure that lots contribute to the public realm.
- Policy 4.50: Establish an absolute maximum cap on number of parking spaces in the district and adjacent areas based on the established targets for traffic reduction and goals for transit usage.[176]
- Policy 4.51: Scrutinize and restrict new accessory and non-accessory parking in the Plan area until a comprehensive cap on new parking is adopted.
- Policy 4.52: Increase and expand active management of on- and off-street parking, such as SFPark.
- Policy 4.53: Prohibit parking and loading curb cuts on key transit and pedestrian streets, including Mission, Second, and Folsom streets.
- Policy 4.54: Do not permit any new surface parking lots in the district, including as temporary uses.
- Policy 4.55: Ensure that existing surface parking lots provide landscaping and other amenities to improve the public realm and mitigate their ecological impacts.
- Policy 4.56: Require that temporary surface parking lots, as a condition of any re-authorization, include facilities for other non-private auto modes, including parking for car sharing vehicles and bicycles.
- Policy 4.57: Develop an administrative enforcement mechanism and authority to levy administrative fines for the existing Planning Code requirement for short-term parking pricing and prohibitions on discount rates for long-term parking.
- Policy 4.58: Make all non-residential parking, including accessory parking, subject to the City's Parking Tax, regardless of whether such parking is made available to the public for a fee.
- Policy 4.59: Develop a local enforcement mechanism for the existing State of California "parking cash-out" law for parking accessory to commercial development.
- Policy 4.60: Develop a local parking cash-out ordinance to apply to all parking accessory to commercial development.

[176] The draft Plan does not identify a proposed numerical limit on parking supply, but instead calls for future consideration of such a cap. Accordingly, no analysis is provided herein of a limit on the number of spaces. It is noted that the concept of a parking cap, while consistent with City policy such as the Transit First Policy, would be subject to separate environmental review at such time as an actual limitation were proposed.

- Policy 4.61: Support the establishment of a multimodal transportation fee for new development based on the number of parking spaces and auto trips generated, and invest the revenue in projects and programs that reduce or mitigate vehicle trips in the District.

San Francisco does not consider parking supply as part of the permanent physical environment and, therefore, does not consider changes in parking conditions to be environmental impacts as defined by CEQA. The Planning Department acknowledges, however, that parking conditions may be of interest to the public and the decision makers. Therefore, this report presents a parking analysis for information purposes.

Parking conditions are not static, as parking supply and demand varies from day to day, from day to night, from month to month, etc. Hence, the availability of parking spaces (or lack thereof) is not a permanent physical condition, but changes over time as people change their modes and patterns of travel.

Parking deficits are considered to be social effects, rather than impacts on the physical environment as defined by CEQA. Under CEQA, a project's social impacts need not be treated as significant impacts on the environment. Environmental documents should, however, address the secondary physical impacts that could be triggered by a social impact (CEQA Guidelines §15131 (a)). The social inconvenience of parking deficits, such as having to hunt for scarce parking spaces, is not an environmental impact, but there may be secondary physical environmental impacts, such as increased traffic congestion at intersections, air quality impacts, safety impacts, or noise impacts caused by congestion. In the experience of San Francisco transportation planners, however, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, taxis, bicycles or travel by foot) and a relatively dense pattern of urban development, induces many drivers to seek and find alternative parking facilities, shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service in particular, would be in keeping with the City's "Transit First" policy. The City's Transit First Policy established in the City's Charter Article 8A, Section 8A.115, provides that "parking policies for areas well served by public transit shall be designed to encourage travel by public transportation and alternative transportation."

The transportation analysis accounts for potential secondary effects, such as cars circling and looking for a parking space in areas of limited parking supply, by assuming that all drivers would attempt to find parking at or near the project site and then seek parking farther away if convenient parking is unavailable. Moreover, the secondary effects of drivers searching for parking is typically offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. The traffic assignments used in the transportation analysis, as well as in the associated air quality, noise and pedestrian safety analyses, reasonably addresses potential secondary effects.

Parking Supply and Demand

Assumed development in the Plan area would generate a demand for approximately 9,440 parking spaces (610 short-term and 8,830 long-term) during the midday peak period, and a demand for

approximately 8,320 parking spaces (575 short-term and 7,745 long-term) during the evening peak. The number of off-street parking spaces that could be provided as of right by the same assumed development projects is approximately 1,245, or up to approximately 1,585 with valet operations. The maximum amount of parking that could be provided, assuming review and authorization by the Planning Commission, pursuant to Sections 151.1(f) and 309 of the *Planning Code* for parking in excess of principally permitted amounts, is approximately 2,020 spaces, or up to about 2,365 with valet operations. Therefore, the Plan-area-wide parking shortfall could range between about 5,400 and 8,200 spaces. There are currently about 13,500 off-street parking spaces within the Plan Area,[177] with a peak occupancy of approximately 90 percent during the weekday midday period, resulting in about 2,200 available off-street parking spaces, which would be far too few spaces to accommodate all of the unmet off-street parking demand. Additionally, as many as 600 additional surface parking spaces could be lost in the Plan area due to future development on sites currently occupied by parking lots.

Indirect Adverse Effects on Transit Operations

The excess parking demand could result in an increase in the price of off-street parking in and near the Plan area, and could also (possibly in combination with a price increase) result in a mode shift, as drivers decide not to drive and instead utilize other modes of travel, such as by transit, by bicycle, or on foot. While transit and other non-automobile modes of travel are favored by City policy, including the Transit-First Policy, if the mode shift resulted in a substantial amount of additional transit riders, these additional transit trips could cause or exacerbate overcrowded conditions on transit vehicles, which would be over capacity on several parts of the Muni and regional transit system, as described in Impact TR-3, above. While the potential amount of new riders cannot be quantified (because information is not available regarding the likelihood or geographic distribution of potential shifts from vehicles onto transit), it is reasonable to assume that some trips would shift from auto to transit. If such a mode shift were to occur, secondary transit impacts could occur on the following lines either as a result of exacerbating an existing impact or resulting in a new impact on those lines where capacity utilization approaches the standard.

- Muni Corridors (a.m. peak): Geary, California, Sutter/Clement, Third, San Bruno / Bayshore, Other, Subway, and Haight / Noriega.
- Muni Screenlines (a.m. peak): Northwest.
- Muni Corridors (p.m. peak): Geary, California, Sutter / Clement, Chestnut/Union, Third, San Bruno / Bayshore, Other, and Subway. Haight / Noriega.
- Muni Screenlines (p.m. peak): Northwest, Southeast, and Southwest.
- Regional Corridors (a.m. peak): East Bay BART, AC Transit; North Bay GGT Bus and Ferries.
- Regional Screenlines (a.m. peak): East Bay and North Bay.
- Regional Corridors (p.m. peak): East Bay BART, AC Transit; North Bay GGT Bus and Ferries.
- Regional Screenlines (p.m. peak): East Bay and North Bay.

[177] As noted in the setting, about 1,800 off-street parking spaces have been eliminated since the parking survey was conducted for the Transportation Impact Study.

The potential mode shift onto transit would result in **significant, unavoidable impacts** to the transit corridors and screenlines identified above, even with implementation of Mitigation Measures M-TR-3a through M-TR-3e.

California High-Speed Rail

The California High-Speed Rail project, if built, would have a terminal at the new Transit Center. The 2009 Business Plan for the rail project, projects a total of 24,100 daily boardings in 2035 at the Transit Center.[178] Of these passengers, about 80 percent are expected be inter-regional travelers and 20 percent are expected to be local commuters. The Business Plan indicates that 54 percent of the inter-regional trips and 67 percent of the local commuter trips would occur during a 6-hour daily peak period. It is anticipated that during the weekday p.m. peak hour, there would be about 3,370 boardings and 1,780 alightings at the Transit Center.[179] This would generate about 1,80 peak-hour vehicle trips, 1,700 transit trips, 2,215 walking trips (includes to transit and parking) and 50 bicycle trips.

The additional vehicle trips generated by the high-speed rail project would cause further deterioration in conditions at many of the study intersections, including causing some intersections that are expected to operate at acceptable level of service with implementation of the draft Plan to deteriorate to LOS E or F. Because parking is anticipated to be very limited within the vicinity of the Transit Center and within the Plan area in general, it is expected that only taxi and drop-off / pick-up trips would travel through the intersections immediately adjacent to the Transit Center. Traffic on freeway on-ramps would also experience further delays.

Additional riders on Muni could exacerbate the already overcrowded conditions on the Northwest Screenline, Southeast Screenline, and Southwest Screenline. Additionally, the delay to Muni surface vehicles (particularly within the Plan area) could increase with the High-Speed Rail project. Crowding on BART, AC Transit, and Golden Gate Transit buses (and, possibly, ferries) would increase as well.

Pedestrian activity generated by the rail service would primarily affect sidewalks and crosswalks in the immediate vicinity of the Transit Center, some of which could deteriorate to unacceptable service levels. No substantial additional adverse effects would be anticipated with respect to bicycles or loading. Parking occupancy would increase in the Plan area.

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178 California High-Speed Rail Authority, *Report to the Legislature*, page 72, Table D, December 2009. This document is available online at: http://www.cahighspeedrail.ca.gov/assets/0/152/198/18a28048-f143-4855-b9b4-a9471e50b8ef.pdf. On April 13 2010, the CHSRA published an *Addendum to the California High-Speed Rail Authority's "Report to the Legislature; December 2009"*, which makes minor revisions to the 2009 Plan but does not change the total anticipated daily boardings. The *Addendum* is available online at: http://www.cahighspeedrail.ca.gov/assets/0/152/198/107e685c-4ab8-42b7-b146-543db5fe5aeb.pdf.

179 U.S. Department of Transportation, Federal Railroad Administration, *Transbay Program Final EIS Reevaluation*, Appendix B, May 2010. This document is available online at: http://transbaycenter.org/tjpa/documents/reevaluation-of-transbay-program-final-eis.

Summary – Plan Impacts

In summary, implementation of the draft Plan would result in a significant, unavoidable impact on traffic, on transit, on pedestrian and bicycle circulation, on off-street freight loading, and due to construction-period impacts; and less-than-significant impacts on emergency access. The shortfall in on-street loading spaces would result in a significant and unavoidable impact on traffic, transit service, pedestrians, and bicycles. Although not a CEQA consideration, the impacts on parking would also be less than significant, although the anticipated parking shortfall could indirectly result in adverse effects on transit service.

Transit Tower Impacts

Travel Demand Analysis

The project would generate about 1,968 and 2,115 new person trips during the a.m. and p.m. peak hours, respectively, of which about 27 percent would be vehicle trips (532 in the a.m. peak hour and 551 in the p.m. peak hour).[180] In the a.m. peak hour, there would be 981 transit trips and 282 walking trips, and the remainder (80) would be made by other modes such as bicycle, motorcycle and taxi. Corresponding numbers in the p.m. peak-hour would be 964 transit trips, 424 walking trips, and 75 other-mode trips.

The project would be subject to a variety of transportation management requirements under *Planning Code* Section 163, the intent of which is to assure that adequate measures are undertaken and maintained to minimize the transportation effects of added office employment in the Downtown and South of Market area, by facilitating the effective use of transit, encouraging ridesharing, and employing other practical means to reduce commute travel by single-occupant vehicles.

Traffic Impacts

Impact TR-10: Traffic generated by the proposed Transit Tower would increase average vehicle delay and would degrade level of service at local intersections. (Significant and Unavoidable)

As shown in **Table 23**, five of the 10 signalized intersections studied currently operate at acceptable (LOS D or better) service levels during the p.m. peak hour under existing conditions.[181] The other five intersections—First Street at Market, Mission, Howard, Folsom, and Harrison Streets—operate at an unacceptable LOS E or F. These intersections on First Street are located on the primary approaches to I-80 and the Bay Bridge, and traffic to the bridge causes extensive delays under existing conditions. Three of the study intersections—Fremont Street at Howard, Mission, and Market-Front Streets—were also analyzed for the a.m. peak hour due to heavy morning volumes on Fremont Street. All three Fremont

[180] The 532 and 551 vehicle trips represent 625 and 652 person-trips by vehicle in the a.m. and p.m. peak hours, respectively; the number of vehicle trips is less than the number of person trips by vehicle because some person trips are made in vehicles carrying more than one person.

[181] Because the Transit Tower could be implemented in the near future, impacts are considered against existing conditions.

TABLE 23
PEAK- HOUR INTERSECTION LEVELS OF SERVICE (TRANSIT TOWER)

Intersection	Existing		Existing + Tower		Cumulative (2030) [b]		Project Contribution
	LOS[d]	Delay[d]	LOS[d]	Delay[d]	LOS[d]	Delay[d]	To Cumul.[c]
P.M. PEAK HOUR							
1. First Street / Market Street	**E**	**72.7**	**E**	**77.1**	**F**	**>80** ***(v/c = 1.42)***	1.4% (SBT) 1.1% (EBR)
2. Fremont / Market / Front Streets	B	19.1	C	21.0	**F**	**>80** ***(v/c = 1.20)***	1.2% (NBTR)
3. Second Street / Mission Street	C	22.5	C	26.6	**E**	**60.2**	1.8% (WBTR)
4. First Street / Mission Street	**E**	**57.2**	**F**	**>80.0** ***(v/c = 1.26)***	**F**	**>80** ***(v/c = 3.09)***	3,2% (SBR) 0.4% (EBTR)
5. Fremont Street / Mission Street	C	24.8	C	26.2	**F**	**>80** ***(v/c = 1.42)***	1.4% (NBTR)
6. Second Street / Howard Street	B	12.3	B	13.1	**F**	**>80** ***(v/c = 1.62)***	2.4% (WBLTR)
7. First Street / Howard Street	**E**	**74.3**	**F**	**>80.0** ***(v/c = 1.46)***	**F**	**>80** ***(v/c = 2.31)***	18.1% (SBR) 6.5% (WBL)
8. Fremont Street / Howard Street	D	48.6	**E**	**59.1**	**F**	**>80** ***(v/c = 1.49)***	3.5% (EBLT) 0.6% (NBR)
9. First Street / Folsom Street	**E**	**70.1**	**F**	**>80.0** ***(v/c = 1.16)***	**F**	**>80** ***(v/c = 1.62)***	0.0%
10. First St. / Harrison St. / I-80 EB On	**F**	**>80.0** ***(v/c = 1.36)***	**F**	**>80.0** ***(v/c = 1.39)***	**F**	**>80** ***(v/c = 1.48)***	3.8% (SBT)
A.M. PEAK HOUR							
5. Fremont / Market / Front Streets	C	24.3	C	25.9	**F**	**>80** ***(v/c = 1.05)***	0.6% (NBTR)
6. Fremont Street / Mission Street	D	36.1	D	39.4	**F**	**>80** ***(v/c = 1.26)***	2.4% (NBTR)
7. Fremont Street / Howard Street	D	37.9	D	50.1	**F**	**>80** ***(v/c = 1.76)***	2.6% (EBLT) 2.3% (NBR)

1 Intersections at LOS E or LOS F are **bolded;** solid box indicates significant project or project + cumulative impact; dashed box indicates significant cumulative impact.
2 Delay in seconds per vehicle. Where delay exceeds 80 seconds (signalized intersections only), volume-to-capacity ratio indicated in parentheses.
3 Project's percent contribution to cumulative volume in critical movement at intersections projected to operate at LOS E or F. NB, SB, EB, WB indicates traffic direction (e.g., northbound); L, T, R indicates traffic movement through intersection (Left Turn, Through, Right Turn).

SOURCE: AECOM

Street intersections operate at acceptable LOS in the a.m. peak hour. The intersections selected for analysis were chosen because they would be the most likely to be affected by project traffic. While project-generated vehicles would also travel through other intersections, they would have less impact on intersections farther from the project site, as vehicles would disperse among the available streets as they travel away from the project site.

With the addition of project traffic to existing conditions,[182] operating conditions at four of the study intersections would degrade from those under existing conditions in the p.m. peak hour: First and Mission Streets, First and

Howard Streets, First and Folsom Streets, and Fremont and Howard Streets, resulting in significant impacts at these four intersections. At the two other intersections currently operating at unacceptable LOS (First and Market and First and Harrison Streets), project traffic would represent less than 5 percent of the volume of any "critical movement" (traffic movements through an intersection that most strongly influence intersection LOS), which is regarded as a less than "considerable" contribution to the existing degraded operation. Therefore, the project would result in less-than-significant impacts on intersection operations at these two intersections. In the a.m. peak hour, project traffic would not result in degradation of any intersection LOS.

Mitigation Measures

No mitigation is feasible to reduce impacts to a less-than-significant level at any of the four intersections that would be adversely affected by the proposed project. At First and Mission Streets, the Municipal Transportation Agency (MTA) could potentially optimize signal timing, which might reduce impacts to LOS E (and better than under existing conditions). However, this measure would require evaluation by the MTA with respect to signal progression and pedestrian timing requirements. Therefore, the feasibility of the mitigation measure is uncertain and the impact would be **significant and unavoidable**.

At First and Howard Streets, signal optimization would not improve conditions to better than LOS F.

At Fremont and Howard Streets, the MTA could potentially stripe an additional westbound through lane along Howard Street by reducing the number of eastbound travel lanes from two to one. However, this measure would require detailed evaluation by the MTA with respect to intersection geometry and other factors. Therefore, the feasibility of the mitigation measure is uncertain and the impact would be **significant and unavoidable**.

At First and Folsom Streets, the MTA could potentially stripe an exclusive southbound left-turn pocket at the intersection by removing approximately four on-street parking spaces on the east side of First Street, and convert the current shared through-left lane into a through lane. However, this measure would require detailed evaluation by the MTA with respect to intersection geometry and other factors. Therefore, the feasibility of the mitigation measure is uncertain and the impact would be **significant and unavoidable**.**Significance after Mitigation:** Significant and Unavoidable, due to the uncertainty of implementing this measure.

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[182] Because the proposed on-site parking garage would not accommodate the peak parking demand, some vehicle-trips generated by the project would need to use other off-street parking facilities; these vehicles were directly assigned to other parking facilities in the Plan area that have available capacity.

Cumulative Traffic Impacts

Cumulative traffic impacts were assessed by evaluating traffic from the proposed Transit Tower in the context of the draft Plan impacts analysis (Impact TR-1). As shown in Table 23, the Transit Tower's contributions to poorly-performing critical movements at one of the ten study intersections operating at LOS E or LOS F under 2030 Cumulative Conditions would exceed five percent. At the intersection of First and Howard Streets, the Transit Tower would make a considerable contribution to the total volumes on the southbound right and westbound left critical movements during the weekday p.m. peak hour, which would be a significant impact.

No mitigation is available for this impact, for the reasons discussed under Impact TR-1, and this impact would, therefore, be **significant and unavoidable**.

Transit

Impact TR-11: Transit ridership generated by the proposed Transit Tower would not result in a substantial increase in transit demand that could not be accommodated by adjacent transit capacity resulting in unacceptable levels of transit service, or cause a substantial increase in delays or operating costs. (Less than Significant)

The Transit Tower project would generate approximately 981 net new a.m. peak-hour transit trips, and about 964 net new transit trips in the p.m. peak hour; more than 90 percent of transit trips would be made in the peak direction (inbound in the morning and outbound in the afternoon). Of these trips, about half would be on Muni in the morning peak hour, and slightly more than half would be entirely on Muni in the afternoon peak hour, with the remainder being made primarily by regional transit. Muni trips would be dispersed over the more than 15 Muni routes (local and express buses, streetcar and Metro trains) that serve the Plan area. Project transit ridership in the peak direction would incrementally increase p.m. peak-period capacity utilization[183] at the four Muni screenlines (which are imaginary cordon lines drawn around the greater downtown area for purposes of analyzing Muni ridership by corridor). All Muni screenlines (see **Table 24**) currently operate better than Muni's service standard of 85 percent capacity utilization in both the morning and afternoon peak hours,[184] although the Metro corridors (Southwest screenline) currently exceed the standard. However, the increase in ridership due to the project would be no more than 2 percentage points on any corridor or screenline, and would not be significant, inasmuch as the increased ridership would be dispersed over dozens of Muni vehicles and would not result in exceedances of Muni capacity. The project would be subject to the Transit Impact Development Fee, which is a one-time fee assessed against downtown office projects to offset increased capital costs to Muni to provide additional capacity to serve the increased demand from new development.

183 Capacity utilization is the aggregate number of passengers divided by the aggregate design capacity of the transit vehicles, and may include varying numbers of standees, depending on the transit carrier.

184 Muni's service standard is based on differing capacities of its fleet's various sizes of buses and rail vehicles.

TABLE 24
MUNI PEAK-HOUR CAPACITY UTILIZATION (TRANSIT TOWER)

Screenline / Corridor	Existing		Existing plus Transit Tower		Cumulative		Contribution to Cumulative	
	AM	PM	AM	PM	AM	PM	AM	PM
Northeast Screenline								
Kearny / Stockton	58%	56%	59%	57%	77%	78%	–	–
Other	41%	48%	41%	48%	68%	74%	–	–
Subtotal	50%	52%	50%	53%	72%	76%	–	–
Northwest Screenline								
Geary	63%	76%	65%	78%	**86%**	**92%**	2.0%	2.1%
California	68%	69%	70%	71%	**99%**	**111%**	1.8%	2.0%
Sutter / Clement	54%	56%	56%	58%	**95%**	**90%**	1.9%	2.1%
Fulton / Hayes	72%	68%	73%	70%	79%	70%	–	–
Balboa	58%	49%	59%	50%	62%	49%	–	–
Chestnut / Union	70%	64%	72%	66%	69%	**86%**	–	2.5%
Subtotal	65%	65%	67%	67%	82%	**86%**	–	2.1%
Southeast Screenline								
Third	61%	78%	62%	79%	**91%**	**99%**	0.3%	0.3%
Mission	65%	53%	66%	54%	50%	69%	–	–
San Bruno / Bayshore	78%	74%	79%	75%	84%	83%	–	–
Other	62%	70%	63%	71%	**88%**	**91%**	1.1%	1.0%
Subtotal	67%	66%	68%	67%	77%	**86%**	–	0.8%
Southwest Screenline								
Subway	**86%**	**87%**	**88%**	**88%**	81%	**92%**	–	1.1%
Haight / Noriega	53%	58%	54%	60%	**85%**	81%	2.6%	–
Other	44%	43%	45%	44%	54%	41%	–	–
Subtotal	76%	77%	78%	79%	80%	**86%**	–	1.4%
TOTAL	67%	68%	68%	69%	79%	**111%**	n/a	n/a

Notes:
AM Peak Hour represents inbound (to downtown) ridership; **PM Peak Hour** represents outbound (from downtown) ridership.
Bold indicates exceedance of capacity utilization policy standard (85% utilization).
1 Unbolded capacity utilization of 85% indicates actual number is slightly below threshold.
Dash (–) indicates corridor or screenline does not exceed 85% threshold.

SOURCE: AECOM.

Project ridership on regional transit carriers would total about 445in the morning peak hour and 405 in the afternoon peak hour (some riders would also take Muni), with about half traveling to and from the East Bay on BART, and another third to and from the Peninsula on BART. Project transit trips would increase East Bay and Peninsula BART p.m. peak-period capacity utilization by 1 percentage point or less, and would not substantially affect capacity utilization on AC Transit, Golden Gate Transit, SamTrans, or Caltrain service (with five or fewer net new riders on each). None of the regional carriers' capacity utilization standards would be exceeded with project transit trips.[185] Therefore, project effects on regional transit ridership would be less than significant.

185 Golden Gate Transit, AC Transit and Caltrain have a passenger-per-seat standard of 100 percent. BART has a peak-hour passenger-per-seat standard of 135 percent.

Cumulative Transit Impacts

As described in Impact TR-3, by 2030, ridership on Muni lines is projected to generally grow faster than increases in capacity, and overall peak-hour ridership across the four screenlines, as a percentage of overall capacity, would increase substantially from existing conditions, with three of four screenlines exceeding Muni's 85-percent standard in the p.m. peak hour, along with several individual corridors in both peak hours. In some cases, capacity utilization on individual corridors would exceed 95 percent, with ridership on vehicles approaching the capacity for seated and standing passengers. However, project-generated ridership would represent less than one percent of the growth in Muni ridership at the four screenlines, and would make up less than 1.5 percent of total 2030 cumulative transit ridership at the screenlines. The maximum contribution to any single corridor or screenline would be 2.6 percent. Therefore, the project would have a less-than-significant cumulative impact on Muni operations.

Similarly, by 2030, ridership levels on regional transit lines (see **Table 25**) are projected to increase faster than increases in capacity, with both East Bay BART service and Golden Gate Transit bus service anticipated to be operating in excess of their respective load factor standards in both the a.m. and p.m. peak hours. BART trains in the Transbay Tube are projected to exceed 115 percent of capacity entering San Francisco in the morning peak hour and approach that figure in the afternoon peak hour, up from 80 percent and 83 percent, respectively, under existing conditions. Project ridership would comprise approximately 1.6percent of the growth in ridership from existing conditions to 2030 in the a.m. peak hour, and about 1.5 percent in the p.m. peak hour (less than three-fourths of one percent of the total in each case). Therefore, the project would have a less-than-significant impact on BART operations.

TABLE 25
REGIONAL TRANSIT PEAK-HOUR CAPACITY UTILIZATION (TRANSIT TOWER)

Screenline / Operator	Existing		Existing plus Transit Tower		Cumulative		Contribution to Cumulative	
	AM	PM	AM	PM	AM	PM	AM	PM
East Bay								
BART	80%	83%	81%	84%	**117%**	**113%**	0.7%	0.6%
AC Transit	55%	60%	55%	61%	**157%**	**117%**	0.2%	0.3%
Ferries	56%	46%	57%	47%	84%	80%	–	–
Subtotal	77%	78%	77%	79%	120%	111%	–	–
North Bay								
Golden Gate Transit Bus	57%	63%	57%	64%	**101%**	**118%**	0.5%	0.5%
Ferries	56%	53%	56%	54%	99%	99%	–	–
Subtotal	56%	59%	57%	59%	101%	109%	–	–
South Bay								
BART[1]	65%	61%	65%	62%	60%	57%	–	–
Caltrain	65%	61%	66%	61%	71%	64%	–	–
SamTrans	65%	61%	65%	61%	77%	44%	–	–
Ferries	n/a	n/a	n/a	n/a	51%	25%	–	–
Subtotal	65%	61%	65%	52%	63%	58%	–	–
TOTAL	70%	70%	71%	71%	96%	90%	–	–

Notes:

AM Peak Hour represents inbound (to downtown) ridership; **PM Peak Hour** represents outbound (from downtown) ridership.

Bold indicates exceedance of 100% of seating capacity, except 150% of seating capacity on BART). Although operators are grouped by screenlines, screenlines are not analyzed as a whole because they are served by different operators.

1 Includes trips to/from stations within San Francisco but outside of downtown (16th / Mission, 24th / Mission, Glen Park, and Balboa Park).

SOURCE: AECOM, 2011.

AC Transit buses would operate at 157 percent of capacity in the morning and 117 percent in the afternoon (up from 55 to 60 percent at present), and Golden Gate transit buses would operate at as much as 118 percent of seated capacity (p.m. peak hour), an increase from the existing 63 percent. Project ridership would constitute up to 0.5 percent of the growth in AC Transit ridership (0.3 percent of the total), and would make up 1.1 percent of the growth in Golden Gate Transit bus ridership (0.5 percent of the total). Therefore, the project would have a less-than-significant impact on AC Transit and Golden Gate Transit operations.

Effects on transit resulting from operation of the proposed Transit Tower's loading dock are discussed below under Impact TR-14.

Mitigation: None required.

Pedestrian Conditions

Impact TR-12: The proposed Transit Tower would not result in substantial overcrowding on public sidewalks, but would create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas. (Significant and Unavoidable with Mitigation)

Sidewalks on Mission, First, and Fremont Streets operate at LOS A or B in both the midday and p.m. peak hour, and would continue to do so with the addition of pedestrian traffic from the proposed project, as well as under cumulative conditions. No significant effects would ensue.

Crosswalks in the First/Mission Streets and Fremont/Mission Streets intersections operate at a range of between LOS A and LOS D, all of which are considered acceptable, under existing conditions. With the project, the eight crosswalks would see increased usage but no LOS would decline to an unacceptable level, with the exception of the north crosswalk in the Fremont/Mission intersection, which would operation at LOS E. This would be a significant impact. Under cumulative conditions, the north and south crosswalks at First/Mission Streets and the north crosswalk at Fremont/Mission Streets would operate at LOS E in the midday peak hour, and seven of eight crosswalks would operate at LOS E in the p.m. peak hour. (The north crosswalk at First/Mission Streets would operate at LOS C.) Transit Tower pedestrian trip generation would make a considerable contribution (greater than 5 percent) only to the north crosswalk in the Fremont/Mission intersection, discussed above.

Effects on pedestrians resulting from operation of the proposed Transit Tower's loading dock are discussed below under Impact TR-14.

Mitigation Measure

M-TR-12 **Widen North Crosswalk at Fremont / Mission Streets:** To ensure adequate pedestrian level of service under Existing plus Project and Cumulative Conditions, the Municipal

Transportation Agency could widen the north crosswalk at Fremont and Mission Street by approximately 5 feet.

Significance after Mitigation: Significant and Unavoidable, due to the uncertainty of implementing this measure.

Bicycle Conditions

Impact TR-13: The proposed project would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas. (Less than Significant)

The Transit Tower would be located in the heart of the Plan area, and in the vicinity of several major bicycle routes, including Route 50 (Market Street), Route 11 (Second Street), Route 30 (Howard Street and Folsom Street), and Route 5 (The Embarcadero), as well as the San Francisco Bay Trail paralleling the Embarcadero along the waterfront. The Transit Tower is expected to increase bicycle traffic on these area bikeways (up to approximately 50 trips during the weekday AM and PM peak hours), but is not expected to result in significant impacts, as there is currently available capacity on these routes to handle additional bicycle traffic.

Bicyclists would be able to access the Transit Tower from all three adjacent streets, either riding directly to the building's driveway and down into the Transit Tower garage via First Street, or walking their bike into the building and / or garage from Mission Street or Fremont Street. There would be the potential for conflicts at the driveway between bicyclists and parking garage vehicles or service / delivery trucks accessing the loading dock, as access to the garage would be shared between all users. However, given the limited capacity of the Transit Tower's garage and the alternative routes available to bicyclists, this is not expected to result in significant impacts to bicycle conditions.

The Transit Tower would also generate new vehicular and pedestrian traffic on city streets, which could increase the potential for vehicle-bicycle and pedestrian-bicycle conflict. However, the Transit Tower would not propose roadway or street modifications that would be inherently dangerous to bicyclists, and given the existing traffic levels (compared to the additional traffic levels generated by the Transit Tower), no significant impacts to bicycle conditions are expected as a result of the Transit Tower's new vehicular and pedestrian traffic.

Because impacts to pedestrians and bicyclists would be less than significant, no mitigation is required.

Effects on bicycles resulting from operation of the proposed Transit Tower's loading dock are discussed below under Impact TR-14.

Mitigation: None required.

Loading

Impact TR-14: The proposed project would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed on-site loading facilities or within convenient on-street loading zones, and could create potentially hazardous conditions or significant delays affecting traffic, transit, bicycles and pedestrians. (Significant and Unavoidable with Mitigation)

Under *Planning Code* Section 152.1, the project would be required to provide 15 off-street (standard truck) freight loading spaces (13 for office use and 2 for retail use). The *Planning Code* allows the substitution of two service van spaces for each full-size loading space, provided that at least one-half of the required number of spaces is provided for trucks (ignoring any resulting fraction). Application of that substitution formula for the project would yield a requirement for two truck spaces and two van spaces. Based on current plans, the project would provide six *Planning Code*-complying standard-truck loading spaces in a below-grade loading dock accessible from First Street via a ramp that would also serve the proposed parking garage.

The project would generate a total of about 353 service vehicle stops per day. Calculated average hourly loading demand would be about 16 spaces, and peak demand would be about 21 spaces. The project's six off-street truck loading spaces would not meet the average or peak demand.

If approved by the Municipal Transportation Agency following a public hearing, there would be an on-street commercial loading space directly abutting the building frontage on First Street. This would provide additional loading supply, but this space could not be reserved for exclusive use by the Transit Tower. While there are on-street commercial loading spaces provided along both First Street and Fremont Street within one block of the Transit Tower site, use of these spaces would be impractical for most loading activities due to their distance from the building and the need to cross one or more streets to access the site. Due to the shortfall of off-street loading spaces within the building and the lack of sufficient immediately adjacent on-street loading spaces directly adjacent to the building, delivery and service vehicles would likely double-park illegally along First Street or Mission Street. This would restrict roadway capacity, disrupting traffic flow and resulting in increased congestion that would delay traffic. Additionally, the curbside lane adjacent to the site on Mission Street is a transit-only lane, so illegal parking by delivery / service vehicles would force transit vehicles to merge into the regular travel lanes.

As a result, the deficient loading supply of the Transit Tower would result in a significant impact to loading, and secondary impacts to traffic, transit and bicycle operations.

Driveway and Loading Dock Operations

The Transit Tower would have a single garage driveway off of First Street serving both the building's parking garage and loading dock. Vehicles using the parking garage and trucks using the loading dock would share this driveway to access the underground garage complex. As currently designed, the loading dock would be located between the main control point for the garage and the exclusive control

point serving the parking area. (The second control point would govern access into and out of the parking area, and would include an automated ticketing machine or a parking attendant.)

Trucks would enter the garage via the ramp, pass the first control point, make a left turn, and back into the loading dock. To exit, trucks would make a right turn out of the loading dock, make a second right turn past the first control point, and travel up the ramp back to street level. Due to limited space, however, trucks using the southern four spaces at the dock would have difficulty making the two right turns to clear the primary control point and gain access the exit ramp. Trucks using these spaces would need to make a second reversing movement to adequately align themselves to make the second right turn at the primary control point. During these maneuvers, cars entering and exiting the parking area would be temporarily blocked. Trucks attempting to enter the loading dock would also require traffic to / from the parking area to be temporarily stopped to allow for these maneuvers to take place safely.

Depending on when these dock entry / exit maneuvers take place, there could be some spillback queues during these maneuvers as vehicles attempting to enter the garage are forced to wait for trucks to clear the circulation aisle. If such maneuvers block the circulation aisle for a sufficient length of time (e.g., if separate entry and exit maneuvers were conducted in succession), and/or these maneuvers are performed during peak inbound traffic movements (such as during the a.m. peak hour), queues could spill back up the driveway and onto First Street.

In the future, the First Street sidewalk adjacent to the building is expected to serve as a major pedestrian route to access the new Transit Center. The Transit Tower's proposed driveway and curb cut would disrupt pedestrian flow and could present safety hazards to pedestrians along this section of sidewalk, with approximately 180 vehicles entering the garage and 40 vehicles exiting the garage during the a.m. peak hour and approximately 190 vehicles exiting the garage and 40 trips entering the garage during the p.m. peak hour. In addition, any vehicle queues as described above could extend across the sidewalk, further disrupting pedestrian flow and creating safety hazards for pedestrians along the First Street sidewalk adjacent to the Transit Tower.

First Street is also a major vehicular street. Any queues reaching First Street would block a travel lane, reducing roadway capacity and creating a traffic hazard.

Moreover, the difficulty of the loading maneuvers within the loading dock, combined with the lack of a sufficient number of off-street loading spaces, could encourage some delivery and service vehicles to double-park illegally along the First Street and Mission Street building frontages rather than enter the loading dock, causing increased congestion and delay for both traffic and transit vehicles.

Finally, because First Street is one-way southbound, the driveway configuration as proposed would result in turning movement conflicts between vehicles attempting to enter the garage (south side of the driveway) and vehicles attempting to exit the garage (north side of the driveway). This conflict could lead to an increased potential for collisions, increasing safety hazards to drivers.

Given these considerations, the Transit Tower garage driveway and loading dock would result in significant impacts to traffic, transit, and pedestrian operations.

Mitigation Measures

M-TR-14a **Loading Dock Management:** To ensure adequate off-street loading capacity is provided, the project sponsor shall implement active management of the Transit Tower loading dock, including, but not necessarily limited to, the following:

- Establish a Loading Demand Management Plan. All loading activities would be coordinated through an on-site manager, to ensure that loading docks are available when scheduled trucks arrive. Unscheduled deliveries (which would have to park on the street, likely illegally) would be prohibited access to the building freight elevators;
- During periods when the building's loading dock is fully utilized, the coordinator would direct trucks to return when there is available capacity at the loading dock. Alternatively, a sign could be provided at or near the driveway to the alert truck drivers that the dock is full; and,
- Educate the building's office and retail tenants on the capacity of the loading dock and the loading coordinator's role, and encourage off-peak deliveries or use of smaller van-type vehicles that could be accommodated in standard parking spaces within the building garage.

M-TR-14b **Garage/Loading Dock Driveway Operations:** To ensure that operation of the driveway serving the project's off-street parking garage and off-street loading dock does not result in queues of vehicles that could adversely affect traffic, transit, pedestrians, and bicycles on First Street, the project sponsor shall undertake measures including, but not necessarily limited to, the following:

- Redesign the internal layout of the loading dock to allow for easier entrance / exit maneuvers for all provided loading spaces (e.g., limited need for additional reversing movements). This would be evaluated using a truck-turning template assessment to ensure that vehicles of all sizes could adequately access each space;
- Restrict the use of the loading dock to trucks 35 feet in length or shorter;
- Install a "GARAGE FULL" sign at the garage driveway to alert drivers that the on-site garage is at capacity;
- Between the hours of 6:00 a.m. to 10:00 p.m., station a parking garage attendant at the driveway on First Street to direct vehicles entering and exiting the garage to avoid any safety issues with pedestrians in the sidewalk, prevent delays or disruption to traffic and transit operations along First Street, and minimize conflicts between vehicles entering the garage and vehicles exiting the garage;
- Install visible warning devices at the driveway opening to alert pedestrians of approaching vehicles;
- Limit hours of operation of the loading dock to avoid peak pedestrian and traffic times. No trucks would be permitted to enter or exit the loading dock between the hours of 7:00 a.m. to 9:00 a.m., 12:00 p.m. to 1:00 p.m., and 4:00 p.m. to 6:00 p.m. on weekdays;

- Redesign the garage driveway with the inbound direction (entering the garage) on the north side of the driveway and the outbound direction (exiting the garage) on the south side of the driveway, which would eliminate conflicts between vehicles entering and exiting the garage;
- Signalize the driveway intersection at First Street, so that the driveway would function as the east leg of the First Street / Minna Street signalized intersection. Vehicles exiting the driveway would receive a solid red signal during the green signal for southbound First Street. Signage and striping within the driveway would direct exiting vehicles to stop and wait within the driveway during the red signal phase and not block the sidewalk, and indicate that left turns on red exiting the driveway would be prohibited. When southbound First Street has a red signal (and eastbound Minna Street has a green signal), vehicles exiting the driveway would have a flashing red signal, indicating that they are permitted to exit but must yield to pedestrians on the First Street sidewalk (similar to a typical driveway) as well as pedestrians crossing First Street at Minna Street (similar to a typical signalized intersection). These measures would provide exiting vehicles with a designated phase for egress movements, separate from the First Street phase, which would ensure that they do not block the sidewalk while exiting. Vehicles entering the driveway would proceed along with southbound First Street traffic and would also have to yield to pedestrians on the First Street sidewalk (like at a typical driveway), and left turns on red into the driveway would be prohibited, as indicated by signage. Pedestrians movements on the First Street sidewalk would not be signalized, and vehicles entering and exiting the driveway would have to yield to these pedestrians at all times (similar to a typical driveway);
- Ensure that vehicular queues do not stretch back to the First Street sidewalk or travel lane at any time; and
- As part of the Planning Department project approval process (e.g., Section 309 of the *Planning Code*), the Transit Tower project sponsor shall consult with SFMTA on the design of the parking garage and access to ensure that it is functional and well-integrated with street operations across all modes.

Significance after Mitigation: Significant and Unavoidable

Because no detailed design is available for the Transit Tower loading dock that indicates how, or if, the building's off-street freight loading and garage operations would function acceptably, and while implementation of Mitigation Measure TR-14b would be expected to reduce the impact, it is uncertain whether the above management and engineering solutions would reduce it to a less-than-significant level. Therefore, this impact is considered **significant and unavoidable.**

Passenger Loading. The project does not propose dedicated curbside passenger loading zones, as there is limited curb space available adjacent to the project site to serve passenger loading needs. However, passenger loading could occur from the on-street parking spaces and current loading spaces along the east curb of Fremont Street, except between 7:00 a.m. and 9:00 a.m. and 3:00 p.m. and 7:15 p.m., when the parking lane is restricted. During these periods, passenger loading would need to occur from other on-street spaces in the vicinity to reduce the potential for private vehicle pick-up and drop-off activities to conflict with Muni operations along Mission Street and Golden Gate Transit operations along Fremont

Street. Assuming enforcement of the No-Stopping restrictions, no significant effect would ensue. Nevertheless, passenger loading should receive additional consideration during the detailed design and entitlement process for the proposed Transit Tower.

Emergency Access

Impact TR-15: The proposed project would not result in inadequate emergency access. (Less than Significant)

The project site is accessible from both First and Mission Streets, and the Transit Tower would also be accessible from Fremont Street, across the planned Mission Square open space. Access directly into the building for emergency vehicles and responding personnel would be provided via the parking garage driveway on First Street, with additional access at street level (from either First Street, Mission Street, or Fremont Street via the Mission Square plaza) on foot through the building lobby. The project also proposes no modifications to the roadway network. Overall, the project would not result in any significant impacts to emergency vehicle access.

Mitigation: None required.

Construction Impacts

Impact TR-16: Project construction, along with construction of the Transit Center and other nearby projects, would result in disruption of nearby streets, transit service, and pedestrian and bicycle circulation. (Significant and Unavoidable with Mitigation)

Detailed plans for construction of the Transit Tower have not been finalized. However, in compliance with the San Francisco Noise Ordinance and permit conditions, it is expected that construction would occur primarily on weekdays from 7:00 a.m. to 5:00 p.m., with work occurring on Saturday from 8:00 a.m.to 4:00 p.m. on an as-needed basis only.

The estimated total number of daily truck trips is currently undetermined, but given the building size and the amount of excavation would be expected to be substantial. However, the Transit Tower project sponsor would follow the Regulations for Working in San Francisco Streets ("The Blue Book") and would provide reimbursement to SFMTA for installation and removal of temporary striping and signage changes required during construction of the Transit Tower.

Construction staging areas have not been identified. Given the constrained site, staging may need to be provided at a nearby off-site location, resulting in additional truck traffic. Adjacent sidewalks and travel lanes may need to be closed for extended periods. Any travel lane or sidewalk closures deemed necessary for construction of the Transit Tower would be coordinated with the City in order to minimize the

impacts on local traffic, but impacts to traffic and pedestrians would be likely. In general, lane and sidewalk closures are subject to review and approval by the Department of Public Works (DPW) and the Interdepartmental Staff Committee on Traffic and Transportation (ISCOTT). Any Muni stop relocation would need to be coordinated with the Muni Street Operations / Special Events office. Any SamTrans or Golden Gate Transit stop relocation would need to be coordinated with the appropriate regional transit agencies.

Based on the confined site, expected intensity and duration of construction, and likely impacts to traffic and pedestrian circulation, construction of the Transit Tower would result in a significant construction impact

In terms of cumulative impacts, other projects may be under construction in the project site vicinity at the same time as the proposed project. Primarily, these would include ongoing construction of the new Transit center, which will last several years, until approximately 2017, as well as the nearby approved project at 350 Mission Street and proposed projects at 50 First Street and 181 Fremont Street, as well as the TJPA-owned Parcel F on Howard Street. Additional potential projects are within two blocks.

If a decision is made to commence construction of the Transit Tower before completion of construction of the new Transit Center, the Transbay Joint Powers Authority may need to coordinate internally and externally, with SFMTA, SamTrans, and Golden Gate Transit staff and potentially with representatives from other developers proposing projects in the immediate vicinity, to secure sufficient vehicular, transit, pedestrian, and bicycle circulation along Plan Area roadways.

In addition, construction of the Transbay Transit Center and other developments in the area would result in increased traffic levels, due to construction workers, earth moving vehicles, and the delivery of construction materials via trucks. These additional vehicles would result in substantial congestion and circulation issues in the immediate vicinity of the Transit Tower and other individual project sites. Extended closures of travel lanes and sidewalks may be necessary. Based on these issues, construction of the Transit Tower combined with adjacent construction projects would result in a cumulative construction impact.

Given the number of relatively large projects proposed in the vicinity and the uncertainty concerning construction schedules, it is conservatively assumed that cumulative construction activities could potentially result in disruptions to traffic, transit, pedestrians, and/or bicycles that could be significant. The proposed Transit Tower could proceed with construction in advance of some other projects in the vicinity. As noted above, the project sponsor and/or construction contractor would coordinate with construction contractors for any concurrent nearby projects, including the new Transit Center. Nevertheless, despite the best efforts of the project sponsor and project construction contractor, it is possible that simultaneous construction of the proposed Transit Tower and the Transit Center (and, potentially, other nearby projects) could result in substantial disruption to traffic and transit operations, as well as pedestrian and bicycle traffic.

Mitigation Measure

M-TR-16a **Construction Coordination.** To minimize potential disruptions to transit, traffic, and pedestrian and bicyclists, the project sponsor and/or construction contractor shall develop a Construction Management Plan that could include, but not necessarily be limited to, the following:

- Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m. (or other times, if approved by the Municipal Transportation Agency) to minimize disruption of traffic, transit, and pedestrian flow on adjacent streets and sidewalks during the weekday a.m. and p.m. peak periods.
- Identify optimal truck routes to and from the site to minimize impacts to traffic, transit, pedestrians, and bicyclists; and,
- Encourage construction workers to use transit when commuting to and from the site, reducing the need for parking.

The project sponsor shall also coordinate with the Municipal Transportation Agency/Sustainable Streets Division, the Transbay Joint Powers Authority, and construction manager(s)/contractor(s) for the Transit Center project, and with Muni, AC Transit, Golden Gate Transit, and SamTrans, as applicable, to develop construction phasing and operations plans that will result in the least amount of disruption that is feasible to transit operations, pedestrian and bicycle activity, and vehicular traffic.

Significance after Mitigation: Given the size of the proposed Transit Tower, the number of relatively large projects proposed in the vicinity of the Transit Tower site, and the uncertainty regarding construction schedules, it is conservatively assumed that construction activities could potentially result in disruptions and secondary impacts to traffic, transit, pedestrians, and / or bicycles, even with implementation of this mitigation measure. Therefore, this impact is considered **significant and unavoidable**.

Parking

The proposed project is in the C-3-O (Downtown Office) zoning district, in which off-street parking is not required for commercial uses, and is permitted for up to 7 percent of gross floor area. (The draft Transit Center District Plan proposes that this limit be reduced to 3.5 percent of gross floor area.) The project parking garage would accommodate up to about 302 parking spaces (capacity for about 480 vehicles through the use of valet parking operations). The project would exceed 7 percent of gross floor area devoted to parking (and also the proposed 3.5 percent limit), and would thereby would not comply with *Planning Code* Section 151.1; parking area in excess of the maximum would be required to be approved as a principal use (major parking garage) in accordance with Sections 158 and 223(p) of the *Planning Code*.

The project would create a parking demand of approximately 1,518 spaces during the weekday midday period. The proposed parking supply of 302 spaces would be inadequate to accommodate the midday parking demand. As discussed in the setting there are approximately 60 off-street parking lots and

garages in the parking survey area that provide publicly accessible parking. It is estimated that approximately 1,500 spaces are available during the midday peak.[186] Based on these conditions, it is anticipated that some of the Transit Tower's parking shortfall of about 1,220 spaces could be accommodated within nearby parking facilities.

It should be noted that project parking shortfalls are not considered to be significant impacts on the environment, and that the city's "Transit First" policy places an emphasis on encouraging alternative transportation. As a result, providing additional parking in an attempt to reduce the parking shortfall would not only fail to comply with the Planning Code, but would also conflict with the Transit First policy by increasing traffic on Plan Area roadways and increasing delays to transit service.

Summary – Transit Tower Impacts

In summary, the proposed Transit Tower would result in a significant and unavoidable impacts related to traffic, transit, loading, and construction, and significant but mitigable impacts related to pedestrian circulation. The project would result in less-than-significant impacts with regard to bicycle conditions. Although not a CEQA consideration, the impacts on parking would also be less than significant.

186 As noted in the setting, about 1,800 off-street parking spaces have been eliminated since the parking survey was conducted for the Transportation Impact Study.

F. Noise and Vibration

Setting

Sound Descriptors

Decibel

Sound is characterized by various parameters that describe the rate of oscillation (frequency) of sound waves, the distance between successive troughs or crests in the wave, the speed that it travels, and the pressure level or energy content of a given sound. The sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound, and the decibel (dB) scale is used to quantify sound intensity. Because sound can vary in intensity by over one million times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all sound frequencies within the entire spectrum, human response is factored into sound descriptions in a process called "A-weighting," expressed as "dBA." The dBA, or A-weighted decibel, refers to a scale of noise measurement that approximates the range of sensitivity of the human ear to sounds of different frequencies. On this scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. A 10-dBA increase in the level of a continuous noise represents a perceived doubling of loudness. The noise levels presented herein are expressed in terms of dBA, unless otherwise indicated. **Table 26** shows some representative noise sources and their corresponding noise levels in dBA.[187]

Planning for acceptable noise exposure must take into account the types of activities and corresponding noise sensitivity in a specified location for a generalized land use type. Some general guidelines[188] are as follows: sleep disturbance can occur at levels above 35 dBA; interference with human speech begins at about 60 dBA; and hearing damage can result from prolonged exposure to noise levels in excess of 85 to 90 dBA.

Leq, CNEL, Ldn

Time variations in noise exposure are typically expressed in terms of a steady-state energy level (called Leq) that represents the acoustical energy of a given measurement. Leq (24) is the steady-state energy level measured over a 24-hour period. Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dBA increment be added to "quiet time" noise levels to form a 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL). CNEL adds a 5-dBA "penalty" during the evening hours (7:00 p.m. to 10:00 p.m.) and a 10-dBA penalty during the night hours (10:00 p.m. to 7:00 a.m.).

187 U.S. Department of Housing and Urban Development, *The Noise Guidebook*, 1985. Available on the internet at: http://www.hud.gov/offices/cpd/energyenviron/environment/resources/guidebooks/noise/.

188 U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March, 1974. Available on the internet at: http://nonoise.org/library/levels74/levels74.htm.

TABLE 26
TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT

Examples of Common, Easily Recognized Sounds	Decibels (dBA) At 50 feet	Subjective Evaluations
Near Jet Engine	140	Deafening
Threshold of Pain (Discomfort)	130	
Threshold of Feeling – Hard Rock Band	120	
Accelerating Motorcycle (at a few feet away)	110	
Loud Horn (at 10 feet away)	100	Very Loud
Noisy Urban Street	90	
Noisy Factory	85[1]	
School Cafeteria with Untreated Surfaces	80	Loud
Near Freeway Auto Traffic	60[2]	Moderate
Average Office	50[2]	
Soft Radio Music in Apartment	40	Faint
Average Residence Without Stereo Playing	30	
Average Whisper	20	Very Faint
Rustle of Leaves in Wind	10	
Human Breathing	5	
Threshold of Audibility	0	

[1] Continuous exposure above 85 dBA is likely to degrade the hearing of most people.
[2] Range of speech is 50 to 70 dBA.

SOURCE: U.S. Department of Housing and Urban Development, *The Noise Guidebook.* 1985.

Another 24-hour noise descriptor, called the day-night noise level (Ldn), is similar to CNEL, except that Ldn adds only the 10-dBA nighttime penalty, not the evening penalty. In practice, Ldn and CNEL usually differ by less than 1 dBA at any given location for transportation noise sources, which is generally an imperceptible difference. The San Francisco Noise Ordinance uses the Ldn descriptor.

Health Effects of Environmental Noise

The World Health Organization (WHO) is perhaps the best source of current knowledge regarding health impacts due to the fact that the European nations have continued to study noise and its health effects, while the U.S. Environmental Protection Agency all but eliminated its noise investigation and control program in the 1970s.[189] According to WHO, sleep disturbance can occur when continuous indoor noise levels exceed 30 dBA or when intermittent interior noise levels reach 45 dBA, particularly if background noise is low. With a bedroom window slightly open (a reduction from outside to inside of 15 dB), the WHO criteria would suggest exterior continuous (ambient) nighttime noise levels should be 45 dBA or below, and short-term events should not generate noise in excess of 60 dBA. WHO also notes that

[189] The *San Francisco General Plan* Land Use Compatibility Guidelines for Community Noise, presented below in Figure 19, were created during the same era.

maintaining noise levels within the recommended levels during the first part of the night is believed to be effective for the ability to fall asleep.[190]

Other potential health effects of noise identified by WHO include decreased performance on complex cognitive tasks, such as reading, attention, problem solving, and memorization; physiological effects such as hypertension and heart disease (after many years of constant exposure, often by workers, to high noise levels); and hearing impairment (again, generally after long-term occupational exposure, although shorter-term exposure to very high noise levels, for example, exposure several times a year to concert noise at 100 dBA). Noise can also disrupt speech intelligibility at relatively low levels; for example, in a classroom setting, a noise level as low as 35 dBA can disrupt clear understanding. Finally, noise can cause annoyance, and can trigger emotional reactions like anger, depression, and anxiety. WHO reports that, during daytime hours, few people are seriously annoyed by activities with noise levels below 55 dBA, or moderately annoyed with noise levels below 50 dBA.[191]

Fundamentals of Vibration

As described by the Federal Transit Administration (FTA), ground-borne vibration, in contrast to airborne noise, is not a common environmental problem, and it is uncommon for vibration caused by heavy vehicles, such as trucks and buses, to be perceptible, even close to major roads. However, the FTA notes that "ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard." Another common source of vibration is certain construction activities, such as pile-driving and the operation of heavy earthmoving equipment.[192]

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

190 World Health Organization, *Guidelines for Community Noise*. Geneva, 1999. Available on the internet at: http://www.who.int/docstore/peh/noise/guidelines2.html. This document is also available for review at the Planning Department, 1650 Mission Street, Suite 400, in Case File No. 2004.0160E.

191 *Ibid*.

192 Federal Transit Administration, Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment*, May 2006. Available on the internet at: http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf. Reviewed May 25, 2011.

The effects of ground-borne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of activities such as pile driving during construction. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Existing Noise Environment

The level of long-term environmental noise in urban areas is, in general, largely dependent on vehicle traffic volumes and travel speeds as well as the mix of vehicle types. The existing ambient noise environment within the Transit Center District Plan area, typical of most urban areas, is dominated by vehicular traffic (autos, trucks, buses) on local roadways. BART and Muni trains operate underground below Market Street, which is the northern boundary of the Plan area, and thus do not generate substantial noise at street level.

The San Francisco Department of Public Health (DPH) has mapped transportation noise throughout the City of San Francisco, based on modeled baseline traffic volumes derived from the San Francisco County Transportation Authority travel demand model. DPH mapping indicates the range of Ldn noise levels that occur on every street within the City. The portion of this map that covers the Plan area is presented as **Figure 55**.

As indicated in this figure, existing noise levels immediately adjacent to most streets in the Plan area from Main Street and west (other than some mid-block "alleys") exceed 70 dBA (Ldn).[193] However, mapping also shows that noise levels decrease with distance from streets, particularly where buildings tend to serve as noise barriers, so that the interiors of some city blocks within the Plan area are subject to lower noise levels (between 55 and 69 dBA (Ldn). The noise map also indicates that the elevated I-80 freeway, located approximately 1,000 feet to the south, does not substantially influence the local noise environment. The highest traffic-generated noise levels (greater than 70 dBA, Ldn) in Plan area primarily occur along First Street, Fremont Street north of Folsom Street, Mission Street, Howard Street, Harrison Street west of Second Street, and New Montgomery Street, as well as on Third Street, just west of the Plan area.

In addition to vehicle traffic, continuous sources of mechanical noise also contribute to ambient noise levels. On the other hand, short-term noise sources, such as truck back-up beepers, the crashing of material being loaded or unloaded, and car doors slamming and engines starting up of parked cars, contribute very little to 24-hour noise levels but are capable sleep disturbance and severe annoyance. The importance of noise to receptors is dependent on both time of day and context. For example, long-term

[193] Note that the noise levels presented in the figure are 24-hour noise levels, in which nighttime noise is given additional weight. These noise levels are not directly comparable to the noise levels discussed under "Health Effects of Environmental Noise," as those noise levels are for specified periods of less than 24 hours.



SOURCE: San Francisco Departmet of Public Health, 2008

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Figure 55

Existing Transportation Noise Levels

high noise levels from large traffic volumes can make conversation at a normal voice level difficult or impossible, while short-term peak noise levels, if they occur at night, can disturb sleep.

The Plan area does not contain a substantial number of stationary sources of noise. Such sources are often associated with heavy commercial and light industrial uses (commercial building contractors, wholesale distribution and trucking facilities, and processing facilities) that do not generally exist in the Plan area, with the notable exception of the Transit Center currently under construction and scheduled for completion in 2017. (Until that time, bus operations are being conducted at the Temporary Transbay Terminal, a surface facility located on the block bounded by Main, Beale, Howard, and Folsom Streets.) The primary stationary noise sources in the Plan area are mechanical (heating, ventilation, and air conditioning) equipment on building roofs.

The San Francisco Department of Public Health (DPH), which is responsible for enforcement of the City's Noise Ordinance related to operational noise from such stationary sources (see discussion of Noise Ordinance below) has responded to a variety of noise complaints in recent years in neighborhoods surrounding the Plan area. In many cases, such complaints have arisen when new residential and live-work buildings have been constructed in areas historically dominated by heavy commercial and light industrial uses. DPH staff reports that, in many such instances, noise measurements taken subsequent to the receipt of complaints revealed that commercial/industrial uses were generating noise levels in excess of those permitted under the City's Noise Ordinance; in many cases, it is possible that the noise level had been a long-time phenomenon that only rose to the level of enforcement action when a new residential or other sensitive use was introduced nearby. According to DPH staff, noise complaints from occupants of new residential projects have revealed that existing, and in some instances long-standing, commercial/industrial uses are in violation of the Noise Ordinance. As a result of DPH response to these complaints, existing facilities have been cited and, in some cases, required to retrofit existing equipment and/or change operations.[194]

Because the Plan area is substantially dominated by existing office uses, such conflicts are less likely to arise in the Plan area, although it is noted that construction of The Infinity residential complex, in Rincon Hill, generated a large number of noise complaints concerning rooftop mechanical equipment on a computer "server farm" on an adjacent parcel. According to DPH staff, the server farm, which existed prior to construction of the new residential building, was required to insulate its mechanical equipment to reduce noise levels at the adjacent residential building. It can be difficult to analyze or predict such conflicts in advance because noise measurements made at ground level often do not accurately reflect noise generated by rooftop equipment, especially when such equipment is many stories above grade. Even tenants of office buildings proximate to such noise sources (such as from a neighboring office building) may not be aware of the noise because nearly all newer office buildings have closed windows. Residential towers, on the other hand, often have operable windows or outdoor balconies, or both, which can expose residents to greater noise levels than office tenants at the same distance from a noise source.

[194] Tom Rivard, Senior Environmental Health Specialist, San Francisco Department of Public Health, personal communication.

Transit Tower Site

The proposed Transit Tower would be developed immediately adjacent to the new Transit Center. In addition to bus traffic, the noise environment in the site vicinity is dominated by auto, bus, and truck, traffic on First, Fremont, and Mission Streets.

Sensitive Receptors

Sensitive noise receptors are generally considered to include hospitals, skilled nursing/convalescent care facilities, schools, churches, libraries, and residences. Land uses within the Transit Center District Plan area are described in detail in Section IV.A, Land Use. Residential uses occur in parts of Plan area, with most located in the eastern portion of the Plan area. There are no schools or churches located in the Plan area, although there are several day care centers, as described in Section IV.A, Land Use. There are no hospital or skilled nursing/convalescent care facilities nor are there any public libraries in the Plan area. However, there are several small libraries associated with institutions and agencies (i.e., U.S. Environmental Protection Agency, Golden Gate University School of Law) located within the Plan area.

Regulatory Setting

Federal Regulations

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations (CFR), Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 50 feet from the vehicle pathway centerline, under specified test procedures. These controls are implemented through regulatory controls on truck manufacturers. There are no comparable standards for vibration, which tend to be specific to the roadway surface, the vehicle load, and other factors.

California Noise Insulation Standards

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings other than detached single-family dwellings that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in Title 24 of the California Code of Regulations (the California Building Code). For limiting noise transmitted between adjacent dwelling units, the noise insulation standards specify the extent to which walls, doors, and floor ceiling assemblies must block or absorb sound. For limiting noise from exterior sources, the noise insulation standards set forth an interior standard of 45 dBA (Ldn) in any habitable room and, where such units are proposed in areas subject to noise levels greater than 60 dBA (Ldn), demonstration of how dwelling units have been designed to meet this interior standard. If the interior noise level depends upon windows being closed, the design for the structure must also specify a ventilation or air-conditioning system to provide a habitable interior environment. The typical range of noise reduction provided by residential dwellings is 12 – 18 decibels with windows partially open. An acoustically well-insulated home with windows and doors kept closed

can provide 30 – 35 dB of noise attenuation whereas a more typical, unmodified dwelling might provide 20 – 25 dB of noise level reduction.[195]

San Francisco General Plan

The Environmental Protection Element of the *San Francisco General Plan* contains Land Use Compatibility Guidelines for Community Noise.[196] These guidelines, which are similar to state guidelines promulgated by the Governor's Office of Planning and Research, indicate maximum acceptable noise levels for various newly developed land uses. These guidelines are presented in **Figure 56**. Although this figure presents a range of noise levels that are considered compatible or incompatible with various land uses, the maximum "satisfactory" noise level is 60 dBA (Ldn) for residential and hotel uses, 65 dBA (Ldn) for school classrooms, libraries, churches and hospitals, 70 dBA (Ldn) for playgrounds, parks, office buildings, retail commercial uses and noise-sensitive manufacturing/ communications uses, and 77 dBA for other commercial uses such as wholesale, some retail, industrial/manufacturing, transportation, communications, and utilities. If these uses are proposed to be located in areas with noise levels that exceed these guidelines, a detailed analysis of noise reduction requirements will normally be necessary prior to final review and approval.

San Francisco Noise Ordinance

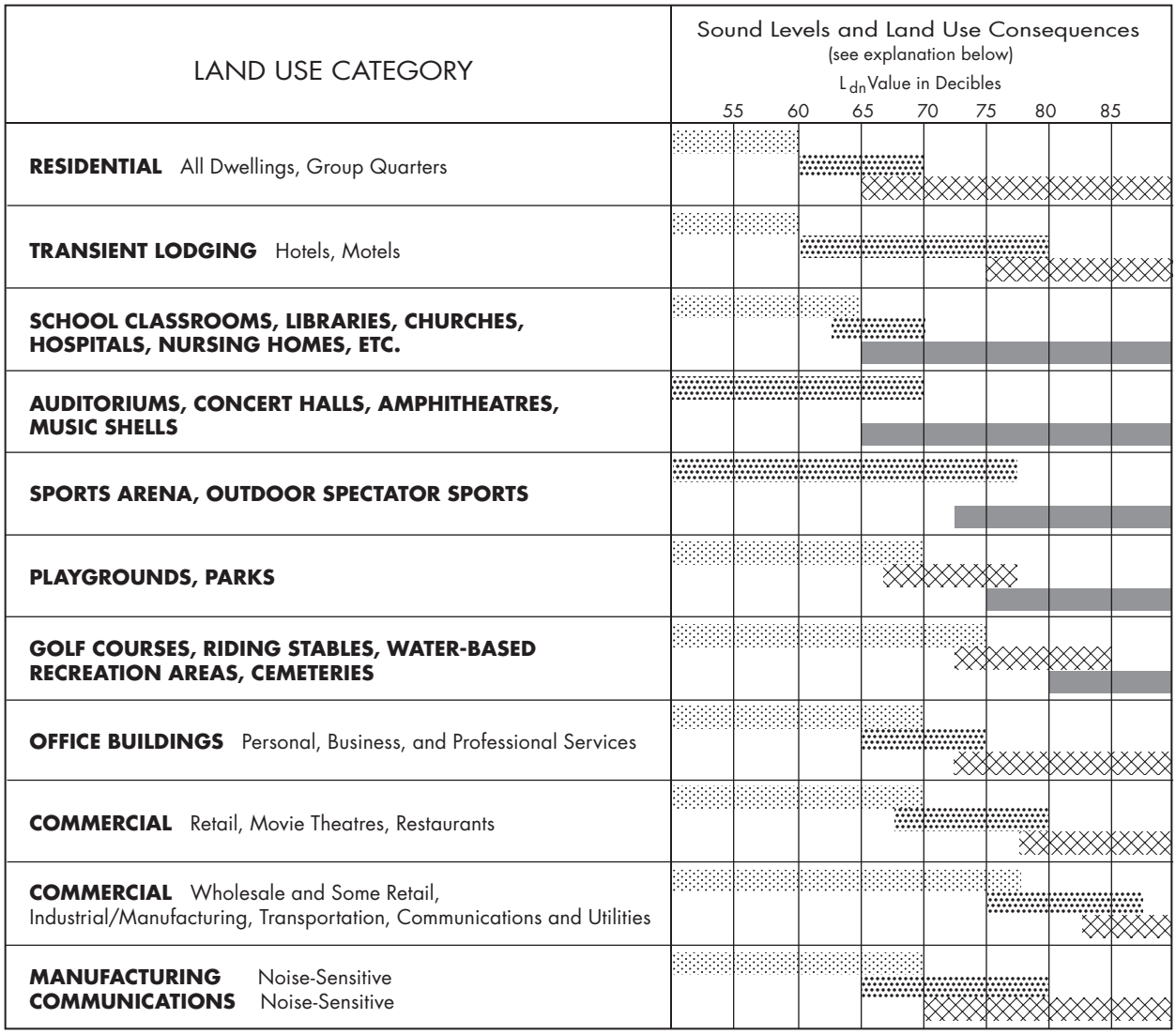
In the City, regulation of noise is stipulated in Article 29 of the Police Code (the Noise Ordinance), which states the City's policy is to prohibit unnecessary, excessive, and offensive noises from all sources subject to police power. Sections 2907 and 2908 of Article 29 regulate construction equipment and construction work at night, while Section 2909 provides for limits on stationary-source noise from machinery and equipment. Sections 2907 and 2908 are enforced by the Department of Building Inspection, and Section 2909 is enforced by the Department of Public Health. Summaries of these and other relevant sections are presented below:

Sections 2900(d) and 2918 establish a Noise Task Force to determine if there are additional adverse and avoidable noise sources not covered in this statute that warrant regulation. The Task Force reports annually to the Board of Supervisors regarding progress in protecting the noise environment, solving complaints, and necessary enabling legislation required to meet its legislative mandate. The issues surrounding new residential construction adjacent to existing commercial and industrial uses has been discussed at task force meetings; however, no decisions have been made as of summer 2011 to address these conflicts. The task force meets quarterly but will sunset in November 2011 unless it decides to continue.

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195 Wyle Laboratories, Wyle Research Report WR 94-23, "Raleigh-Durham International Airport New Construction Acoustical Design Guide," Prepared for Raleigh-Durham Airport Authority, September 30, 1994. This document is available at the Planning Department, 1650 Mission Street, Suite 500, in Case File No. 2007.0558E.

196 Environmental Protection Element, Policy 11.1.



Satisfactory, with no special noise insulation requirements.

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

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

New construction or development should generally not be undertaken.

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SOURCE: San Francisco General Plan, Environmental Protection Element

Figure 56
Land Use Compatibility Chart for Community Noise

Section 2907(a) of the Police Code limits noise from construction equipment to 80 dBA when measured at a distance of 100 feet from such equipment, or an equivalent sound level at some other convenient

distance. Exemptions to this requirement include impact tools with approved mufflers, pavement breakers and jackhammers with approved acoustic shields, and construction equipment used in connection with emergency work. Section 2908 prohibits nighttime construction (between 8:00 p.m. and 7:00 a.m.) that generates noise exceeding the ambient noise level by 5 dBA at the nearest property line unless a special permit has been issued by the City.

Section 2909 generally prohibits noise from fixed mechanical equipment and music in excess of 5 dBA more than ambient noise from residential sources, 8 dBA more than ambient noise from commercial sources, and 10 dBA more than ambient on public property at a distance of 25 feet. Section 2909(d) establishes maximum noise levels for fixed noise sources (e.g., mechanical equipment) of 55 dBA (7:00 a.m. to 10 p.m.) and 45 dBA (10 p.m. to 7 a.m.) inside any sleeping or living room in any dwelling unit located on residential property to prevent sleep disturbance.

Impacts

Significance Criteria

The proposed project would result in a significant impact with respect to noise if it would:

- 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;
- Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; or
- Be substantially affected by existing noise levels.

A project would also normally result in a significant impact with respect to noise if it would be 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, or if the project would expose people residing or working in the area to excessive noise levels. Additionally, for a project located in the vicinity of a private airstrip, the project would normally have a significant effect if it would expose people residing or working in the Plan area to excessive noise levels. The project site is not within an airport land use plan area, nor is it in the vicinity of a private airstrip. Therefore, these topics are not applicable.

Methodology

This analysis identifies potential noise impacts associated with future development that could result from implementation of the draft Plan. Noise issues evaluated in this section include: (1) noise generated by

traffic generated by future growth under the Plan; and (2) compatibility of potential future uses with San Francisco Land Use Compatibility Guidelines for Community Noise. Project-specific analysis is also provided for the proposed Transit Tower.

In general, traffic noise increases of less than 3 dBA are barely perceptible to people, while a 5-dBA increase is readily noticeable.[197] Therefore, permanent increases in ambient noise levels of less than 3 dBA are typically considered to be less than significant, except in circumstances in which the resulting noise environment is relatively loud. Some guidance as to the significance of changes in ambient noise levels is provided by the 1992 findings of the Federal Interagency Committee on Noise (FICON), which assessed the annoyance effects of changes in ambient noise levels resulting from aircraft operations.[198] The recommendations are based upon studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Annoyance is a summary measure of the general adverse reaction of people to noise that generates speech interference, sleep disturbance, or interference with the desire for a tranquil environment. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, they provide guidance with respect to other sources of noise. The FICON report recommended a variable scale of acceptable noise increase, with less increase deemed acceptable the higher the noise environment. This is based on the notion that a higher existing noise level requires a smaller increment to trigger annoyance among observers. Thus, for ambient noise levels of less than 60 dBA, Ldn, FICON recommended a threshold of allowable increase of 5 dBA. For noise environments of between 60 and 65 dBA, a 3-dBA threshold was recommended, while for ambient noise in excess of 65 dBA, the threshold was recommended at 1.5 dBA. This EIR relies on the FICON guidance for determining the significance of transportation noise impacts, as set forth in **Table 27**.

TABLE 27
MEASURES OF SUBSTANTIAL INCREASE FOR TRANSPORTATION NOISE EXPOSURE

Ambient Noise Level Without Project (Ldn)	Significant Impact Assumed to Occur If the Project Increased Ambient Noise Levels By:
60 – 65 dBA	+3.0 dBA or more
>65dBA	+1.5 dBA or more

SOURCE: Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992.

The Federal Transportation Administration (FTA) has developed criteria for judging the significance of vibration produced by transportation sources and construction activity. The FTA Guidelines provide screening distances for various transportation-related vibration sources. For a rapid transit railway, such as BART, the screening distance would be 200 feet (measured from source to receptor).

197 California Department of Transportation, Division of Environmental Analysis, "Technical Noise Supplement," November 2009; pp. 2-48 – 2-49. Available on the internet at: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf.

198 Federal Interagency Committee on Noise, *Federal Agency Review of Selected Airport Noise Analysis Issues*, August 1992. Available on the internet at: http://www.fican.org/pdf/nai-8-92.pdf.

The FTA establishes the threshold of architectural damage for non-engineered timber or masonry structures at 0.2 inches per second PPV, and uses a human annoyance response threshold for ground-borne vibration of 80 VdB, RMS.[199] This is used as the threshold of significance in this EIR.

Impact Analysis

Transit Center District Plan

Impact NO-1: Implementation of the draft Plan, including the proposed Transit Tower, would not result in a substantial permanent increase in ambient noise or vibration levels, but Plan implementation could result in exposure of persons to noise levels in excess of standards in the *San Francisco General Plan* and could introduce new sensitive uses that would be affected by existing noise levels. (Significant and Unavoidable with Mitigation)

Traffic Noise Impacts

As indicated in the Setting, noise levels immediately adjacent to all major streets in the Plan area from Main Street to the west exceed 70 dBA (Ldn) under existing conditions. This exceeds the level at which the *General Plan* noise compatibility guidelines recommend that new residential construction "should generally be discouraged" and should be undertaken only following completion of a detailed noise analysis, with "needed noise insulation features included in the design."[200] At this noise level, very sensitive uses such as schools, libraries, hospitals, religious facilities, and the like "should generally not be undertaken." Such a recommendation would presumably apply to child care facilities as well. Additionally, above 65 dBA (Ldn), the FTA recommends an allowable noise increment of only 1 dBA. It is noted that, because noise diminishes with distance, in areas such as the Plan area with existing or proposed very tall residential buildings, traffic-generated noise levels at residential receptors several hundred feet above grade would be substantially lower than at street level. Therefore, in mixed-use towers where residential uses are located only at the upper levels, traffic noise would have less effect. Rooftop mechanical equipment can also generate noise, although typically at lower levels than traffic (other than large compressors and backup generators, if not sound-proofed).

Changes in noise level were estimated for the major streets in the Plan area, based on traffic volumes developed as part of the Plan transportation analysis. Noise levels generated by traffic in the Plan area would increase by less than 3 dBA, compared to existing conditions, and thus in most instances would not be readily perceptible to most observers. In general, background (cumulative) growth would be responsible for one-half to three-fourths (or more) of the overall change in noise levels between existing conditions and 2030 conditions with full implementation of the Plan, while the incremental increase due to Plan-generated growth would generally represent a much smaller noise increase (see **Table 28**). As shown in this table, the greatest peak-hour noise increases (2 dBA or more) overall would occur along

[199] FTA, *Transit Noise and Vibration Impact Assessment*; see footnote 192, p. 341. The threshold is based on potential damage to non-engineered timber and masonry buildings.

[200] This recommendation is given for noise levels beginning at 65 dBA (Ldn); it overlaps with a less stringent recommendation in the range between 65 and 70 dBA (Ldn) and becomes exclusive above 70 dBA.

TABLE 28
FUTURE PEAK HOUR NOISE LEVELS ALONG PLAN AREA ROADWAY SEGMENTS

	Noise Level (dBA @ 50 feet from Roadway Centerline)									
Street (Segment Cross Streets)	**Existing**	**2030 Baseline**	**dBA Chg. From Existing**	**Existing + Plan Growth**	**dBA Chg. From Existing**	**dBA Chg. From Baseline**	**Growth + Pub. Realm**	**dBA Chg. From Existing**	**dBA Chg. From Baseline**	**dBA Chg. Fr. Project Growth**
Mission Street (Third-Second)	71.2	71.8	0.5	72.2	1.0	0.5	72.5	1.2	0.7	0.2
Mission Street (Second-First)	70.8	71.2	0.4	72.0	1.2	0.8	71.9	1.2	0.7	0.0
Mission Street (First-Fremont)	69.5	69.8	0.3	70.2	0.7	0.4	69.9	0.4	0.1	-0.3
Mission Street (Fremont-Beale)	69.7	70.0	0.3	70.8	1.1	0.8	71.2	1.5	1.2	0.4
Howard Street (Third-Second)	68.7	69.5	0.8	70.7	2.0	1.2	70.5	1.8	1.0	-0.3
Howard Street (Second-First)	68.7	69.4	0.7	71.1	2.4	1.7	71.0	2.3	1.6	-0.1
Howard Street (First-Fremont)	68.6	69.2	0.6	69.8	1.2	0.6	69.6	1.0	0.4	-0.1
Howard Street (Fremont-Beale)	68.6	69.4	0.8	69.8	1.1	0.4	69.2	0.6	-0.2	-0.6
Howard Street (Beale-Main)	66.5	67.5	1.0	67.6	1.1	0.1	67.1	0.6	-0.3	-0.5
Folsom Street (Third-Second)	67.9	69.5	1.7	69.8	1.9	0.2	69.4	1.5	-0.2	-0.4
Folsom Street (Second-First)	66.8	68.4	1.6	68.7	1.9	0.3	69.2	2.3	0.8	0.4
Folsom Street (First-Fremont)	65.4	66.7	1.3	67.5	2.1	0.8	68.3	2.8	1.5	0.8
Folsom Street (Fremont-Beale)	64.8	66.6	1.8	66.9	2.0	0.2	66.7	1.9	0.1	-0.2
Folsom Street (Beale-Main)	66.5	67.9	1.4	68.1	1.6	0.2	67.6	1.1	-0.3	-0.5
Folsom Street (Spear-Embarc.)	65.0	66.0	1.0	66.4	1.4	0.4	67.2	2.3	1.2	0.8
Harrison Street (Fifth-Fourth)	69.0	70.0	1.0	70.4	1.4	0.4	70.4	1.4	0.4	0.0
Harrison Street (Fourth-Third)	68.4	69.3	0.9	69.8	1.4	0.5	69.8	1.4	0.5	0.0
Harrison Street (Third-Second)	68.6	70.0	1.5	70.6	2.0	0.6	70.6	2.0	0.6	0.0
Harrison Street (Second-First)	67.5	68.5	1.1	68.6	1.2	0.1	68.8	1.4	0.3	0.2
Harrison Street (First-Fremont)	67.9	68.7	0.8	68.8	0.8	0.1	68.1	0.2	-0.6	-0.6
Harrison Street (Fremont-Main)	67.3	68.4	1.2	68.4	1.2	0.0	68.0	0.7	-0.5	-0.5
Harrison Street (Main-Spear)	65.6	66.6	0.9	66.6	1.0	0.0	65.9	0.3	-0.7	-0.7
Fremont Street (Mission-Howard)	70.3	70.7	0.4	71.5	1.2	0.8	71.1	0.9	0.5	-0.4
Fremont Street (Market-Mission)	70.6	71.6	1.0	72.1	1.5	0.5	71.9	1.3	0.3	1.9
Fremont Street (Mission-Howard)	71.1	72.1	1.0	71.6	1.6	0.5	72.1	1.0	0.0	1.2
Fremont Street (Howard-Folsom)	69.1	70.3	1.2	70.8	1.7	0.5	70.0	1.0	-0.3	-0.7
Fremont Street (Folsom-Harrison)	62.8	64.5	1.7	64.6	1.8	0.1	63.1	0.3	-1.3	-1.5
First Street (Market-Mission)	70.5	71.3	0.8	72.2	1.7	0.8	72.1	1.6	0.8	-0.1
First Street (Mission-Howard)	70.7	71.5	0.9	73.4	2.7	1.9	73.1	2.4	1.5	-0.3
First Street (Howard-Folsom)	70.8	71.5	0.7	72.6	1.8	1.1	71.5	0.7	0.0	-1.1
First Street (Folsom-Harrison)	71.2	71.8	0.6	72.4	1.2	0.6	72.6	1.5	0.9	0.3
Second Street (Market-Mission)	67.4	67.0	-0.5	67.4	0.0	0.4	67.4	0.0	0.5	0.0
Second Street (Mission-Howard)	69.4	69.5	0.1	70.1	0.7	0.6	70.1	0.7	0.6	0.0
Second Street (Howard-Folsom)	69.9	67.6	-2.2	70.0	0.1	2.4	71.2	1.4	3.6	1.2
Second Street (Folsom-Harrison)	70.2	69.5	-0.7	71.3	1.1	1.8	71.2	1.0	1.7	-0.1
Second Street (Harrison-Bryant)	71.5	72.1	0.6	72.6	1.1	0.5	72.6	1.1	0.5	0.0
New Montg'y St. (Market-Mission)	68.5	68.9	0.4	69.1	0.5	0.1	69.1	0.5	0.1	0.0
New Montg'y St. (Mission-Howard)	69.5	70.4	0.8	70.7	1.2	0.3	70.7	1.1	0.3	0.0
Third Street (Market-Mission)	71.4	72.7	1.3	73.0	1.6	0.3	72.8	1.5	0.1	-0.2
Third Street (Mission-Howard)	72.6	74.6	2.0	74.8	2.2	0.2	74.8	2.1	0.2	-0.1
Third Street (Howard-Folsom)	72.7	74.9	2.2	75.1	2.3	0.2	75.0	2.3	0.1	0.0
Third Street (Folsom-Harrison)	71.9	74.0	2.1	74.3	2.4	0.3	74.3	2.4	0.3	0.0
Third Street (Harrison-Bryant)	72.8	74.5	1.6	74.6	1.8	0.1	74.6	1.8	0.2	0.0
Beale Street (Market-Mission)	68.2	69.1	0.9	69.3	1.1	0.2	69.2	1.0	0.1	-0.1
Beale Street (Mission-Howard)	68.3	69.2	0.9	69.5	1.2	0.3	69.5	1.2	0.2	-0.1
Beale Street (Howard-Folsom)	65.6	66.6	1.1	66.7	1.1	0.0	67.6	2.1	1.0	1.0
Main Street (Market-Mission)	64.3	65.6	1.2	65.6	1.3	0.0	65.1	0.8	-0.4	-0.5
Main Street (Mission-Howard)	64.9	66.1	1.3	66.3	1.4	0.1	65.6	0.8	-0.5	-0.6
Main Street (Howard-Folsom)	65.6	66.5	0.9	66.6	1.0	0.1	65.7	0.1	-0.8	-0.9

Red values are higher; blue values are lower; values in black are relatively moderate.

NOTES: Assumptions include: Travel speeds on all streets, 30 mph; Vehicle Mix: 90% Autos/ 3% Medium Trucks / 7% Heavy Trucks (including buses) on streets with substantial bus and truck traffic (Mission, First, Second, Third, Fremont north of Howard; south of Howard, Fremont assumed as 93% / 3% / 4%); for other streets, 95% / 3% / 2%); Background noise levels due to traffic on other roadways and non-traffic related activities are not reflected in these noise levels. Noise levels in this table are intended to indicate incremental noise changes due to future growth and project development. Since they do not include background noise levels, they do not necessarily reflect actual noise levels along these roadway segments.

SOURCE: Environmental Science Associates, 2011.

Third Street (just west of the Plan area), Folsom Street, portions of Howard Street, and the block of First Street between Mission and Howard Streets, where the proposed Transit Tower would be located (and traffic from which would be the cause of most of that last increase). The largest incremental increase in noise due to the development resulting from the Plan itself would occur on First Street between Mission and Folsom Streets (adjacent to and south of the Transit Tower), on Mission Street between Fremont and Beale Streets, on Howard Street between First and Third Streets, and on parts of Folsom Street east of Fremont Street and Beale Street between Howard and Folsom Streets; these last two changes would largely be due to changes in circulation resulting from the Plan's proposed alterations to lane configurations on certain streets. The greatest traffic-generated noise levels would continue to be on Third Street, First Street, Fremont Street north of Folsom Street, Mission Street, Howard Street west of First Street, and Harrison Street west of Second Street. Streets such as Mission, Howard, Folsom, Harrison, First, and Third Streets, would also experience the largest increases in traffic noise with implementation of the draft Plan, with increases there (and on part of Beale Street) exceeding 1.5 dBA, when compared to existing conditions.[201] Based on the significance criterion described on p. 352, this would be a significant impact.

There are existing noise-sensitive land uses (residential units and child care centers) on some of these streets, such as Mission, Howard, Second, First, and Beale Streets. Additionally, other such sensitive land uses could be developed on these and nearby streets in the Plan area with implementation of the draft Plan.

The *General Plan* noise guidelines indicate that any new residential construction or development in areas with noise levels above 60 dBA (Ldn) should be undertaken only after a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. In areas where noise levels exceed 65 dBA (Ldn), new residential construction or development is generally discouraged, but if it does proceed, a detailed analysis of noise reduction requirements must be done and needed noise insulation features included in the design. Therefore, a detailed analysis of noise reduction requirements would typically be required for all future residential uses proposed in the Plan area. Because all new residential development in the Plan area is anticipated to comprise attached, multi-family residential units (i.e., there would not be expected to be any single-family homes constructed in the Plan area, given existing development densities and land costs), new residential development in the Plan area would be subject to Title 24 (*Building Code*) Noise Insulation requirements. This state regulation, adopted by the City, requires that multi-family residential units meet an interior standard of 45 dBA

[201] The modeling reveals one apparently anomalous result: the noise level on Second Street between Howard and Folsom Streets is predicted to *decrease* by more than 2 dBA between existing and future baseline (no project) conditions. The reason for this is that the transportation analysis includes planned changes to Second Street under the *San Francisco Bicycle Plan*, which are anticipated to eliminate left turns on Second Street. As a result, the Municipal Transportation Agency is considering a formal "detour" for Bay Bridge-bound traffic on Second Street, in which southbound vehicles would turn right on Howard Street, left on Hawthorne Street, and left on Harrison Street to reach the bridge. Accordingly, the transportation analysis assumes that the vast majority of traffic that today passes southbound on Second Street through the Howard Street intersection is projected to turn right instead, substantially reducing traffic volume on Second Street between Howard and Folsom Streets. Plan area growth is projected to add traffic back to Second Street, reaching approximately existing volumes, with changes in Plan-area lane configurations adding additional traffic growth to Second Street.

(Ldn) in any habitable room. Where such units are proposed in areas subject to noise levels greater than 60 dBA (Ldn), the project plans must demonstrate how dwelling units have been designed to meet this interior standard. Therefore, compliance with the state noise standards would ensure consistency with the *General Plan* noise standards for interior areas of new residential development in the Plan area. As stated in the Setting, it is noted that in areas with noise levels up to 70 dBA (Ldn), conventional construction can typically provide 25 dBA of noise insulation, while more advanced acoustical insulation can provide up to about 35 dBA insulation. While additional noise attenuation features beyond conventional construction may need to be incorporated into the building design where noise levels exceed 70 dBA (Ldn) to ensure that acceptable interior noise levels can be achieved, it is anticipated that the required interior noise level of 45 dBA can be achieved in new residential construction with incorporation of noise abatement features. Mitigation Measure M-NO-1a would require a noise study be completed for new residential projects prior to the completion of environmental review, to ensure that interior noise levels are suitable for residential use. However, required outdoor open space (decks, patios, gardens, and the like) would typically be subject to higher noise levels than noise-insulated interior areas. Mitigation Measure M-NO-1b would require new residential open spaces be sited to reduce, to the extent feasible, noise impacts associated with such open space. However, existing residential uses, including their open spaces, could be adversely affected by increases in traffic noise.

Other noise-sensitive land uses, such as day care centers (along with schools, libraries, and religious facilities) would also be subject to relatively high levels of traffic-generated noise in the Plan area. Many such special-purpose uses are subject to particular design and construction standards, and would likely meet appropriate interior noise levels as a matter of course. Day care centers, which are typically included in office buildings in the Plan area (and not in separate structures) could require noise insulation to achieve acceptable indoor noise levels; child care centers are also required to provide outdoor play space, and such areas would generally be subject to greater noise levels than those in the building interior. Without appropriate design, child care facilities and other non-residential noise-sensitive land uses could be subject to potentially significant impacts due to traffic-generated noise. To avoid the potential significant impact of exposure of such uses to noise levels in excess of *General Plan* recommendations, Mitigation Measure M-NO-1c would require that such uses would undergo appropriate noise analysis prior to approval and construction. Likewise, Mitigation Measure M-NO-1b would avoid potentially significant noise impacts to other new development in the Plan area by ensuring appropriate noise analysis, consistent with the *General Plan* noise guidelines for land use compatibility. However, existing sensitive uses could be adversely affected by increases in traffic noise.

The planned City Park atop the new Transit Center would be exposed to traffic noise, including increased noise generated by new development in the Plan area. However, noise levels in the park, which would be approximately 70 feet above grade, would be less than those at street level, because the distance above grade would preclude any direct line-of-sight connection between traffic and all areas behind the perimeter of the park. As a result, the bulk of the Transit Center building itself would serve to buffer City Park from street noise. Traffic noise would be further attenuated by the distance between the noise source and the park. Accordingly, noise impacts in City Park would be less than significant.

Other publicly accessible open spaces are or would be at ground level. These include the proposed Mission Square, at Fremont and Mission Streets, adjacent to the Transit Tower, and the proposed open space at the northeast corner of Second and Howard Streets. These open spaces, along with existing and to-be-developed open spaces created as part of office building development in the Plan area, would be exposed to traffic noise, including increased noise levels from subsequent development in the Plan area. To the extent feasible, site design, landscaping, street furniture, and similar features could be used to reduce noise levels in these open spaces. Because these spaces are located in a densely developed urban area, users of these spaces are presumed to be accustomed to noise levels that, under other circumstances, would be considered excessive. Moreover, because the increases in traffic noise described above would generally be limited (less than 3 dBA, or barely perceptible), this impact is considered less-than-significant.

Building Equipment Noise

As noted in the Setting, the primary stationary noise sources in the Plan area are mechanical (heating, ventilation, and air conditioning) equipment on building roofs. Although the Plan area is primarily an office district, and the draft Plan would maintain office space as the predominant land use in the area, there are existing residential units in the Plan area, and other residential buildings and mixed-use projects that would include residential units are anticipated with implementation of the Plan. As stated in the Setting, the City's Noise Ordinance limits noise from commercial properties to 8 dBA over the ambient noise level. Because rooftop equipment noise is not readily apparent to ground-level observers, and in recognition of the existing relatively high noise levels in the Plan area and the fact that the Plan area contains, and will continue to contain, a mix of uses including residential uses, Mitigation Measure M-NO-1d would require that noise from existing rooftop mechanical equipment be considered in the design of noise insulation for new residential uses. Additionally, Mitigation Measure M-NO-1e calls for the Planning Department to require the maximum feasible reduction of building equipment noise, such as through the enclosure of building mechanical equipment. However, existing residences and other sensitive uses could be adversely affected by the operation of new noisy building equipment proximate to those uses.

Vibration

As stated in the Setting, ground-borne vibration from operations of allowable uses in the Plan area is not a common environmental problem and even heavy-vehicle traffic (e.g., trucks and buses) does not generally result in perceptible vibration. Therefore, no significant long-term impacts with respect to vibration are anticipated.

Mitigation Measures

M-NO-1a: **Noise Survey and Measurements for Residential Uses.** For new residential development located along streets with noise levels above 70 dBA Ldn, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise-generating uses within two blocks of the project

site, and including at least one 24-hour noise measurement (with average and maximum noise level readings computed every 10 seconds), prior to completion of the environmental review for each subsequent residential project in the Plan area. The analysis shall demonstrate with reasonable certainty that Title 24 standards, where applicable, can be met, and that there are no particular circumstances about the proposed project site that appear to warrant heightened concern about noise levels in the vicinity. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that acceptable interior noise levels consistent with those in the Title 24 standards can be attained.

M-NO-1b: **Noise Minimization for Residential Open Space.** To minimize effects on residential development in the Plan area, the Planning Department, through its building permit review process and in conjunction with the noise analysis set forth in Mitigation Measure M-NO-1a, shall require that open space required under the Planning Code for residential uses be protected, to the maximum feasible extent, from existing ambient noise levels that could prove annoying or disruptive to users of the open space. Implementation of this measure could involve, among other things, site design that uses the building itself to shield on-site open space from the greatest noise sources, construction of noise barriers between noise sources and open space, and appropriate use of both common and private open space in multi-family dwellings, and implementation would also be undertaken consistent with other principles of urban design.

M-NO-1c: **Noise Minimization for Non-Residential Uses.** To reduce potential effects on new non-residential sensitive receptors such as child care centers, schools, libraries, and the like, for new development including such noise-sensitive uses, the Planning Department shall require, as part of its building permit review process, the preparation of an acoustical analysis by person(s) qualified in acoustical analysis and/or engineering prior to the first project approval action, in order to demonstrate that daytime interior noise levels of 50 dBA, based on the *General Plan* Environmental Protection Element, can be attained.

M-NO-1d: **Mechanical Equipment Noise Standard.** The Planning Department shall require that, as part of required the noise survey and study for new residential uses (Mitigation Measure M-NO-1a), all reasonable efforts be made to identify the location of existing rooftop mechanical equipment, the predicted noise generated by that equipment, and the elevation at which the predicted noise level would be of potential concern for new residential uses, as well as the necessary noise insulation for the new residential uses, where applicable.

M-NO-1e: **Interior Mechanical Equipment.** The Planning Department shall require, as part of subsequent project-specific review under CEQA, that effects of mechanical equipment noise on adjacent and nearby noise-sensitive uses be evaluated, and that design of

commercial buildings that incorporates the maximum feasible reduction of building equipment noise, such as through the use of quieter equipment, fully noise-insulated enclosures around rooftop equipment, and/or incorporation of mechanical equipment into intermediate building floor(s).

Level of Significance after Mitigation

Implementation of the above mitigation measures would reduce noise impacts to the maximum extent feasible, consistent with the *San Francisco General Plan*, and would render this impact less than significant with respect to new residential development and other new sensitive land uses. However, it cannot be stated with certainty that existing sensitive land uses would not be adversely affected by increased noise levels, particularly with respect to traffic noise. Therefore, because it is not generally feasible to retrofit existing uses to increase noise insulation, this impact is considered **significant and unavoidable**. It should be noted that the identification of this program level potentially significant impact does not preclude the finding of future less-than-significant impacts for subsequent projects, for which project-specific analysis finds that those project(s) would meet applicable thresholds of significance.

Impact NO-2: Construction activities in the Plan area could expose persons to temporary increases in noise levels substantially in excess of ambient levels. (Less than Significant with Mitigation)

Development that could result from implementation of the draft Plan would involve construction of new buildings, demolition, and possibly building rehabilitation and renovation. Limits on daytime construction hours of 7:00 a.m. – 8:00 p.m. are established by the *San Francisco Police Code*. Increased ambient noise levels from construction would be considered short-term and intermittent.

Construction activity noise levels at and near the construction areas would fluctuate depending on the particular type, number, and duration of uses of various pieces of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used. In addition, certain types of construction equipment generate impulsive noises (such as pile driving), which can be particularly annoying. Due to the programmatic nature of the Draft Plan, it is unknown whether future development within the Plan area would involve pile driving, although it can be reasonably expected that at least some buildings—including the proposed Transit Tower—would require pile-supported foundations. Pile-driving may be more likely east of approximately First Street, where land was historically reclaimed from the margin of San Francisco Bay and soil conditions are typically poorer. **Table 29** shows typical noise levels during different construction stages.

Noise from construction activities generally attenuates at a rate of 6 to 7.5 dBA per doubling of distance. Based on the Plan area terrain, an attenuation of 6 dBA is assumed. Future construction could occur adjacent to sensitive receptors. Based on Table 29, the noise level associated with, for example, excavation is

TABLE 29
TYPICAL CONSTRUCTION NOISE LEVELS

Construction Phase	Noise Level (dBA, Leq)[a]
Pile Driving	101 (intermittent)
Excavation	89
Finishing	89
Structural Erection	85
Ground Clearing	84
Foundations	78

[a] Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.

SOURCE: U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971.

89 dBA at 50 feet. Therefore, if sensitive receptors were located at this distance, construction noise at these levels would be substantially greater than existing noise levels throughout the Plan area. Impacts associated with construction noise, especially if the construction is to occur during the nighttime hours when most people are sleeping, would be significant.

Moreover, there is potential for simultaneous construction of multiple large buildings in a relatively small area under the Plan. For example, the new Transit Center is currently under construction, and construction activity will continue at that site until 2017. Several other projects are proposed (and one was approved in 2011) within about one block of the Transit Center site. Depending on the overlapping phases of construction, noise levels could be greater at certain locations.

In the event that pile driving is determined to be required for a subsequent development project, the sponsor of that project would implement Mitigation Measure M-NO-2a (Noise Control Measures for Pile Driving), which would reduce potential pile-driving noise impacts to a less-than-significant level. Moreover, as noted, the project sponsor would be required to comply with measures required for impact tools in Section 2907(b) of the Police Code. As a result, adverse impacts from pile-driving noise upon sensitive receptors near a particular project site would be reduced to a less-than-significant level.

Closed windows typically can reduce daytime interior noise levels to an acceptable level. Nevertheless, because of the number of sensitive receptors throughout the Plan area, implementation of Mitigation Measure M-NO-2b (General Construction Noise Control Measures), would be required for subsequent development projects to reduce construction noise to a less-than-significant level.

Mitigation Measures

M-NO-2a: **Noise Control Measures During Pile Driving.** For individual projects that require pile driving, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. These attenuation measures shall include as many of the following control strategies, and any other effective strategies, as feasible:

- The project sponsor of a development project in the Plan area shall require the construction contractor to erect temporary plywood noise barriers along the boundaries of the project site to shield potential sensitive receptors and reduce noise levels;
- The project sponsor of a development project in the Plan area shall require the construction contractor to implement "quiet" pile-driving technology (such as pre-drilling of piles, sonic pile drivers, and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
- The project sponsor of a development project in the Plan area shall require the construction contractor to monitor the effectiveness of noise attenuation measures by taking noise measurement; and
- The project sponsor of a development project in the Plan area shall require that the construction contractor limit pile driving activity to result in the least disturbance to neighboring uses.

M-NO-2b: **General Construction Noise Control Measures.** To ensure that project noise from construction activities is minimized to the maximum extent feasible, the project sponsor of a development project in the Plan area shall undertake the following:

- The project sponsor of a development project in the Plan area shall require the general contractor to ensure that equipment and trucks used for project construction utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- The project sponsor of a development project in the Plan area shall require the general contractor to locate stationary noise sources (such as compressors) as far from adjacent or nearby sensitive receptors as possible, to muffle such noise sources, and to construct barriers around such sources and/or the construction site, which could reduce construction noise by as much as five dBA. To further reduce noise, the contractor shall locate stationary equipment in pit areas or excavated areas, if feasible.
- The project sponsor of a development project in the Plan area shall require the general contractor to use impact tools (e.g., jack hammers, pavement breakers, and rock drills) that are hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used, along with external noise jackets on the tools, which could reduce noise levels by as much as 10 dBA.
- The project sponsor of a development project in the Plan area shall include noise control requirements in specifications provided to construction contractors. Such requirements could include, but not be limited to, performing all work in a manner that minimizes noise to the extent feasible; use of equipment with effective mufflers; undertaking the most noisy activities during times of least disturbance to surrounding residents and occupants, as feasible; and selecting haul routes that avoid residential buildings inasmuch as such routes are otherwise feasible.
- Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor of a development project in the Plan area shall submit to the Planning Department and Department of Building Inspection (DBI) a list of measures to respond to and track complaints pertaining to construction

noise. These measures shall include (1) a procedure and phone numbers for notifying DBI, the Department of Public Health, and the Police Department (during regular construction hours and off-hours); (2) a sign posted on-site describing noise complaint procedures and a complaint hotline number that shall be answered at all times during construction; (3) designation of an on-site construction complaint and enforcement manager for the project; and (4) notification of neighboring residents and non-residential building managers within 300 feet of the project construction area at least 30 days in advance of extreme noise generating activities (defined as activities generating noise levels of 90 dBA or greater) about the estimated duration of the activity.

Level of Significance after Mitigation

Implementation of Mitigation Measures M-NO-2a and M-NO-2b would reduce the noise impact from future construction throughout the Plan area to a less than significant level.

Impact NO-3: Construction activities in the Plan area could expose persons to temporary increases in vibration levels substantially in excess of ambient levels. (Significant and Unavoidable with Mitigation)

Construction in the Plan area could potentially expose people to the impacts of excess groundborne vibration or noise levels. Specifically, vibration created through construction activities including pile driving could occur adjacent to sensitive receptors.

As shown in **Table 30**, pile driving can generate vibration levels as high as 1.518 inches per second (in/sec) PPV (112 Vdb RMS). Where pile driving is not required, use of heavy equipment for project construction generates vibration levels up to 0.089 in/sec PPV or 87 Vdb RMS at a distance of 25 feet, for the largest typical construction equipment such as a large bulldozer. Because most streets in the Plan area are 82.5 feet wide, vibration from construction would most affect receptors on adjacent parcels. Vibration levels, measured as PPV, across the street from construction sites would be reduced by more than 80 percent. Other pieces of equipment, such as a small bulldozer, would result in vibration impacts resulting in lesser PPV and RMS. Therefore, with the exception of pile driving, most construction activities would generate ground-borne vibration levels that would not exceed the FTA criteria of 0.2 in/sec PPV for structural damage but could exceed 80 RMS for human annoyance. Moreover, construction could adversely affect adjacent properties (i.e., those closer than 82.5 feet).

Groundborne vibration impacts associated with construction activities on historic resources, and mitigation for those effects, are addressed in Section IV.D, Cultural and Paleontological Resources, p. 270. Mitigation identified in that section would require contractors to undertake best practices during construction and to conduct pre-construction surveys of historical resources within 125 feet of proposed construction (to allow for a 25 percent safety factor) and to conduct construction-period monitoring of these resources to ensure that potential construction impacts would be reduced as feasible.

TABLE 30
VIBRATION VELOCITIES FOR CONSTRUCTION EQUIPMENT

Equipment/Activity	PPV at 25 ft (inches/second)[a]	PPV at 82.5 feet	RMS at 25 ft (Vdb)[c]	RMS at 82.5 feet
Pile Driver (upper range)	1.518	0.265	112	106
Pile Driver (typical)	0.644	0.113	104	98
Large Bulldozer	0.089	0.016	87	72
Loaded Trucks	0.076	0.013	86	71
Small Bulldozer	0.003	0.00	58	43

[a] Buildings can be exposed to ground-borne vibration levels of 0.2 PPV without experiencing structural damage.
[b] Assumes receptor is across the street.
[c] The human annoyance response level is 80 Vdb RMS.

SOURCE: ESA, 2010; Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

Mitigation Measures

Implement Mitigation Measure M-NO-2a, Noise Control Measures During Pile Driving.

Implement Mitigation Measure M-CP-3b, Construction Best Practices for Historical Resources, p. 270, and Mitigation Measure and M-CP-3c, Construction Monitoring Program for Historical Resources, p. 270.

Level of Significance after Mitigation

Implementation of Mitigation Measures M-NO-2a, M-CP-3b and M-CP-3c would reduce the vibration impact from future construction throughout most of the Plan area to a less than significant level. However, certain uses in close proximity to construction sites could, depending on the source and nature of the vibration, experience construction-related vibration that would be considered **significant and unavoidable**. It should be noted that the identification of this program level potentially significant impact does not preclude the finding of future less-than-significant impacts for subsequent projects, for which project-specific analysis finds that those project(s) would meet applicable thresholds of significance.

Transit Tower

Impact NO-4: The proposed Transit Tower project would not result in a substantial permanent increase in ambient noise levels in the project vicinity, and it would not expose persons to noise levels in excess of standards established in the local general plan or noise ordinance. (Less than Significant with Mitigation)

The *General Plan* Land Use Compatibility Guidelines indicate that, for office uses, the maximum "satisfactory" noise level without incorporating noise insulation into a project is 70 dBA (Ldn). The Guidelines indicate that office development should be discouraged at noise levels above 75 dBA (Ldn).

Where noise levels that exceed satisfactory level (i.e., 70 dBA), a detailed analysis of noise reduction requirements will normally be necessary prior to final review and approval. As noted in the Setting, traffic is the primary noise source in the Plan area, and the traffic noise level on all major streets in the project vicinity exceeds 70 dBA (Ldn). A 24-hour noise measurement at the intersection of Mission and Fremont Streets, diagonally across the intersection from the project site, measured the existing noise level (including all sources, not just traffic) at 76.5 dBA (Ldn), with a daytime (7:00 a.m. to 10:00 p.m. noise level of 73.3 dBA (Leq).[202] Hourly noise levels ranged from 63.8 dBA at 3:00 a.m. hour. to 77.4 dBA during the 8:00 a.m. hour. Given that the proposed project would contain primarily office use, with some retail space, and that these uses are not considered sensitive receptors for noise, it is anticipated that conventional construction techniques, including the use of noise-insulated glass, would result in reduction of interior noise levels of up to 30 dBA, resulting in levels adequate for the proposed uses. Accordingly, the impact of interior noise on the proposed project would be less-than-significant, and no further analysis is required.

Traffic Noise

Generally, traffic must double in volume to produce a noticeable increase in noise levels. Based on trip generation calculations prepared for the project, most trips to the project site would be made via transit and by foot. As described in the Plan analysis of traffic noise (Impact NO-1, above), the peak-hour traffic noise level would increase on First Street between Mission and Howard Streets (where the Transit Tower garage entrance/exit would be located) by almost 3 dBA. A portion of this increase would be due to traffic destined to and from the Transit Tower, which would generate approximately 5,500 daily vehicle trips (about 540 peak-hour vehicle trips). First Street currently has, and would continue to have, the highest noise levels in the Plan area, in large part because of the heavy traffic volume that uses First Street to reach the Bay Bridge on-ramp at First and Harrison Streets. Because traffic generated by the Transit Tower would result in an approximately 2 dBA increase in traffic noise, the impact is considered less than significant.

Although the proposed Transit Tower would be constructed adjacent to the planned City Park atop the new Transit Center, noise effects in the park would be less than significant, because the park would be approximately 70 feet above grade and would therefore be buffered from street noise by the Transit Center itself. Street noise would be further attenuated by distance.

Because the trip generation calculations on which the noise analysis is based are specific to travel activity in downtown San Francisco and already reflect robust transit use and a substantial number of bicycling and walking trips, it is not considered feasible to reduce vehicle trip generation by the more than 50 percent that would be required to avoid a project-specific significant impact. However, implementation of Mitigation Measures M-NO-1a, M-NO-1b, and M-NO-1c, p. 357, above, would avoid exposing sensitive receptors to this increased noise level.

[202] Noise measurements record all noise, not just traffic noise, and thus can result in higher numbers than the modeled results.

Level of Significance after Mitigation

With implementation of Mitigation Measures M-NO-1a, M-NO-1b, and M-NO-1c, project-specific effects of traffic noise would be less than significant.

Building Operation Noise

The proposed Transit Tower project would include mechanical equipment, such as air conditioning units and chillers, which could produce operational noise. These operations would be subject to Section 2909 of the San Francisco Noise Ordinance, Article 29 of the *San Francisco Police Code*. As amended in November 2008, this section establishes a noise limit from mechanical sources, such as building equipment, specified as a certain noise level in excess of the ambient noise level at the property line: for noise generated by residential uses, the limit is 5 dBA in excess of ambient, while for noise generated by commercial and industrial uses, the limit is 8 dBA in excess of ambient and for noise on public property, including streets, the limit is 10 dBA in excess of ambient.[203] In addition, the Noise Ordinance provides for a separate fixed-source noise limit for residential interiors of 45 dBA at night and 55 dBA during the day and evening hours. Compliance with Article 29, Section 2909, would minimize noise from building operations.

No detailed design information is available for the Transit Tower with respect to the location of mechanical equipment. Without mitigation, building equipment noise could be disruptive to existing and potential future residents in the Plan area, and, for purposes of a conservative assessment, this impact is considered potentially significant. Implementation of Mitigation Measures M-NO-1d and M-NO-1e, above, would further restrict the noise level for mechanical equipment in the Plan area and would require the project sponsor to fully enclose and noise-proof building mechanical equipment.

Mitigation Measures

Implement Mitigation Measure M-NO-1d, Mechanical Equipment Noise Standard, and Mitigation Measure M-NO-1e, Interior Mechanical Equipment.

Level of Significance after Mitigation

With implementation of Mitigation Measures M-NO-1d and M-NO-1e, operational noise from building equipment would be less than significant.

Impact NO-5: Construction of the proposed Transit Tower project would result in a temporary and/or periodic increase in ambient noise levels and vibration in the project vicinity above levels existing without the project. (Less than Significant with Mitigation)

Demolition, excavation, and building construction would temporarily increase noise in the project vicinity. Construction equipment would generate noise and possibly vibrations that could be considered an annoyance by occupants of nearby properties, or that could result in harm to individuals and/or surrounding buildings. The construction period for the Transit Tower would last approximately

[203] Entertainment venues are also subject to a separate criterion for low-frequency (bass) noise.

36 months. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers. Impacts would generally be limited to the period during which new foundations and exterior structural and facade elements would be constructed. Interior construction noise would be substantially reduced by the presence of exterior walls.

The Transit Tower would have a concrete slab foundation supported by driven piles anticipated to be founded on bedrock more than 200 feet below grade. The tower's structural system is anticipated to employ the concept of "megacolumns," which are very large structural columns several feet in width. The concentrated load supported by these megacolumns would be sustained by large diameter piles approximately 10 feet in diameter, with additional piles driven to support the building's foundation slab. Pile driving can generate noise levels in excess of 100 dBA at 50 feet each time the hammer strikes the pile. While potentially more startling than constant noise levels, pile driving noise is intermittent, occurring only when a pile is being driven, with breaks when driving one pile is complete and another is being placed in position. Therefore, the project sponsor would be required implement Mitigation Measure M-NO-2a (Noise Control Measures for Pile Driving), p. 360, above, which would reduce potential pile-driving noise impacts to a less-than-significant level. Moreover, as noted, the project sponsor would be required to comply with measures required for impact tools in Section 2907(b) of the *Police Code.* As a result, adverse impacts from construction noise upon sensitive receptors near the project site would be reduced to a less-than-significant level.

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the *Police Code*), amended in November 2008. The ordinance requires that noise levels from individual pieces of construction equipment, other than impact tools, not exceed 80 dBA at a distance of 100 feet from the source. Impact tools (jackhammers, hoerammers, impact wrenches) must have both intake and exhaust mufflers as well as be equipped with acoustically attenuating shields or shrouds to the satisfaction of the Director of Public Works or the Director of Building Inspection. Section 2908 of the Ordinance prohibits construction work between 8:00 p.m. and 7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works or the Director of Building Inspection. The project must comply with regulations set forth in the Noise Ordinance.

The closest sensitive noise receptors to the project site that have the potential to be adversely affected by construction noise are the residential units in the Millennium Tower, across Fremont Street from the project site, and two child care facilities located about one block away, one in the PG&E building at 77 Beale Street, and a second at 342 Howard Street. Closed windows typically can reduce daytime interior noise levels to an acceptable level. Nevertheless, because of the proximity to these receptors, implementation of Mitigation Measure M-NO-2b (General Construction Noise Control Measures), p. 361, above, would be required to reduce construction noise to a less-than-significant level. Therefore, although construction noise could be annoying at times, with mitigation, construction noise would not be expected to exceed noise levels commonly experienced in an urban environment, and would not be considered significant.

Concerning vibration, because there are no sensitive uses closer than across the street (i.e., greater than 82.5 feet) from the Transit Tower site, vibration impacts would be anticipated to be less than significant, as described in Impact NO-3.

Mitigation Measures

Implement Mitigation Measure M-NO-2a, Noise Control Measures for Pile Driving, and Mitigation Measure M-NO-2b, General Construction Noise Control Measures.

Level of Significance after Mitigation

With implementation of Mitigation Measures M-NO-2a and M-NO-2b, project-specific construction noise impacts would be reduced to a less-than –significant level.

Impact NO-6: The proposed Transit Tower project would not be substantially affected by existing noise levels. (Less than Significant)

Ambient noise levels in the project vicinity are typical of noise levels in downtown San Francisco, which are dominated by vehicular traffic, including trucks, cars, Muni buses, and emergency vehicles. Mission, First, and Fremont Streets all experience relatively heavy traffic and generate moderate to high levels of traffic noise. Observation during weekday business hours by the environmental consultant indicates that surrounding land uses do not conduct noticeably noisy operations.

With regard to effects of the ambient area noise on project occupants, the proposed project would include a noise-reducing dual-pane glass assembly in its glazing system, which would reduce outdoor noise levels by up to 30 dBA, sufficient to ensure an adequately quiet interior noise environment for office use.

Mitigation: None required.

Cumulative Impacts

Impact C-NO: The draft Plan and proposed Transit Tower, in combination with past, present, and reasonably foreseeable future projects, would result in cumulative noise impacts. (Significant and Unavoidable with Mitigation)

The traffic noise analysis in Impact NO-1, above, includes noise from traffic increases due to background (cumulative) development. As indicated there, this cumulative growth would be responsible for one-half to three-fourths (or more) of the overall change in noise levels between existing conditions and 2030 conditions with full implementation of the Plan, while the incremental increase due to Plan-generated growth would represent a smaller noise increase. Mitigation Measures M-NO-1a, M-NO-1b, and M-NO-1c, p. 357, would reduce traffic noise impacts, but not necessarily to a less-than-significant level.

Therefore, cumulative increases in ambient noise, generally from traffic, are considered significant and unavoidable.

Cumulative construction impacts would occur from other projects in the vicinity, most notably the new Transit Center itself, which is currently under construction immediately south of the Transit Tower site. There are several other projects for which the Planning Department has applications on file in proximity to the Transit Tower site, including a project approved in 2011 at 350 Mission Street, diagonally across the Fremont and Mission Streets intersection from the proposed Mission Square park. Other potential development includes a high-rise project with three towers at the northwest corner of First and Mission Streets, a mixed-use tower on Fremont Street south of the new Transit Center, and a mid-rise residential building on Tehama Street between First and Second Streets. Other potential projects identified in the analysis for the Transit Center District Plan include towers on Mission Street between First and Second Street (Golden Gate University site) and on the north side of Howard Street between First and Second Streets. Each of these projects would generate construction noise. To the extent that simultaneous construction is undertaken in close enough proximity to the Transit Tower project site, or that two or more of the above projects are undertaken at the same time, such that cumulative effects related to construction noise would be anticipated, noise effects would be greater or last longer, or both. Additionally, the proposed underground extension of Caltrain service to the Transit Center, while it would occur beneath Second Street (two blocks east of the project site) would cause additional noise and vibration impacts if it is funded and built.

The construction of the proposed Caltrain Downtown Extension would temporarily introduce a new source of noise and vibration into the project area. However, this work would be primarily underground and more than 300 feet from the Transit Tower project site, At this distance, noise and vibration from the Caltrain Downtown Extension would not, along with the Transit Tower, result in significant cumulative impacts. The ongoing construction of the Transit Center will include construction of a lower level to accommodate future Caltrain (and potential high-speed rail) service. However, train track tunneling and construction would not occur until a later date, which is dependent on funding.

In the event that one or more nearby projects were to be undertaken at the same time as the proposed project, the Planning Department and the Departments of Building Inspection, Public Works, and Public Health, along with the Transbay Joint Powers Authority (sponsor of the Transit Center) and the Peninsula Joint Powers Board (sponsor of the Caltrain extension), would be expected to work to ensure that all projects comply with the San Francisco Noise Ordinance and that project construction schedules are coordinated so as to minimize, to the extent feasible, construction noise that could be disruptive. However, it is anticipated that, because of the large amount of construction ongoing and proposed in the Plan area, construction noise and vibration impacts could be significant for at least some existing, and possibly future, sensitive receptors.

Mitigation Measure

Implement Mitigation Measure M-NO-2a, Noise Control Measures for Pile Driving, and Mitigation Measure M-NO-2b, General Construction Noise Control Measures.

M-C-NO **Cumulative Construction Noise Control Measures.** In addition to implementation of Mitigation Measure NO-2a and Mitigation Measure NO-2b (as applicable), prior to the time that construction of the proposed project is completed, the project sponsor of a development project in the Plan area shall cooperate with and participate in any City-sponsored construction noise control program for the Transit Center District Plan area or other City-sponsored areawide program developed to reduce potential effects of construction noise in the project vicinity. Elements of such a program could include a community liaison program to inform residents and building occupants of upcoming construction activities, staggering of construction schedules so that particularly noisy phases of work do not overlap at nearby project sites, and, potentially, noise and/or vibration monitoring during construction activities that are anticipated to be particularly disruptive.

Level of Significance after Mitigation

With implementation of Mitigation Measures M-NO-2a, M-NO-2b, and M-C-NO, cumulative construction noise impacts would be reduced, but not necessarily to a less-than–significant level. It is also noted that the limitation on annual office development codified in *Planning Code* Section 321 could result in some "metering" of office development over time. While there is enough available space in the inventory of space available for large buildings to accommodate all Plan area buildings with applications currently on file, the entire amount of office space anticipated under the Plan represents about six years of annual allocations, or twice the amount of the current inventory. Therefore, if a number of additional projects—either in or outside of the Plan area—were to be proposed soon, not all could be approved at the same time. This could incrementally reduce the potential for cumulative construction noise in the Plan area. For purposes of a conservative assessment, however, this impact is considered **significant and unavoidable**. It should be noted that the identification of this program level potentially significant impact does not preclude the finding of future less-than-significant impacts for subsequent projects, for which project-specific analysis finds that those project(s) would meet applicable thresholds of significance.

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